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Darnum Battery Energy Storage System

Ecological Impact Assessment

Final

May 2026

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SAMSUNG C&T REA

Darnum Battery Energy Storage System

Ecological Impact Assessment

Final

Prepared by
Umwelt (Australia) Pty Limited

On behalf of
Samsung C&T Renewable Energy Australia

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Report No.: 32317/ V1
Date: May 2026

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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.



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Document Status

Rev No.	Reviewer Name	Date	Approved for Issue Name	Date
V1	David Endersby	08/04/2026	Jesse Percival / Caroline Funnell	23/04/2026

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Executive Summary

Umwelt has undertaken an ecological impact assessment of the proposed Darnum Battery Energy Storage System Project (the Project). The purpose of this report is to outline the findings of the ecological impact assessment, including approval requirements associated with ecological values that are likely to be impacted by the Project; recommended strategies to avoid and mitigate further impacts to ecological values; as well as recommendations of further assessments (if required) and next steps.

Assessment Area

The assessment area is approximately 52.5 ha, located 8 km north-east of Warragul, VIC. It is located within the Baw Baw Shire local government area (LGA), and the Gippsland Plain bioregion. The study area comprises a residential/agricultural property currently predominantly utilised for grazing and an area of adjacent road reserve.

Methods

A general vegetation and habitat assessment was undertaken by Umwelt ecologists on 4 August 2025 to 5 August 2025. This assessment comprised mapping native vegetation in accordance with the Guidelines for the removal, destruction and lopping of native vegetation (the Guidelines, (DEECA (Vic), 2025a)), and recording habitat values observed.

Additional detailed ecological investigations were also undertaken including targeted searches for burrowing cray chimneys (04 August 2025), targeted threatened flora transect surveys (25 September 2025, and 8 December 2025), and detailed tree mapping (undertaken 8 December 2025).

Likely impacts to ecological values potentially occurring within or adjacent to the assessment area were assessed based on the concept design (current at the time of writing), and a conservative indicative disturbance envelope. Both direct and indirect impacts were considered.

Ecological Values

The assessment area is largely a highly modified environment, mainly consisting of improved pasture, albeit with stands of woody native vegetation occurring in the north-west and in the east.

Native vegetation recorded within the assessment area comprised patches of three Ecological Vegetation Classes (EVCs) totalling 14.42 ha, and 32 scattered trees.

No threatened ecological communities (as listed under the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act), or the *Flora and Fauna Guarantee Act 1988* (FFG Act)) were recorded within the assessment area.

Threatened species (as listed under the EPBC Act and/or FFG Act) likely to occur within or adjacent to the assessment area are summarised in **Table E.1** below, with one threatened species – Green Scentbark (*Eucalyptus fulgens*) recorded within the assessment area. No additional threatened species were recorded.

Table E.1 Threatened Species with a Moderate or Higher Likelihood of Occurrence within or Adjacent to the Assessment Area

Scientific name	Common name	Conservation status		Likelihood of occurrence
		EPBC Act	FFG Act	
Flora				
<i>Dianella amoena</i>	Matted Flax-lily	Endangered	Critically endangered	Moderate
<i>Eucalyptus fulgens</i>	Green Scentbark	-	Endangered	Recorded
<i>Eucalyptus strzeleckii</i>	Strzelecki Gum	Vulnerable	Critically endangered	Moderate
<i>Pterostylis chlorogramma</i>	Green-striped Greenhood	Vulnerable	Endangered	Moderate
Fauna				
<i>Callocephalon fimbriatum</i>	Gang-gang Cockatoo	Endangered	Endangered	High
<i>Ranoidea raniformis</i>	Growling Grass Frog	Vulnerable	Vulnerable	Moderate
<i>Neophema chrysostoma</i>	Blue-winged Parrot	Vulnerable	Vulnerable	High
<i>Ninox strenua</i>	Powerful Owl	-	Vulnerable	High
<i>Pseudophryne semimarmorata</i>	Southern Toadlet	-	Endangered	Moderate
<i>Tyto novaehollandiae</i>	Masked Owl	-	Critically endangered	High
<i>Varanus varius</i>	Lace Monitor	-	Endangered	Moderate

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Assessment of Ecological Impacts

Impacts to ecological values have been avoided or otherwise minimised by concentrating development in areas of improved pasture, though a complete avoidance of impacts to ecological values was not feasible for the Project.

Likely ecological impacts associated with the Project include:

- Removal of 0.671 ha of native vegetation assessable under the Guidelines (all Lowland Forest (EVC 16)) comprising:
 - 0.148 ha of native vegetation patches, including four large patch trees.
 - 0.522 ha scattered trees, comprising nine trees, eight of which are large.
- Removal of scattered Weeping Grass (*Microlaena stipoides*) individuals (outside of native vegetation patches) within a 0.524 ha area of primarily exotic improved pasture that supports scattered Weeping Grass individuals at 2.5% cover.
- Removal of 0.669 ha of foraging habitat for Gang-gang Cockatoo, Blue Winged Parrot, and Powerful Owl, Masked Owl and Lace Monitor (figure is inclusive of scattered trees).
- Permanent removal of 1.612 ha of improved pasture within 200 m (but no closer than 100 m) of an ephemeral waterway that may be utilised by Growling Grass Frog as foraging habitat.

- Removal of 0.04 ha of woodland habitat that may be utilised by Southern Toadlet.

It should be noted that:

- No hollow-bearing trees will be removed.
- No threatened flora will be removed.
- No impacts to species listed under the EPBC Act are considered to be a 'significant impact' under that Act.

Legislative and Policy Obligations

Potential legislative and policy implications associated with potential project impacts are summarised in **Table E.2** below.

Table E.2 Potential legislative and policy implications

Legislation/policy	Implications
Commonwealth	
<i>Environment Protection and Biodiversity Conservation Act 1999</i>	Referral under the EPBC Act not required (considering only significant impacts upon MNES) No matters of national environmental significance (MNES) are considered likely to be significantly impacted in accordance with the Significant Impact Guidelines 1.1 (DEWHA (Cth), 2013), and the Significant impact guidelines for the vulnerable growling grass frog (<i>Ranoidea raniformis</i>) (DEWHA (Cth), 2009).
State	
<i>Environment Effects Act 1978</i>	No referral under the EE Act is required (considering only biodiversity criteria). No biodiversity-related referral criteria specified in the Ministerial guidelines for assessment of environmental effects under the <i>Environment Effects Act 1978</i> (DTP (Vic), 2023) have been triggered by Project impacts.
<i>Flora and Fauna Guarantee Act 1988</i>	No permit to take under the FFG Act is required. No removal of threatened or protected flora species listed under the FFG Act will occur.
<i>Planning and Environment Act 1987</i>	Planning approval required for native vegetation removal Planning approval pursuant to Clause 52.17 of the Baw Baw Planning Scheme will be required for the removal of: • 0.671 ha of Lowland Forest (EVC 16) comprising: 0.148 ha of patches, including four large patch trees, and 0.522 ha scattered trees, comprising nine trees, eight of which are large. • Scattered Weeping Grass individuals (outside of native vegetation patches) within a 0.524 ha area of primarily exotic improved pasture that supports scattered Weeping Grass individuals at 2.5% cover.
Guidelines for the removal, destruction or lopping of native vegetation (the Guidelines)	Assessment under the Guidelines and native vegetation offsets required. All application requirements associated with assessment under the Guidelines are addressed in this report (see Table 6.1). Offset requirement for native vegetation removal is 0.1620 General Habitat Units (West Gippsland CMA or Baw Baw Shire LGA vicinity), with a minimum strategic biodiversity score of 0.3378, including 12 large trees.

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Next Steps/Requirement for Further Assessment

1. Submit this report; alongside the Planning Permit Application to the responsible authority seeking approval to remove the required extent of native vegetation.
2. Continue to avoid and minimise impacts to native vegetation through the detailed design and construction phase. Opportunities to reduce clearance of native vegetation (particularly large canopy trees) will be investigated during detailed design of the access road including:
 - a. Confirmation of the largest vehicle required to access site, potentially enabling reductions in access road width.
 - b. Investigation of the use of the secondary (southern) access point (and associated easement) as the main access point (subject to ongoing discussions with AusNet). This would allow the northern access route (where most Project vegetation clearance is currently proposed) to serve as the secondary access for emergency vehicles. This in turn would enable reductions in width and adjustments in alignment of the northern access road to enable further avoidance of native vegetation.
 - c. Consultation with an arborist to avoid and minimise impacts to canopy trees.

A conservative approach has been used in this assessment to reflect the worst case.

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Abbreviations and Glossary

Term/ abbreviation	Description/ expansion
CaLP Act	<i>Catchment and Land Protection Act 1994</i>
Canopy tree	Defined in the Guidelines (DEECA (Vic), 2025a) as: ‘a mature tree (that is, it is able to flower) that is greater than 3 m in height and is normally found in the upper layer of the relevant vegetation type’.
DBH	Diameter at Breast Height. Defined in the Guidelines (DEECA (Vic), 2025a) as: ‘the diameter of the main trunk of a tree measured over bark at 1.3 m above ground level’.
DSH	Diameter at standard height. Defined in AS 4970:2025 (Standards Australia, 2025) as ‘trunk diameter at 1.4 m above ground level.’ Where multi-stemmed trees occur, a combined DSH is calculated using the diameter of each stem at 1.4 m above ground level.
DCCEEW	Department of Climate Change, Energy, Environment, and Water (Commonwealth of Australia)
DEECA	Department of Energy, Environment, and Climate Action (Victorian Government)
DTP	Department of Transport and Planning (Victorian Government)
EE Act	<i>Environment Effects Act 1978</i>
EES	Environmental Effects Statement
EPBC Act	<i>Environment Protection and Biodiversity Conservation Act 1999</i>
EVC	Ecological Vegetation Class. EVCs are the standard unit for classifying vegetation types in Victoria.
FFG Act	<i>Flora and Fauna Guarantee Act 1988</i>
The Guidelines	<i>Guidelines for the Removal, Destruction, or Lopping of Native Vegetation</i>
ha	Hectares
Habitat zone	Defined in the Vegetation Quality Assessment manual 1.3 (DSE (Vic), 2004) as: ‘A discrete area of native vegetation consisting of a single vegetation type (EVC) with an assumed similar averaged quality.’
km	Kilometres
Large tree	Defined in the Guidelines (DEECA (Vic), 2025a) as: ‘a native canopy tree with a Diameter at Breast Height (DBH) greater than or equal to the large tree benchmark for the relevant bioregional EVC. A large tree can be either a large, scattered tree or a large patch tree’. All scattered trees that are not large trees are small, scattered trees.
LGA	Local Government Area
Minor NRZ encroachment	Defined in AS 4970:2025 (Standards Australia, 2025) as encroachment into an NRZ that is ‘less than or equal to 10% of the area of the NRZ, ... (where there has not been) recent NRZ encroachments and is outside of the SRZ.’
MNES	Matters of National Environmental Significance
Native vegetation	Defined in clause 73 of the Victoria Planning Provisions and all local planning schemes as ‘plants that are indigenous to Victoria, including trees, shrubs, herbs and grasses.’

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Term/ abbreviation	Description/ expansion
NRZ	Notional root zone. Defined in AS 4970:2025 (Standards Australia, 2025) as ‘zone enclosed by a radius of 12 times DSH that is a primary trigger for arboricultural input on a development site.’ Where minor NRZ encroachment occurs, it is generally considered unlikely that there will be a significant impact to tree health, longevity or structure of the relevant tree. Encroachment into an NRZ that is less than or equal to 10% of the area of the where the NRZ, and is outside of the SRZ, has not had recent NRZ encroachments
P&E Act	<i>Planning and Environment Act 1987</i>
Patch	Defined in the Guidelines (DEECA (Vic), 2025a) as: ‘an area of vegetation where at least 25 per cent of the total perennial understorey plant cover is native, or: - Any area with three or more native canopy trees where the drip line of each tree touches the drip line of at least one other tree, forming a continuous canopy, or - Any mapped wetland included in the Current wetlands map, available in DEECA systems and tools’. Patches may consist of one or more habitat zones.
Patch tree	A native canopy tree within a patch (DEECA (Vic), 2025a).
PMST	Protected Matters Search Tool
Small patch tree	A canopy tree within a patch that reaches 80% or more of the relevant mature height as defined within the relevant EVC benchmark description, and with a Diameter at Breast Height (DBH) less than the large tree benchmark for the relevant bioregional EVC.
Scattered tree	Defined in the Guidelines (DEECA (Vic), 2025a) as: ‘A native canopy tree that does not form part of a patch’.
SREA	Samsung C&T Renewable Energy Australia
TPZ	Tree Protection Zone. Defined in AS 4970:2025 (Standards Australia, 2025) as ‘specified zone above and below ground and at given offsets from the trunk set aside to protect a tree’s roots and crown where these might be damaged by development.’
Umwelt	Umwelt (Australia) Pty Limited
VBA	Victorian Biodiversity Atlas
Vic	Victoria
Victorian Wetland Inventory (Current)	A geospatial dataset administered by DEECA showing the extent and types of wetlands in Victoria.
DEECA mapped wetland	A wetland mapped in the Victorian Wetland Inventory (Current) dataset. These wetlands are considered a patch of native vegetation.

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1.0 Introduction

Darnum BESS Pty Ltd (ACN 694 489 828) as trustee of the Darnum BESS Trust (ABN 84 694 489 828) (the Applicant), owned by Samsung C&T Renewable Energy Australia (SREA) (ABN 74 661 046 331), is proposing the development of the Darnum Battery Energy Storage System (the Project) at 875 Darnum Shady-Creek Road, Shady Creek, Victoria (the Project Site). The Project would involve the construction, operation and decommissioning of a Battery Energy Storage System (BESS) with a delivery capacity of up to approximately 200 Megawatts (MW) / 800 MWh (4 hr).

This ecological impact assessment has been prepared as part of the Planning Permit Application for the Project which will be assessed by the Minister for Planning as the responsible authority. Umwelt Australia Pty Ltd. (Umwelt) has been engaged to prepare the ecological impact assessment.

1.1 Assessment Purpose and Scope

The purpose of this report is to outline the findings of the ecological impact assessment (hereafter, this assessment), including the identification of ecological values relevant to the Project and the potential impacts the Project may have on those ecological values. The relevance of Commonwealth and State legislation and policy requirements and subsequent approvals pathways in relation to the values identified, are also outlined. Specifically, the scope of this assessment comprised the following objectives:

- Determine the likelihood of threatened and/or endangered ecological communities occurring within or adjacent to the assessment area
- Determine the type, quality and extent of native vegetation present within the assessment area in accordance with the Guidelines for removal, destruction or lopping of native vegetation (DEECA (Vic), 2025a) and the Vegetation Quality Assessment Manual, (DSE (Vic), 2004)
- Assess the likely impacts of the Project on ecological values likely to occur within the assessment area
- Identify any permit and/or approval requirements associated with likely impacts to ecological values.
- Provide recommendations to further avoid, minimise or otherwise mitigate impacts to ecological values for the detailed design and construction phases of the project.

1.2 Project Description

The Project would comprise the following key components:

- A 200 MW / 800 MWh BESS compound, including 196 battery modules, 49 x 6.36 MVA step-up transformers and associated cabling.
- An onsite 33 kV / 220 kV Project substation, including a 240 MVA HV transformer, switchgear / control rooms, harmonic filters and associated infrastructure.

- A switchyard to facilitate Project connection into the National Electricity Market (NEM) via the existing 220 kV overhead transmission line (Yallourn Power Station to Rowville Terminal Station) that runs across the southern portion of the Project Site.
- Ancillary infrastructure and works including site access, internal access roads and parking, operations and maintenance facilities, stormwater infrastructure, noise walls and radiant heat walls, fire water tanks and systems, asset protection zones, lightning protection, lighting, signage, security devices and fencing, landscaping/screening.

The Project would have a total development footprint of approximately 7 ha, inclusive of approximately 2.5 ha for the BESS compound, approximately 3.0 ha for the Project substation, switchyard and grid connection, along with approximately 1.5 ha for ancillary infrastructure external to the main infrastructure compounds.

Access to the Project is planned directly from Darnum-Shady Creek Road via a modified version of the existing crossover which currently provides access to the host dwelling and associated farm infrastructure and operations. A secondary access is also proposed off Darnum-Shady Creek Road near the southern site boundary and would function primarily as an emergency access.

The BESS would have a capacity of 200 MW active power and 800 MWh battery storage capacity, which would improve the stability of the NEM by storing electricity during periods of low demand, and releasing during periods of high demand.

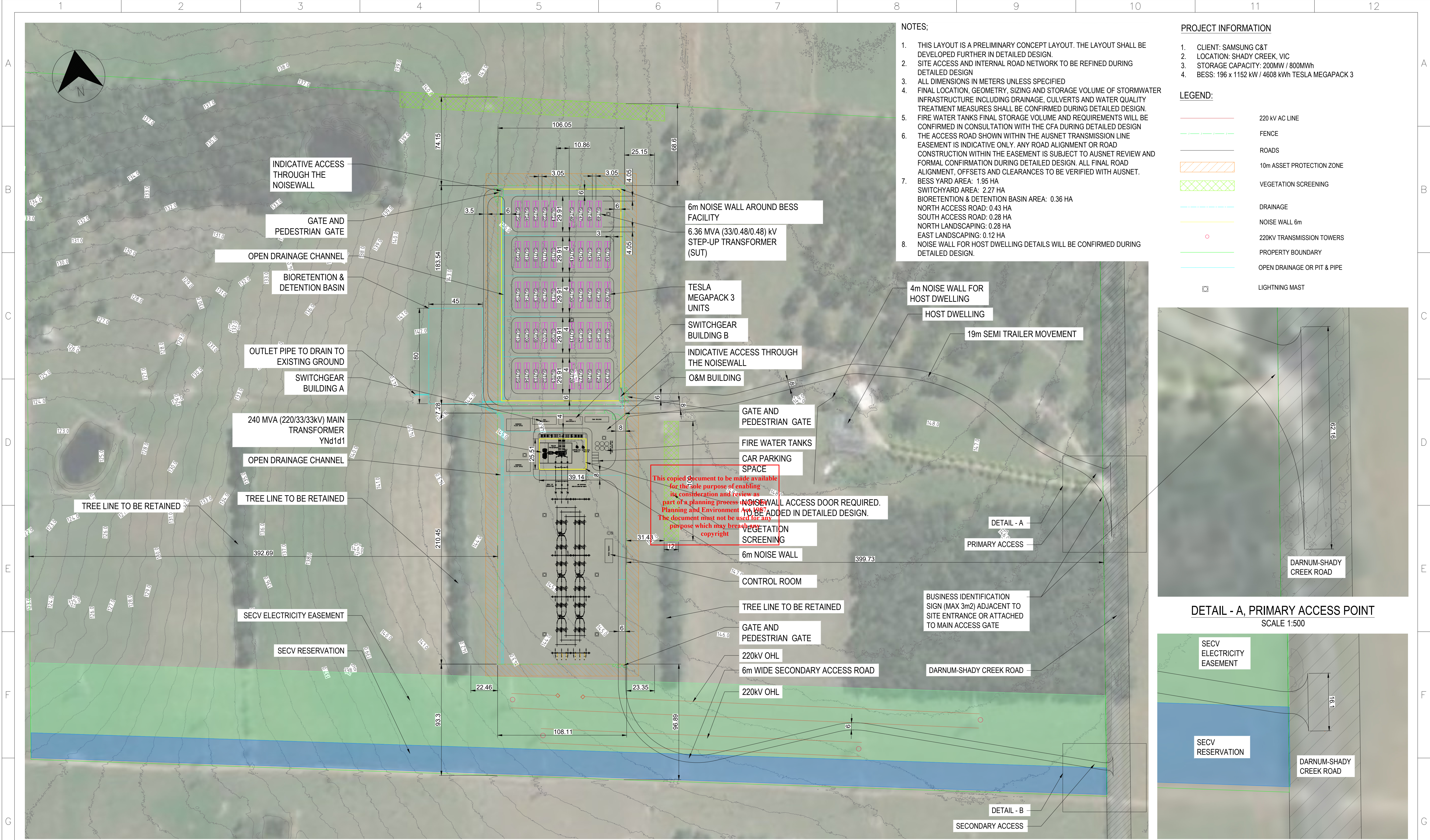
Construction is expected to commence in 2027 and take up to 18 months to complete. For planning purposes, an indicative construction envelope of up to approximately 20.5 ha has been identified to encompass areas required for access, material and equipment laydown, staff parking and amenities, offices and construction water supply, along with temporary working buffers around the development footprint. Not all of the indicative construction envelope is expected to be disturbed for construction of the Project. Additional temporary construction areas beyond the permanent infrastructure footprint would be minimised, wherever practicable, to reduce disturbance impacts, and would be investigated once the construction contractor is appointed and detailed construction scheduling / sequencing has been confirmed.

The Project would operate 24 hours a day, 7 days a week and has an expected 25-year operating lifespan. At the conclusion of this 25-year period, the BESS components may be replaced or refurbished to extend the life (subject to market conditions) or otherwise decommissioned.

The proposed Project concept layout plan is shown in **Figure 1.1**.

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NOTES;

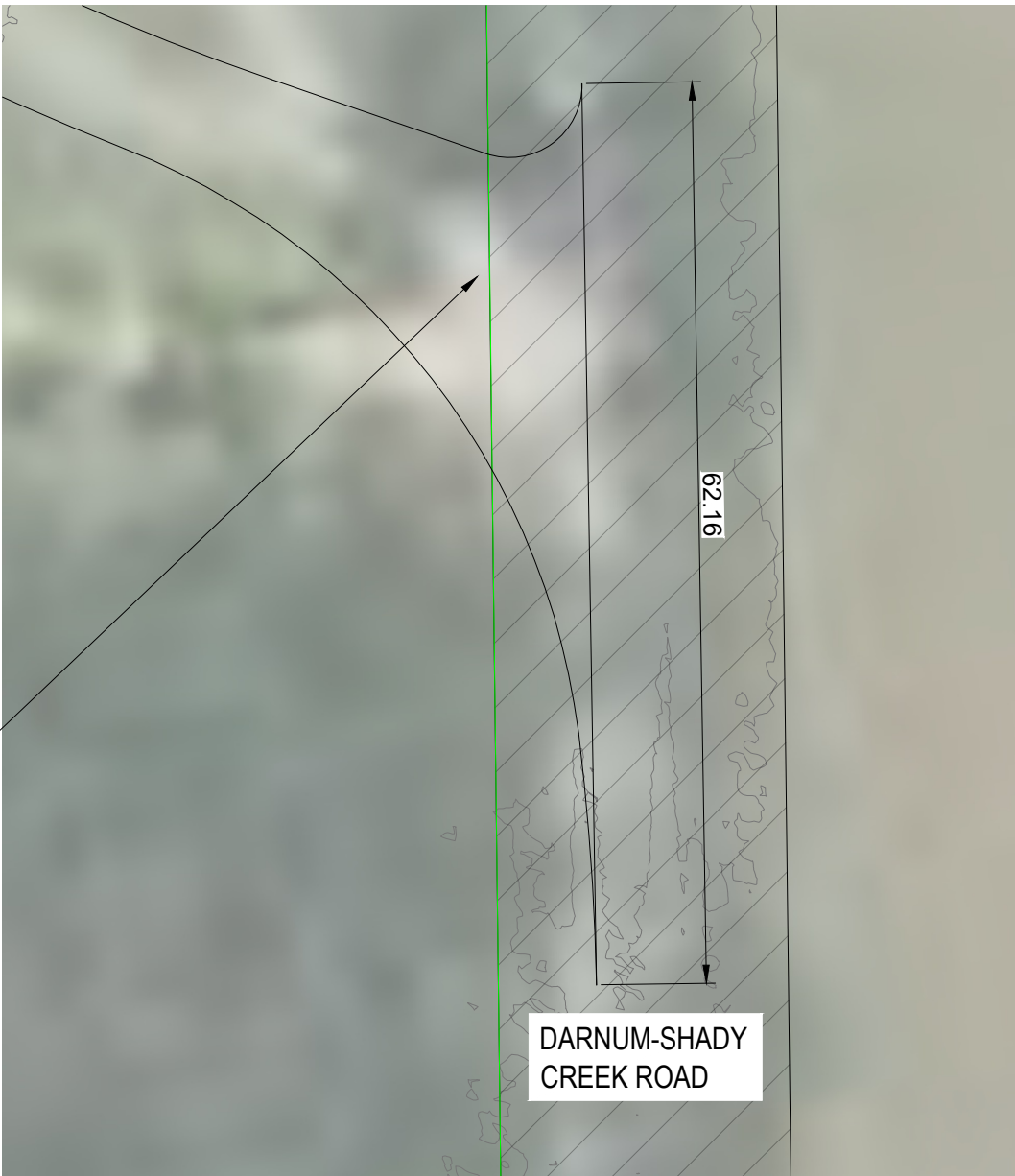
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- 2. SITE ACCESS AND INTERNAL ROAD NETWORK TO BE REFINED DURING DETAILED DESIGN
- 3. ALL DIMENSIONS IN METERS UNLESS SPECIFIED
- 4. FINAL LOCATION, GEOMETRY, SIZING AND STORAGE VOLUME OF STORMWATER INFRASTRUCTURE INCLUDING DRAINAGE, CULVERTS AND WATER QUALITY TREATMENT MEASURES SHALL BE CONFIRMED DURING DETAILED DESIGN.
- 5. FIRE WATER TANKS FINAL STORAGE VOLUME AND REQUIREMENTS WILL BE CONFIRMED IN CONSULTATION WITH THE CFA DURING DETAILED DESIGN
- 6. THE ACCESS ROAD SHOWN WITHIN THE AUSNET TRANSMISSION LINE EASEMENT IS INDICATIVE ONLY. ANY ROAD ALIGNMENT OR ROAD CONSTRUCTION WITHIN THE EASEMENT IS SUBJECT TO AUSNET REVIEW AND FORMAL CONFIRMATION DURING DETAILED DESIGN. ALL FINAL ROAD ALIGNMENT, OFFSETS AND CLEARANCES TO BE VERIFIED WITH AUSNET.
- 7. BESS YARD AREA: 1.95 HA
SWITCHYARD AREA: 2.27 HA
BIORETENTION & DETENTION BASIN AREA: 0.36 HA
NORTH ACCESS ROAD: 0.43 HA
SOUTH ACCESS ROAD: 0.28 HA
NORTH LANDSCAPING: 0.28 HA
EAST LANDSCAPING: 0.12 HA
- 8. NOISE WALL FOR HOST DWELLING DETAILS WILL BE CONFIRMED DURING DETAILED DESIGN.

PROJECT INFORMATION

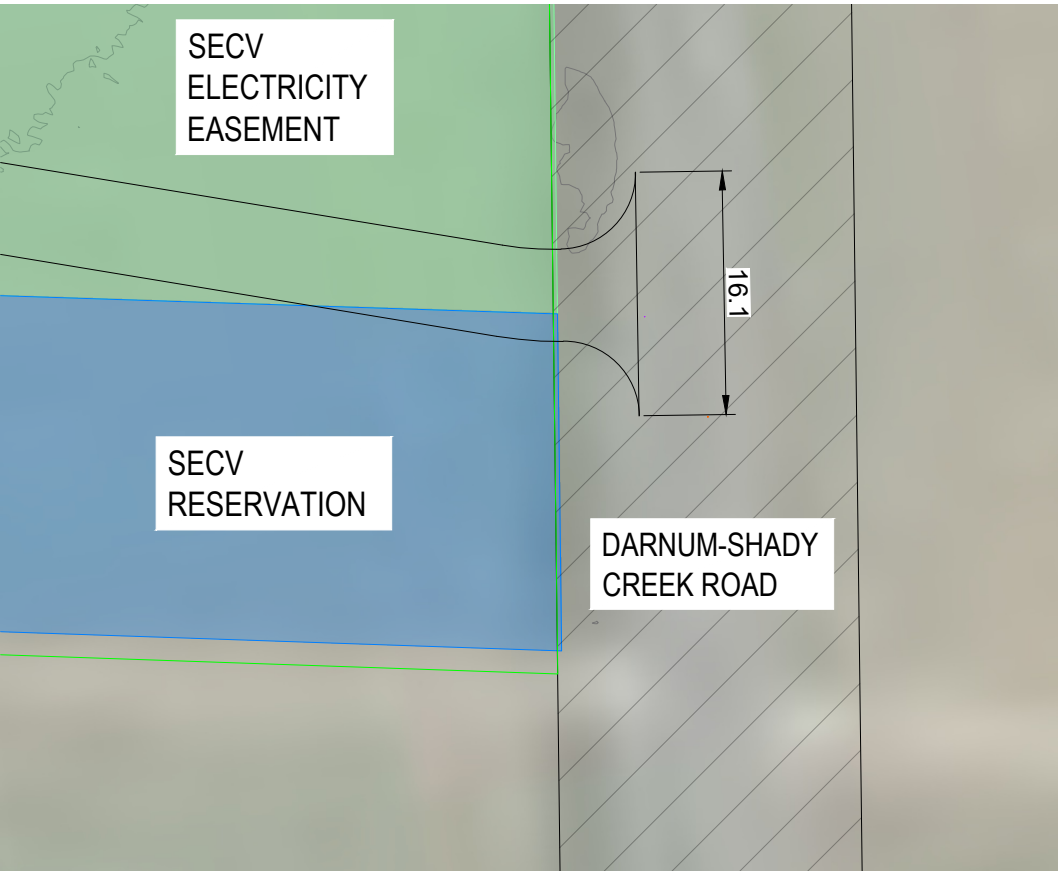
- 1. CLIENT: SAMSUNG C&T
- 2. LOCATION: SHADY CREEK, VIC
- 3. STORAGE CAPACITY: 200MW / 800MWh
- 4. BESS: 196 x 1152 kW / 4608 kWh TESLA MEGAPACK 3

LEGEND:

- 220 kV AC LINE
- FENCE
- ROADS
- 10m ASSET PROTECTION ZONE
- VEGETATION SCREENING
- DRAINAGE
- NOISE WALL 6m
- 220KV TRANSMISSION TOWERS
- PROPERTY BOUNDARY
- OPEN DRAINAGE OR PIT & PIPE
- LIGHTNING MAST



DETAIL - A, PRIMARY ACCESS POINT
SCALE 1:500



DETAIL - B, SECONDARY ACCESS POINT
SCALE 1:500

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PLAN
SCALE 1:1500

CONCEPT DESIGN

J	CONCEPT DESIGN	MK	GM	RM	JD	30/06/2026
I	CONCEPT DESIGN	MK	GM	RM	JD	10/06/2026
H	CONCEPT DESIGN	MK	GM	RM	MK	29/05/2026
G	CONCEPT DESIGN	MK	GM	RM	JD	20/03/2026
F	CONCEPT DESIGN	MK	GM	RM	JD	13/03/2026
REV	DESCRIPTION	DESIGNED	DRAWN	REVIEWED	APPROVED	DATE

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CLIENT SAMSUNG C&T SHADY CREEK, VIC			
DRAFTER G.MIN	DESIGNER M.KENYI	REVIEWER R.MEYER	APPROVER J.DARKER

TITLE DARNUM BESS SITE LAYOUT SET OUT DIMENSIONS			
PROJECT DATUM	Original Size A1	MIDDLETON GROUP DRAWING NUMBER	
SCALE 1:2000	E CODE	DNB-E-DRG-005 DRAWING NUMBER	J REV

1.3 Assessment Area

The area that is the subject of this assessment (hereafter the assessment area) is located approximately 8 km north-east of Warragul, Victoria, and comprises the Project Site as well as the section of the Darnum–Shady Creek Road reserve immediately adjacent to the east. The assessment area has been defined to capture all potential Project impacts to ecological values. The assessment area (approximately 52.5 ha) is shown in **Figure 1.2**.

Land use, planning and administrative particulars for the assessment area (as relevant to this assessment) are summarised in **Table 1.1**.

Table 1.1 Land Use Planning and Administrative Particulars Relevant to the Assessment Area

Address	875 Darnum-Shady Creek Road, Shady Creek, VIC, 3821
SPI	2\LP79375
Land tenure	The property is privately owned freehold land. The adjacent Darnum-Shady Creek Road reserve is publicly managed Crown land.
Local Government Area (LGA)	Baw Baw Shire
Zoning	FZ – Farming Zone
Relevant provisions and overlays¹	• Baw Baw Clause 12.01 Biodiversity • Baw Baw Cause 52.17 Native Vegetation • There are no overlays present that control the removal of vegetation
Catchment Management Authority (CMA)	West Gippsland
Land use	The majority of the property is currently utilised for cattle grazing.

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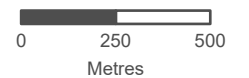
¹ N.b., planning overlays considered for this assessment are limited to those that control the removal of vegetation.



FIGURE 1.2
Assessment Area

Legend

- Roads
- Watercourse
- Existing Transmission Lines
- Parcel
- ▭ Assessment Area



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1.4 Ecological Setting

Matters relevant to the ecological setting of the assessment area (such as modelled native vegetation, topography and threatened species records) are summarised in **Table 1.2** below.

These matters have been identified by the desktop review, as undertaken per the methods outlined in **Section 2.1**.

Table 1.2 Ecological Setting of the Assessment Area

Matter	Desktop review findings
Vegetation modelling	
Bioregion	Gippsland Plain
Ecological Vegetation Class (EVC) modelling	1750 EVC modelling indicates that the assessment area supported Lowland Forest (EVC 16) over most of its extent prior to clearance. The north-west portion of the assessment area is modelled to have supported Swampy Riparian Complex (EVC 126) (DEECA (Vic), 2025b). 2005 EVC modelling indicates that the majority of the assessment area has been cleared, with fragments of the above-mentioned EVCs remaining in the east and the north-west (DEECA (Vic), 2023a).
FFG Communities	The Sedge-rich <i>Eucalyptus camphora</i> Swamp Community is modelled to occur in the vicinity of the assessment area (DEECA (Vic), 2022).
Wetlands mapped in the Victorian Wetland Inventory (Current) dataset	No wetlands included in the Victorian Wetland Inventory (Current) dataset (hereafter, DEECA mapped wetlands) are mapped within the assessment area (DEECA (Vic), 2025b).
Landscape and waterways	
Waterways/waterbodies	One unnamed ephemeral drainage line occurs in the in the north-west of the assessment area. Two open farm dams occur along the length of this waterway within the assessment area.
Wetlands of National significance	No wetlands of National significance occur within the assessment area (DEECA (Vic), 2023c).
Landscape connectivity	- The ephemeral drainage line provides hydrological and ecological connectivity to the broader regional waterway network. - Although fragmented, remnant patches of woody vegetation within the assessment area contribute to landscape connectivity: - Vegetation in the eastern portion of the site is contiguous with roadside woody vegetation, facilitating potential fauna movement and dispersal. - A stand of woody vegetation in the north-west adjoins a larger vegetated patch (separated by an unsealed driveway), which in turn connects to the surrounding waterway network including associated riparian vegetation.
Topography	The topography of the assessment area ranges from generally flat in the east, to gently undulating in the west. There is a gentle incline from 130 m ASL to 150 m above sea level from the western edge of the assessment area to the centre of the assessment area.

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Matter	Desktop review findings
Threatened species records	
Flora	There are 604 threatened flora records within 10 km of the assessment area across five taxa. Records/taxa of particular note include: Green Scentbark (<i>Eucalyptus fulgens</i>) and Strzelecki Gum (<i>Eucalyptus strzeleckii</i>) have been recorded 500 m north-west of the assessment area. Previous threatened flora records within 10 km of the assessment area are summarised by species in Appendix A.
Fauna	There are 554 threatened fauna records within 10 km of the assessment area across 28 taxa (Appendix A). Records/taxa of particular note include: - Growing Grass Frog (<i>Ranoidea raniformis</i>) has been relatively recently (2006) recorded 500 m north-west of the assessment area. Further, there are numerous records of the species in the landscape surrounding the assessment area. - There are numerous records of Gang Gang Cockatoo (<i>Callocephalon fimbriatum</i>) in the landscape surrounding the assessment area. Previous threatened fauna records within 10 km of the assessment area are summarised by species in Appendix A.
Matters of National Environmental Significance – Protected Matters Search Tool results	
Wetlands of International Importance	- Gippsland Lakes Ramsar Site – per the attached PMST (Appendix B), the assessment area is 50–100 km upstream of the Gippsland Lakes Ramsar site. - Western Port Ramsar Site – per the attached PMST, the assessment area is 40–50 km upstream of the Gippsland Lakes Ramsar site.
Listed threatened species	42 threatened species were identified as being of relevance to the assessment area by the PMST.
Listed migratory species	9 listed migratory species were identified as being of relevance to the assessment area by the PMST.
Other MNES	No other MNES were identified by the PMST as being of relevance to the assessment area.

1.5 Legislation and Policy

Legislation and policy considered by this document (including a summary of relevance to the Project) is addressed in **Section 6.0**. That legislation and policy includes:

- Commonwealth
 - Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act)
- State
 - Environment Effects Act 1978* (EE Act)
 - Flora and Fauna Guarantee Act 1988* (FFG Act)
 - Planning and Environment Act 1987* (P&E Act)
 - Guidelines for the removal, destruction or lopping of native vegetation (the Guidelines)
 - Catchment and Land Protection Act 1994* (CaLP Act)
 - Wildlife Act 1975* (Wildlife Act).

2.0 Methods

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2.1 Desktop Review

A review of the following databases, documents and datasets was undertaken to provide information on native vegetation, threatened ecological communities, threatened flora and fauna previously identified or modelled to occur within or nearby to the assessment area:

- **Protected Matters Search Tool (PMST)** (DCCEEW (Cth), 2025) [accessed 29/09/2025]: The PMST (administered by the Commonwealth Department of Climate Change, Energy, the Environment and Water (DCCEEW)) identifies Matters of National Environmental Significance (MNES) listed under the EPBC Act. The PMST report utilised in this this assessment was generated using a 10 km buffer of the assessment area.
- **Victorian Biodiversity Atlas (VBA)** (DEECA (Vic), 2025c) [accessed 29/09/2025]: The VBA (administered by Victorian Department of Energy, Environment, and Climate Action (DEECA)) comprises records of flora and fauna species within Victoria. Records are added opportunistically by a broad range of observers, as flora and fauna surveys are conducted across the State. Records are curated and proofed by DEECA. Records utilised in this assessment were extracted from the VBA online portal against a 10 km buffer of the assessment area.
- Biodiversity datasets administered by DEECA including
 - Native Vegetation - Modelled 1750 Ecological Vegetation Classes (with Bioregional Conservation Status) (DEECA (Vic), 2025b) [accessed 30/07/2025].
 - Native Vegetation - Modelled 2005 Ecological Vegetation Classes (with Bioregional Conservation Status) (DEECA (Vic), 2023a) [accessed 30/07/2025].
 - Native Vegetation - Flora and Fauna Guarantee Act Listed Communities (DEECA (Vic), 2022) [accessed 30/07/2025].
 - Victorian Wetland Inventory (Current) (DEECA (Vic), 2023b) [accessed 30/07/2025].
 - Victorian Wetlands listed in - A Directory of Important Wetlands in Australia (DEECA (Vic), 2023c) [accessed 30/07/2025].

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2.2 Site Assessment

2.2.1 General Vegetation and Habitat Assessment

A general vegetation and habitat assessment of the assessment area was undertaken by Umwelt ecologists on 4 August 2025 to 5 August 2025 (inclusive). Vegetation and habitat assessment included:

- Mapping of native vegetation including patches, large canopy trees and scattered trees in accordance with the Guidelines (DEECA (Vic), 2025a). Mapping of large canopy trees and scattered trees was targeted to areas most likely to be subject to Project impacts. Mapped patches were delineated into habitat zones - discrete areas of native vegetation consisting of a single EVC and similar overall quality.

- Undertaking a Habitat Hectare Assessment of any patches of native vegetation in accordance with the Vegetation Quality Assessment Manual v1.3 (DSE (Vic), 2004).
- Recording potential habitat for threatened flora and fauna that may occur within the assessment area.
- Assessing the presence of threatened communities in accordance with the listing advice for those communities.
- Describing the vegetation and habitat present, including recording the floral taxa observed.

2.2.2 Detailed Ecological Investigations

2.2.2.1 Targeted Flora Surveys

Following the general vegetation and habitat assessment, four threatened flora species were identified as having a moderate or higher likelihood of occurrence within the assessment area, in accordance with the methodology outlined in **Section 2.3**. Targeted surveys were therefore undertaken for these species in areas of suitable habitat where the potential for Project impacts were identified.

Targeted flora surveys were conducted for:

- Green-striped Greenhood (listed as vulnerable under the EPBC Act and endangered under the FFG Act) on 25 September 2025.
- Matted Flax-lily (endangered under the EPBC Act and critically endangered under the FFG Act), Green Scentbark (vulnerable under the FFG Act), and Strzelecki Gum (vulnerable under the EPBC Act and critically endangered under the FFG Act) on 8 December 2025.

The targeted flora survey area (**Figure 2.1**) was systematically surveyed by two ecologists walking parallel transects spaced approximately 5 m apart.

2.2.2.2 Meandering Searches for Burrowing Cray Chimneys

Meandering searches for burrowing cray chimneys (burrow structures characteristic of *Engaeus* spp.) were undertaken in the vicinity of the farm dams and the ephemeral waterway present within the assessment area on 4 August 2025. These searches were completed by traversing the area in the vicinity of these habitat features on foot, scanning the ground for chimneys, meandering to achieve a satisfactory coverage of the area surveyed.

These searches were targeted at determining the potential presence of the Warragul Burrowing Crayfish (listed as critically endangered under the FFG Act). Although the Project site is not within the known range of the species, records of the species within 10 km were identified through the desktop review, and therefore targeted survey for signs of the species was conservatively undertaken.

The area subject to targeted survey is mapped in **Figure 2.1**.

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2.2.2.3 Detailed Tree Survey

A detailed tree survey was undertaken in areas where potential impacts to woody native vegetation were identified (in particular, the potential access road to the BESS site associated with the northern access point). This survey was undertaken to inform accurate assessment of impacts to native vegetation patches, including those associated with the notional root zones (NRZs) of patch trees, and to ensure fauna habitat values were appropriately captured.

Noting that all scattered trees within the assessment area had already been captured as part of the general vegetation and habitat assessment, the detailed tree survey included:

- Mapping of large and small patch trees.
- Assessment of hollow-bearing status through visual inspection of each tree from ground level.

The extent of the detailed tree survey area is shown in **Figure 2.1**.

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FIGURE 2.1
Detailed Ecological Investigation Areas

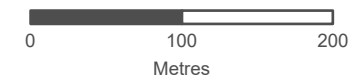
Legend

- Roads
- Watercourse
- Parcel
- - - Assessment Area

Detailed Ecological Investigation Areas

- Targeted Threatened Flora Survey Area
- Detailed Tree Assessment Area
- Burrowing Cray Chimney Search Area

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2.2.3 Spatial Field Data Capture

Spatial data was collected in the field in ArcGIS Field Maps using both direct capture with the integrated mobile phone GPS receiver, and indirect feature capture based on aerial imagery. Mobile phone GPS receivers used are capable of GPS 3–5 m accuracy under optimal conditions, and aerial imagery can often be metres out of alignment. Therefore, the location of features mapped should be considered as indicative, albeit suitable for informing project design and impact assessment.

2.3 Likelihood of Occurrence Assessment for Threatened Species

An assessment of the likelihood of occurrence of threatened species within the assessment area was undertaken. This assessment considered previous records and modelled occurrences within 10 km of the site identified during the desktop review (including the PMST and the VBA), together with the results of field assessments described in **Section 2.2**, including the presence of suitable habitat.

Likelihood of occurrence was determined based on each taxon's known habitat preferences and ecology in comparison with habitat available within the assessment area, as well as survey history and detectability, taking into account all fieldwork undertaken for the Project. The criteria used to assign likelihood of occurrence categories are provided in **Appendix A**.

Taxa assessed as having a likelihood of occurrence above 'low' (i.e. 'moderate', 'high' or 'recorded') were subject to further consideration in the impact assessment. Taxa assigned a 'low' or 'negligible' likelihood are considered unlikely to occur and were not considered further.

2.4 Ecological Impact Assessment

Project impacts to ecological values were assessed where those values were assessed to have a moderate or higher likelihood of occurrence. Impacts considered included both direct and indirect.

2.4.1 Direct Impacts to Native Vegetation and Threatened Species Habitat

Direct impacts to mapped areas of native vegetation or areas of threatened species habitat were determined by comparing the indicative disturbance envelope to the mapped natural values. Generally, these values were considered to be lost wherever they were intersected by the indicative disturbance envelope. The following assumptions have been made in determining direct loss of these values:

- For vegetation communities that do not feature a tree canopy, mapped vegetation was considered to be lost wherever it intersects the indicative disturbance envelope.
- A mapped tree was considered lost where 10% or more of its Notional Root Zone (NRZ) was intersected by the indicative disturbance envelope. The radius of the NRZ is calculated as 12 x the DBH of the relevant tree, in accordance with the Australian Standards (AS4970-2025).

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- For vegetation communities that featured a tree canopy, mapped vegetation was considered to be lost wherever it intersects the indicative disturbance envelope, and where the NRZ of a mapped constituent small or large patch tree within an area of mapped vegetation is intersected by more than 10%. Where a constituent small or large patch tree is lost, the area of the native vegetation represented by that tree's canopy is also considered to be lost.

2.4.2 Determination of Indirect Impacts

Indirect impacts to natural values, such as the modification of biotic and abiotic factors in the environment have been considered in determining the impact of the Project to natural values and threats. Potential impacts considered include:

- The spread of noxious weeds and pathogens.
- Potential barriers to dispersal.
- Fragmentation of a population or habitat.
- Erosion and sedimentation.
- Changes to light, noise and visual disturbance regimes in the environment.
- Changes to abiotic habitat features such as water and light availability.

2.5 Nomenclature and Taxonomy

Use of scientific and common names follows the Victorian Biodiversity Atlas. An asterisk (*) preceding a name indicates taxa which are not indigenous to Victoria. A hash (#) signifies a Victorian indigenous plant species that is not indigenous within the assessment area (i.e. its occurrence is outside of its natural range).

Short-form, in-text conservation status indicators have been appended to species names where relevant. The lowercase status indicators, 'p', 'vu', 'en', and 'cr' indicate that a species is listed as generally protected, vulnerable, endangered or critically endangered under the FFG Act respectively. Uppercase status indicators, 'VU', 'EN', and 'CR' indicate that a species is listed as vulnerable, endangered or critically endangered under the EPBC Act respectively.

When taxa are first introduced in this report they are written with common name followed by scientific name (*in italics*), they are then subsequently referred to by common name only (unless there is not one available). Common names are capitalised and treated as proper nouns to avoid ambiguity.

2.6 Assumptions and Limitations

Information presented in this report is based on conditions at the time of the assessment. Changes to the ecological conditions occur over time through natural and human influences and may alter the conclusions of this report.

This report is based on the assessment area (**Figure 1.2**) and indicative disturbance envelope (**Figure 4.1**). Should Project works be required outside of the indicative disturbance envelope, this report will require review.

Information from available desktop data has not been confirmed through survey or assessment, unless explicitly detailed in this report. The sources include some modelled data (e.g. DEECA EVC mapping and EPBC Act PMST results) and hence this should be considered indicative only.

VBA data is variable depending on the number of previous surveys undertaken in the search area and the ability to readily observe species. For example, at the time of historical site visits some plant species may not have been flowering or visible above the ground and therefore not identified as being present within the area surveyed. In the case of fauna, species move around the landscape and can be in hidden or cryptic locations, so while they potentially utilise or reside within a site, they may often not be observed during surveys. The above has been considered in determining the likelihood of threatened species presence.

Flora taxa observed during the field survey period were recorded. Effort was made to focus on recording indigenous taxa rather than aliens. The site visits were undertaken in spring and early summer (August – December 2025) which is generally a good time for observing flora, however there are still some taxa that would not have been visible or were overlooked. Hence the flora recorded should not be considered a comprehensive list however it is considered that the flora survey undertaken is sufficient and adequate survey effort has been undertaken to detect threatened flora within the indicative disturbance envelope.

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3.0 Ecological Values and Existing Conditions

3.1 Vegetation and Habitat

Much of the assessment area is heavily modified from its modelled pre-1750 condition, with much of the property having been previously cleared of native vegetation and currently supporting improved pasture for grazing livestock. Relatively intact stands of native vegetation occur in the north-west and the east of the assessment area.

Vegetation and habitat observed within the assessment area are described below.

3.1.1 Native Vegetation Patches

The assessment area was found to support 14.42 ha of native vegetation patches across three EVCs. The extent of native vegetation patches within the assessment area is summarised by EVC in **Table 3.1** below and mapped in **Figure 3.1**. EVCs are described as they presented within the assessment area in **Section 3.1.1.1** to **Section 3.1.1.5**.

Table 3.1 **Extent of ecological vegetation classes mapped within the assessment area**

EVC	Bioregion	Bioregional conservation status	Extent within assessment area (ha)
Lowland Forest (EVC 16)	Gippsland Plain	Vulnerable	10.49
Swampy Riparian Woodland (EVC 83)	Gippsland Plain	Endangered	3.87
Tall Marsh (EVC 821)	Gippsland Plain	Depleted ²	0.06
Total			14.42

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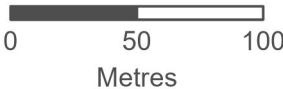
² Bioregional conservation status (BCS) for the Riverina bioregion has been used for this EVC, as there is no BCS listed for this EVC in the Gippsland Plain bioregion.



FIGURE 3.1a
Ecological Values

- Legend**
- Roads
 - Watercourse
 - Parcel
 - Monterrey Cypress Shelterbelt
 - ⋮ Assessment Area
- Patches of Native Vegetation**
- Lowland Forest
 - Swampy Riparian Woodland
 - Tall Marsh
- Trees**
- Patch Tree (Large)
 - Patch Tree (Small)
 - Scattered Tree (Large)
 - Scattered Tree (Small)
 - Other
 - Hollow-bearing
 - + *Eucalyptus fulgens* (threatened)
 - Notional Root Zone
- Threatened and Protected Flora**
- + *Dipodium* sp.
 - + *Eucalyptus fulgens*

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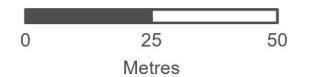
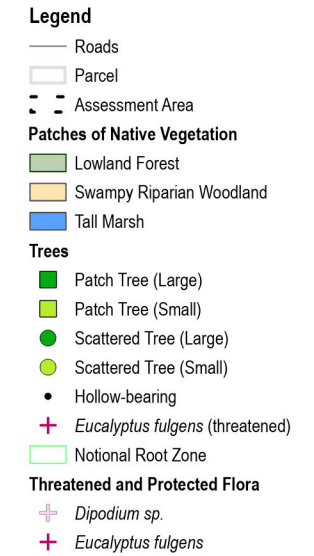


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FIGURE 3.1b
Ecological Values



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3.1.1.1 Lowland Forest (EVC 16) – High Quality

Larger, higher quality Lowland Forest habitat zones were primarily recorded in the eastern portion of the assessment area, extending into the Shady Creek–Darnum Road reserve. These areas were classified as the Lowland Forest EVC based alignment with vegetation modelling (DEECA (Vic), 2025b) as well as floristic and structural consistency with the relevant EVC benchmark, particularly a canopy dominated by Messmate Stringybark (*Eucalyptus obliqua*) and Narrow-leaf Peppermint (*E. radiata*). The characteristics of these habitat zones are summarised in **Table 3.2** below.

Table 3.2 High-quality Lowland Forest Characteristics

Characteristic	Description
Canopy stratum	18m high, 30% cover. Characteristic flora species include Messmate Stringybark (<i>Eucalyptus obliqua</i>) and Narrow-leaf Peppermint (<i>E. radiata</i>) (co-dominant).
Mid stratum	2-7m high, 5% cover. Characteristic flora species include Blackwood (<i>Acacia melanoxylon</i>), Black Wattle (<i>A. mearnsii</i>) and Burgan (<i>Kunzea leptospermoides</i>).
Ground stratum	≤ 1 m high, 60% cover. Characteristic flora species include: Wallaby grasses (<i>Rytidosperma</i> spp.), Spear grasses (<i>Austrostipa</i> spp.), Weeping Grass (<i>Microlaena stipoides</i> var. <i>stipoides</i>), Wattle Mat-rush (<i>Lomandra filiformis</i>) and Thatch Saw-sedge (<i>Gahnia radula</i>).
Disturbance and weed invasion	Minimally disturbed relative to surrounding agricultural landscape. 5% weed cover, predominantly in the in the ground stratum, with characteristic species including cirsium, Common Centaury (<i>*Centaureum anthraea</i>), Blackberry (<i>*Rubus</i> spp.) and Spear Thistle (<i>*Cirsium vulgare</i>).
Flora habitat	High-quality habitat for a range of flora, with a diverse ground layer of forbs and graminoids and evidence of ongoing recruitment of native trees and shrubs.
Fauna habitat	High-quality habitat for a range of fauna, with large hollow-bearing trees offering nesting and roosting opportunities, a eucalypt canopy supporting foraging by insectivorous and nectivorous species, and abundant coarse woody debris and dense tufted ground cover providing shelter for small terrestrial fauna.
Habitat zones	LF2a, LF2b, and LF2c



Photo 3.1 Habitat Zone LF2a – an Indicative Example of High-quality Lowland Forest within the Assessment Area

3.1.1.2 Lowland Forest (EVC 16) – Moderate Quality

Moderate quality Lowland Forest habitat zones occurred in the north-east of the assessment area, near higher-quality habitat zones of this EVC, albeit distinguished from those higher quality examples on the basis of their simplified understorey strata. The characteristics of these habitat zones are summarised in **Table 3.3** below.

Table 3.3 Moderate quality Lowland Forest Characteristics

Characteristic	Description
Canopy stratum	16m high, 30% cover. Characteristic flora species include Messmate Stringybark (<i>Eucalyptus obliqua</i>) and Narrow-leaf Peppermint (<i>E. radiata</i>) (co-dominant).
Mid stratum	Absent.
Ground stratum	<10 cm, 5% cover (albeit 40% in habitat zone LF1C). Characterised predominantly by Weeping Grass across all habitat zones.
Disturbance and weed invasion	Regularly grazed, with historic clearance of canopy and understory vegetation. 90% exotic vegetation cover, exclusively in the ground stratum with characteristic species including pasture grasses such as Brown-top Bent (<i>*Agrostis capillaris</i>), and Sweet Vernal (<i>*Anthoxanthum odoratum</i>).
Flora habitat	Poor quality habitat for native flora, with the ground layer largely dominated by perennial exotic grasses and only limited persistence of native species (e.g. Weeping Grass). Regular grazing and dominance by exotic perennial grasses appears to constrain recruitment of native ground layer taxa, and tree recruitment is absent. Notwithstanding, habitat zone LF1c supports a comparatively higher proportion of native understorey flora cover, including a modest cover and diversity of forb taxa, indicating relatively higher quality flora habitat in that habitat zone.
Fauna habitat	Provides primarily arboreal habitat with larger trees (including hollow-bearing individuals) offering nesting and roosting opportunities and a locally not canopy supporting foraging by arboreal fauna. However, the structurally simplified understorey limits shelter and foraging resources for small terrestrial species.
Habitat zones	LF1a, LF1b, LF1c



Photo 3.2 Habitat zone LF1b - an Indicative Example of Moderate-quality Lowland Forest within the Assessment Area

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3.1.1.3 Lowland Forest (EVC 16) – Low Quality

Small, scattered instances low-quality Lowland Forest habitat zones occurred within the assessment area and were distinguished from moderate and high quality zones on the basis that they lacked a eucalypt canopy and featured relatively low-diversity understoreys. The characteristics of these habitat zones are summarised in **Table 3.4** below.

Table 3.4 Lowland Forest – Low Quality Characteristics

Characteristic	Description
Canopy stratum	Absent
Mid stratum	Shrubby variant: 2 m high, 60% cover (shrubby variant), dominated by Burgan; Bracken variant & Weeping Grass variant: absent
Ground stratum	Shrubby variant: absent; Bracken variant: 1m high, 70% cover, characterised by Bracken Fern (<i>Pteridium esculentum</i>) and Thatch Saw-sedge; Weeping Grass variant: 10 cm high, 20% cover, characterised by Weeping Grass.
Disturbance and weed invasion	Shrubby and Weeping Grass variants are both regularly grazed, with historic clearance of canopy and understory vegetation. The Bracken variant appears to be protected from grazing pressure and roadside slashing owing to its position along a fenceline. Extensive exotic vegetation cover (80% cover) by pasture grasses including Perennial Ryegrass (<i>*Lolium perenne</i>), Prairie Grass (<i>*Bromus catharticus</i>), and Brown Top-bent was observed in the shrubby and weeping grass variants, while the Bracken variant was observed to be predominantly native.
Flora habitat	Poor quality habitat for native flora, with the ground layer largely dominated by either perennial exotic grasses or smothering ruderal native species (Bracken Fern and Tatch Saw Sedge). A combination of regular grazing (shrubby and Weeping Grass variants) and dominance by either exotic perennial grasses or smothering ruderal native species appears to constrain recruitment of native ground layer taxa. Tree recruitment is absent.
Fauna habitat	Habitat offered by the shrubby and Weeping Grass variants of this habitat zone is limited with the structurally simplified understorey limiting shelter and foraging resources for small terrestrial species. The dense, structurally complex ground stratum of the Bracken variant, combined with connectivity to adjacent larger, higher-quality habitat zones may provide shelter for small terrestrial fauna, as well as a degree of connectivity with patches outside the assessment area in the Darnum Shady Creek Road reserve.
Habitat zones	LF3a, LF3b, LF3c, LF3d (shrubby variant); LF4a (Weeping Grass variant); LF4b (Bracken variant)



Photo 3.3 LF3b and LF3c - shrubby variant of lowland forest – low quality



Photo 3.4 LF4b – Bracken variant of lowland forest – low quality

3.1.1.4 Swampy Riparian Woodland (EVC 83)

One Swampy Riparian Woodland habitat zone was mapped in the north-west corner of the assessment area. This habitat zone was classified as swampy riparian woodland based alignment with vegetation modelling (DEECA (Vic), 2025b) as well as floristic consistency with the relevant EVC benchmark, including recruitment of characteristic canopy species, Swamp Gum (*Eucalyptus ovata*) and Narrow-leaf Peppermint as well as the presence of various characteristic understorey species. The characteristics of this habitat zone is summarised in **Table 3.5** below.

Table 3.5 Swampy Riparian Woodland characteristics

Characteristic	Description
Canopy stratum	20 m high; 30% cover. Dominated by Eurabbie (<i>E. globulus</i> subsp. <i>bicostata</i>). Linear formation suggests these trees were planted.
Mid stratum	4–10m high, 10% cover. Characteristic species include Prickly Tea Tree (<i>Leptospermum continentale</i>), Prickly Current-bush (<i>Coprosma quadrifida</i>), and Snow Daisy-bush (<i>Olearia lyrata</i>), Swamp Gum, Narrow-leaf Peppermint, and Eurabbie (self-sown).
Ground stratum	To 1 m high, 25% cover. The ground layer was predominantly native, and characterised by Tall Sword-sedge (<i>Lepidosperma elatius</i>), Austral Bracken Fern (<i>Pteridium esculentum</i>), Common raspwort (<i>Gonocarpus tetragynus</i>), and Forest Wire Grass (<i>Tetrarrhena juncea</i>).
Disturbance and weed invasion	Historic vegetation clearance and silvicultural planting. 5% weed cover, predominantly invasion of pasture grasses at the edges of the habitat zone.
Flora habitat	High-quality habitat of a range of low disturbance, with the habitat zone supporting a diverse ground layer of ferns and graminoids and evidence of ongoing recruitment of native tree species.
Fauna habitat	Eucalypt canopy provides foraging opportunities for insectivorous and nectivorous species, though is unlikely to support tree hollows owing to the paucity of large trees. Coarse woody debris and ground stratum vegetation (although relatively sparse) provide shelter and a variety of microhabitats for small terrestrial fauna.
Habitat zones	SRW1a



Photo 3.5 Patch SRW1a – Swampy Riparian Woodland with Planted Eurabbie forming the Tree Canopy

3.1.1.5 Tall Marsh (EVC 821)

One Tall Marsh habitat zone was mapped within the farm dam in the west of the assessment area. Although the classification of this patch as tall marsh is in contrast to vegetation modelling (DEECA (Vic), 2025b), the choice of EVC is consistent with the characteristics of the relevant benchmark including dominance by tall graminoids. The characteristics of this habitat zone is summarised in **Table 3.6** below.

Table 3.6 Tall Marsh characteristics

Characteristic	Description
Canopy stratum	Absent
Mid stratum	Absent
Ground stratum	70cm high; 30% cover. Characteristic species include Spike sedge (<i>Eleocharis</i> sp ³ , dominant in deeper water) and native rush species (<i>Juncus</i> spp., dominant on the dam margin), as well as scattered Lesser Loostripe (<i>Lythrum hyssopifolia</i>) occurring in low densities at the dam margin.
Disturbance and weed invasion	Historic excavation disturbance associated with construction of farm dam. Ongoing disturbance includes cattle access and grazing. 5% weed cover, restricted to the ground stratum, predominantly characterised by pasture grasses at the dam margin.
Flora habitat	Poor flora habitat, comprising an artificial, permanently inundated waterbody lacking the natural seasonal wetting and drying regime required to support diverse wetland vegetation, and instead supporting a largely monospecific stand of <i>Eleocharis</i> sp.
Fauna habitat	Permanent waterbody supporting amphibians and potentially aquatic fauna (e.g. macroinvertebrates and fish), and offering opportunistic foraging habitat for waterbirds. However, the structurally simple vegetation limits the availability of shelter and breeding habitat for a broader range of species.
Relevant zone IDs	TM1a



Photo 3.6 Patch TM1a

³ Although species is considered likely to be a species of spike sedge, this species was not conclusively identified due to the lack of suitable flowering/fruitleting material at the time of assessment, and its location in deep water.

3.1.2 Large Patch Trees

A total of 64 large patch trees were mapped within the assessment area. Mapping of large patch trees was undertaken predominantly in areas where potential impacts to woody native vegetation were identified. As such, the actual number of large canopy trees within the assessment area is expected to be well in excess of 57 trees, with additional trees likely to occur across habitat zones LF2a, LF2b and LF2c. Large patch trees mapped within the assessment area are summarised by species in **Table 3.7** and mapped in **Figure 3.1**.

Large patch trees within the assessment area are considered to form high-value habitat for a range of fauna, contributing to eucalypt canopies supporting foraging by insectivorous and nectivorous species, with hollow-bearing individuals offering nesting and roosting opportunities.

Table 3.7 Large Patch Trees Mapped within the Assessment Area

Scientific name	Common name	No. large canopy trees mapped
<i>Eucalyptus fulgens</i>	Green Scentbark	4
<i>Eucalyptus obliqua</i>	Messmate Stringybark	54
<i>Eucalyptus radiata</i>	Narrowleaf Peppermint	2
<i>Eucalyptus</i> spp. (dead tree)	Eucalypt	4
Total		64

3.1.3 Scattered Trees

A total of 32 scattered trees were mapped within the assessment area, comprising 21 large trees and 11 small trees. Scattered trees mapped within the assessment area are summarised by species in **Table 3.8** and mapped in **Figure 3.1**.

Scattered trees within the assessment area provide habitat for a range of fauna, contributing canopy resources for foraging by insectivorous and nectivorous species, with larger or hollow-bearing individuals offering potential nesting and roosting opportunities. It should be noted however that the habitat they provide is more fragmented and offers reduced connectivity compared to similar patch trees within the assessment area.

Table 3.8 Scattered Trees

Scientific name	Common name	No. small trees mapped	No. large trees mapped	Subtotal (small + large)
<i>Eucalyptus camaldulensis</i>	River Red-gum	1	2	3
<i>Eucalyptus obliqua</i>	Messmate Stringybark	1	11	12
<i>Eucalyptus radiata</i>	Narrowleaf Peppermint	1	0	1
<i>Eucalyptus</i> sp. (dead tree)	Eucalypt	8	8	16
Total		11	21	32

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3.1.4 Scattered Native Vegetation

Weeping Grass

Weeping Grass was recorded in low densities (around 2.5% cover on average) within areas of improved pasture either side of the existing crossover, outside of native vegetation patches in the east of the assessment area. These areas presented as improved pasture (see **Section 3.1.5**) including dominance (>95% cover) by exotic perennial grasses including Brown-top Bent, Prairie Grass and Sweet Vernal, albeit with a minor component of Weeping Grass.

As confirmed with the landholder, these areas are grazed regularly, albeit not as frequently as the improved pasture elsewhere in the assessment area.

Despite the retention of some native understorey vegetation in this area, the habitat values associated with it are limited. Regular grazing and dominance by exotic perennial grasses appears to constrain recruitment of native ground layer taxa other than Weeping Grass, and tree recruitment is absent. Further, the structurally simplified understorey limits shelter and foraging resources for small terrestrial species.

3.1.5 Other Vegetation/Habitat Values

Farm Dams and Ephemeral Drainage Line

Two farm dams occur within the assessment area. The southern dam supports a sparse, largely monospecific patch of Tall Marsh, which offers some habitat value for amphibians and other aquatic fauna (Common Froglet were heard calling during the site assessment (*Crinia signifera*)) and may provide opportunistic foraging habitat for waterbirds. Pacific Black Duck (*Anas superciliosa*), White-faced Heron (*Egretta novaehollandiae*) and Purple Swamphen (*Porphyrio porphyrio*) observed during the site assessment. However, the limited structural complexity of vegetation present reduces its value as sheltering or breeding habitat for waterbirds. The northern dam lacks fringing or emergent vegetation and is therefore more limited in habitat value, although still provides open-water habitat for mobile aquatic and semi-aquatic fauna and opportunistic foraging opportunities for waterbirds. An ephemeral drainage line extends through the intervening improved pasture and provides seasonally inundated hydrological connectivity between the dams and the broader local waterway network

Improved Pasture and Monterrey Cypress Shelterbelts

Outside of native vegetation patches, the assessment area was broadly characterised by improved exotic pasture, punctuated by Monterrey Cypress shelterbelts. Native species were not observed within the improved pasture or beneath the shelterbelts, with the landholder confirming that the areas had previously been sown with exotic grazing species palatable to stock. Species characterising the pasture and areas beneath the shelter belts included, Perennial Rye Grass, Brown-top Bent, and Prairie Grass, and a variety of exotic herbs such as **Trifolium* spp. Regular grazing and dominance by exotic perennial grasses appears to constrain recruitment of native ground layer taxa in this location. Further, the structurally simplified ground layer limits shelter and foraging resources for small terrestrial species.

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Photo 3.7 Improved Pasture and Monterrey Cypress Shelterbelt

3.2 Threatened Ecological Communities

No threatened ecological communities occur within the assessment area.

One threatened ecological community was modelled as occurring in the vicinity of the assessment area: Sedge-rich *Eucalyptus camphora* Swamp (listed under the FFG Act) (DEECA (Vic), 2022). The presence of this community was ruled out, however, as the floristic characteristics of the vegetation observed on site were found to be lacking several of the floristic characteristics of the TEC. Per its listing advice, the TEC is characterised by a Mountain Swamp Gum (*E. camphora* subsp. *humeana*) canopy 6–25 m in height, over a shrub layer dominated by Woolly Tea-tree (*Leptospermum lanigerum*) and a ground cover of diverse sedges and rushes. In contrast, all vegetation within the assessment area was observed to be lacking Mountain Swamp Gum, Woolly Tea-tree and sedgey/rushy understoreys.

3.3 Threatened Species

3.3.1 Field Observations

- One threatened flora species was recorded during targeted threatened flora surveys:
 - Green Scentbark (en) – 16 individuals recorded in the north-east of the assessment area (**Figure 3.1**).
- No signs of burrowing cray chimneys were observed during meandering searches.

3.3.2 Likelihood of Occurrence Assessment

Four threatened flora species and seven threatened fauna species were assessed as having a moderate or higher likelihood of occurrence within the assessment area (**Table 3.9**). The full results of the likelihood of occurrence assessment for all species identified during the desktop review (including those considered unlikely to occur) are provided in **Appendix A**.

Table 3.9 Summary of Likelihood of Occurrence of Threatened and Protected Species Considered to have a Moderate or Higher Likelihood of Occurrence within the Assessment Area

Scientific name	Common name	Conservation status		Likelihood of occurrence
		EPBC Act	FFG Act	
Flora				
<i>Dianella amoena</i>	Matted Flax-lily	Endangered	Critically endangered	Moderate
<i>Eucalyptus fulgens</i>	Green Scentbark	-	Endnagered	Recorded
<i>Eucalyptus strzeleckii</i>	Strzelecki Gum	Vulnerable	Critically endangered	Moderate
<i>Pterostylis chlorogramma</i>	Green-striped Greenhood	Vulnerable	Endangered	Moderate
Fauna				
<i>Callocephalon fimbriatum</i>	Gang-gang Cockatoo	Endangered	Endangered	High
<i>Ranoidea raniformis</i>	Growling Grass Frog	Vulnerable	Vulnerable	Moderate
<i>Neophema chrysostoma</i>	Blue-winged Parrot	Vulnerable	Vulnerable	High
<i>Ninox strenua</i>	Powerful Owl	-	Vulnerable	High
<i>Pseudophryne semimarmorata</i>	Southern Toadlet	-	Endangered	Moderate
<i>Tyto novaehollandiae</i>	Masked Owl	-	Critically endangered	High
<i>Varanus varius</i>	Lace Monitor	-	Endangered	Moderate

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3.3.3 Habitat Associations and Potential Habitat Use

Threatened flora

All four threatened flora species with a moderate or higher likelihood of occurrence within the assessment area are considered unlikely to occur in the improved pasture habitat across most of the assessment area. These areas (as described as ‘Improved Pasture and Monterrey Cypress Shelterbelts’ in **Section 3.1.5**) have been subject to extensive previous disturbance (including historic vegetation clearance, de-rocking, and sowing with exotic pasture species) to establish the improved pasture present. Threatened flora that may once have occurred in these locations would have been cleared by this comprehensive disturbance regime. Re-establishment of threatened flora in these areas is contra-indicated by the ongoing disturbance regime of grazing and dominance of exotic plants in the ground layer (where native plants are effectively absent, with the exception of low densities of weeping grass (2.5% in the east of the assessment area, either side of the existing crossway), which is likely to have resulted in an ongoing environment that competitively favours the persistent dominance of exotic pasture grasses.

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Forest and woodland vegetation within the assessment area provides more favourable habitat for these species. Higher-quality Lowland Forest (habitat zones LF2a, LF2b, LF2c) provide potentially suitable habitat for Matted Flax-lily (en, CR), Green Scentbark (vu), Green-striped Greenhood (vu, EN). In addition, the lone patch of Swampy Riparian Woodland (SRW1a) is considered to constitute potentially suitable habitat for Strzelecki Gum (vu, CR).

Targeted surveys for the four threatened flora species identified in **Table 3.4** were undertaken across areas of suitable habitat identified as being potentially impacted by the Project (i.e. the targeted flora survey area). This included the southern portion of habitat zone LF2a, the entirety of habitat zones LF1a, and LF4b, as well as the entirety of the road reserve, including native and exotic vegetation.

With the exception of recorded individuals of Green Scentbark, no additional threatened flora species were detected. Based on survey effort and the condition and extent of suitable habitat, the occurrence of other threatened flora species within the indicative construction envelope is considered unlikely.

Threatened avifauna and Lace Monitor

Improved pasture within the assessment area provides negligible habitat value for Gang-gang Cockatoo (EN), Blue-winged Parrot (VU), Powerful Owl (VU), Masked Owl (EN) and Lace Monitor (EN). In contrast, forest and woodland patches supporting a tree canopy offer potential habitat for these species. Areas supporting Lowland Forest (habitat zones LF2a, LF2b, LF2c) and Swampy Riparian Woodland (SRW1a) support suitable habitat features, including mature eucalypts that provide foraging resources and, in some instances, targeted trees with hollows offering potential breeding or roosting opportunities for avifauna.

These woodland areas are functionally connected to adjacent vegetation within the road reserve to the east and a further woodland remaining to the north-west, facilitating movement across the landscape and enhancing the overall habitat value of the site for these species.

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Threatened Frogs

The two farm dams represent potential breeding habitat for Growling Grass Frog (vu, VU), although vegetation conditions in both dams are not optimal for the species (vegetation being sparse in the southern-most dam (and lacking fringing vegetation), and absent in the northern-most dam. The ephemeral waterway connecting these two dams is therefore considered to be an important dispersal corridor for the species, providing access to both dams and into the broader waterway network beyond.

The improved pasture adjacent to this habitat is considered to represent foraging habitat for the species, although not overwintering habitat due to its low structural complexity. Individuals overwintering in the vicinity of this habitat are considered likely to utilise patch SRW1a for this purpose. It is considered unlikely that this species regularly undertakes meaningful dispersal from this habitat to the south-east (i.e. toward the indicative disturbance envelope) outside of sporadic foraging, as there are no overwintering opportunities or aquatic habitat within 200 m in this direction.

Similarly, Southern Toadlet (en) is also likely to utilise the ephemeral waterway and patch SRW1a as potential habitat, with the ephemeral waterway potentially being utilised by the species for breeding. In contrast to Growling Grass Frog, Southern Toadlet is also likely to utilise areas supporting Lowland Forest in the east of the assessment area (habitat zones LF2a, LF2b, LF2c). These patches provide suitable structural complexity for shelter, and breeding opportunities by way of the roadside swale in the Darnum-Shady Creek Road reserve.

3.4 Generally Protected Flora

Three taxa belonging to the *Orchidaceae* family (i.e. orchids, listed as generally protected under the FFG Act) were observed within the assessment area, including:

- 3 Hyacinth Orchid individuals (*Dipodium* sp.) within patch LF2a, within the Shady Creek-Darnum Road reserve.
- Numerous Common Bird Orchids (*Chiloglottis valida*) within zone LF2a, on private property.
- A number of additional orchids (assumed to be of the one taxon owing to their similar leaf morphology and emergence timing) unable to be identified at the time of assessment within habitat zone LF2a on private property. N.b. leaf morphology was used to confirm that these orchids **were not** Green-striped Greenhood (en, VU).

It should be noted that only the Hyacinth Orchid individuals were mapped (**Figure 3.1**) as they were recorded on Crown land, and are therefore their removal would be associated with implications under the FFG Act (see **Section 6.0**).

Additional *Orchidaceae* taxa (and additional individuals of the above recorded taxa) may occur within the assessment area in potentially suitable habitat. Similarly to threatened flora, potentially suitable habitat on site for *Orchidaceae* comprises higher-quality Lowland Forest not subject to regular grazing (habitat zones LF2a, LF2b, LF2c), and Swampy Riparian Woodland (habitat zone SRW1a).

With the exception of the taxa listed above, no additional *Orchidaceae* species were detected. Based on survey effort and the condition and extent of suitable habitat, the occurrence of additional *Orchidaceae* taxa within the indicative disturbance envelope is considered unlikely.

3.5 Migratory Species

Nine migratory species were identified by the PMST (**Appendix B**) as having the potential to utilise habitat within the assessment area. The assessment area is not considered to constitute important habitat for any of the species identified. Migratory species, and assessment of important habitat presence are summarised in **Table 3.10**.

Table 3.10 Migratory Species Identified by the PMST as Potentially Occurring within 10 km of the Assessment Area

PMST functional group	Number of species identified by PMST	Likelihood of occurrence	Presence of important habitat ⁴
Migratory marine birds	1	Low: species may overfly assessment area.	No: species unlikely to utilise habitat within assessment area.
Migratory terrestrial species	2	Low: species may overfly or forage aerially over the assessment area.	No: use of habitat within the assessment area (if any) is considered to be limited.

⁴ Important habitat for migratory species assessed as per DoE (2013). Matters of National Environmental Significance. Significant Impact Guidelines 1.1. Environmental Protection and Biodiversity Conservation Act 1999. Department of the Environment, Government of Australia, Canberra.

PMST functional group	Number of species identified by PMST	Likelihood of occurrence	Presence of important habitat ⁴
Migratory wetland species	6	Low: species may irregularly and infrequently visit farm dams present within the assessment area, though the habitat offered by these features is considered to be poor due to their small size and sparsely vegetated nature.	No: use of habitat within the assessment area (if any) is considered to be limited.

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4.0 Impact Assessment Approach, Impact Avoidance and Mitigation

This section defines the scope of the impact assessment, explains avoidance/minimisation efforts built into the design, and sets the mitigation framework that has been used in the assessment of ecological impacts outlined in **Section 5.0**.

4.1 Potentially Impacting Processes Considered in This Assessment

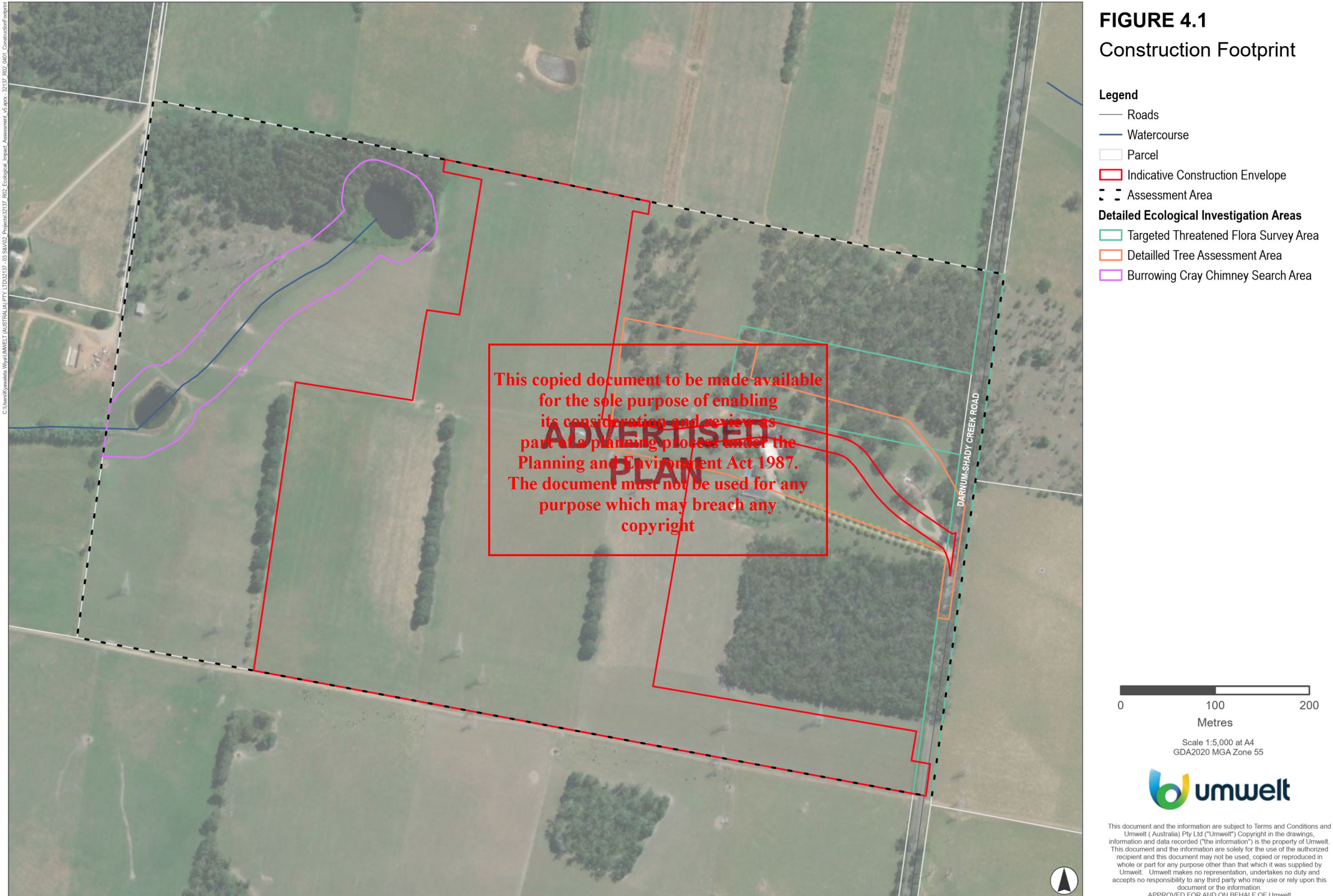
Assessment of potentially impacting processes has been undertaken as per the method outlined in **Section 2.4**. Specific potential impacts considered in this impact assessment are outlined below:

- Construction phase:
 - Direct removal of native vegetation and threatened species habitat associated with construction. All native vegetation and threatened species habitat that intersects the indicative disturbance envelope is considered to be lost. The indicative disturbance envelope is mapped in **Figure 4.1**, and encompasses the space required to construct all project infrastructure, direct removal of native vegetation and habitat associated with construction, as well as areas to be utilised for ancillary construction activities such as access, parking, site offices and laydown areas.
 - Habitat fragmentation and loss of dispersal potential as a result of vegetation clearance, and the placement of temporary infrastructure.
 - Erosion and sedimentation that may result from site drainage.
 - Spread of weeds and pathogens.
 - Changes to local waterway flow regimes associated with stormwater discharge.
 - Mortality or injury to fauna resulting from construction vehicles and machinery.
 - Entrapment of fauna in trenches, pits or other excavations.
- Operation phase:
 - Barriers to dispersal associated with permanent infrastructure.
 - Spread of weeds and pathogens.
 - Changes to local waterway flow regimes associated with stormwater discharge.

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FIGURE 4.1
Construction Footprint



4.2 Avoid and Minimise Statement

In accordance with the Guidelines, this Project has implemented strategies to avoid the removal of, and minimise the impacts on the biodiversity and other values of native vegetation. These efforts focussed on areas of native vegetation that were identified to have the most value.

These strategies were undertaken with due consideration of both site-level planning, and strategic level planning, as described below.

Site-level planning⁵

The following strategies were utilised to avoid (or otherwise minimise) the removal of, and minimise the impacts on the biodiversity and other values of native vegetation:

- Project infrastructure has been situated exclusively in areas of improved pasture and Monterrey Cypress Shelterbelts with no removal of native vegetation required.
- Ancillary infrastructure such as site offices, parking, and laydown areas will be situated in areas of exotic pasture such that no removal of native vegetation will be required (n.b. precise locations of these features are to be finalised in the detailed design phase).
- Regarding the two required site access points:
 - The southern-most site access has been located within the existing powerline easement, the majority of which comprises exotic pasture. Minor clearance of low-quality native vegetation is associated with this access route.
 - The northern-most site access has been aligned with the existing site access to minimise clearance of native vegetation and to reduce the width of access required for heavy vehicle access, complete avoidance of native vegetation in this location was not possible). Further, between the BESS facility itself and the northern-most site access, the proposed access road route has been aligned with an existing informal light vehicle route with a view to minimising impacts to trees and native vegetation patches present. Although impacts in this location could not be completely avoided entirely due to the width of access required, and the indicative nature of concept designs generally, additional avoidance of native vegetation and tree removal is expected to be achieved in consultation with an arborist during the detailed design phase (see **Section 4.3.1**).
- Further, engagement with AusNet has taken place about use of the secondary (southern) access point (and associated easement) as the main access point, including the use of this road by larger vehicles (subject to meeting AusNet easement requirements). This would allow the northern access route (where most Project vegetation clearance is currently proposed) to serve as the secondary access for emergency vehicles. This in turn would enable reductions in width and adjustments in alignment of the northern access road to would enable further avoidance of native vegetation.
- The highest value habitat has been avoided by the assessment area including avoidance of:
 - All hollow-bearing trees
 - The ephemeral watercourse and two farm dams in the north-west of the assessment area.

⁵ The Guidelines characterises site level planning as: “how the proposed use or development has been sited or designed to avoid and minimise impacts on native vegetation.”

- High-quality patches of lowland forest - LF2a, LF2b and LF2c (noting that only minor impacts to patches LF2a and LF2b are proposed in the vicinity of the northern-most site access).
- The lone patch of Swampy Riparian Woodland (SRW1a).

Strategic-level Planning⁶

Not applicable - the site is not subject to any strategic planning process relevant to the proposal.

4.3 Mitigation Measures

4.3.1 Construction Phase

The following mitigation measures are to be adhered to during construction to minimise impacts to ecological values from the Project. These measures must be detailed in appropriate construction environmental management documentation (such as a construction environmental management plan). Implementation of these measures has been assumed by this assessment taken into account in the ecological impact assessment presented in **Section 5.0**:

1. indicative disturbance envelope

The indicative construction envelope as outlined in Figure 4.1 is to be adhered to, with all construction activities to be restricted to this area and no ground disturbance occurring outside of its extent.

2. No-go zones

Vegetation not approved for removal within the indicative disturbance envelope should be clearly delineated on-site for the duration of the works. It is recommended that these areas are delineated with fencing or bunting and signed as 'no-go zones' and must incorporate tree protection zones in accordance with Australian Standards: AS4970-2025 Protection of Trees on Development Sites. No works are to occur within these areas.

3. Biosecurity hygiene

All equipment, materials and people must be clean, washed down and free of dirt or materials potentially containing weed propagules or pathogens prior to entering and upon leaving the site. Works must be undertaken in a manner that does not result in the spread of *Phytophthora*, chytrid fungus or CaLP Act-listed noxious weeds within, to, or from the site.

All areas subject to temporary disturbance are to be rehabilitated to a condition that is comparable to their pre-Project condition to discourage the establishment of weeds. Monitoring must be undertaken to verify the outcome of the rehabilitation.

4. Surface water flow conditions

Runoff and water discharge from disturbed areas must be appropriately managed during construction until permanent drainage and stormwater infrastructure is operational. Measures must be implemented to maintain existing surface water flow conditions, as far as practicable, and to avoid adverse effects associated with increased runoff velocity or discharge to downstream drainage lines and aquatic habitats.

⁶ The Guidelines characterises strategic-level planning as: "any regional or landscape scale strategic planning process that the site has been subject to that avoided and minimised impacts on native vegetation across a region or landscape."

5. Water quality/erosion control

Appropriate erosion and sediment control measures must be implemented to prevent the discharge of sediment, litter or other contaminants from the site and to avoid adverse impacts to receiving waters. All works must be undertaken in accordance with guidance issued by the Environment Protection Authority Victoria and industry best practice for erosion and sediment control and must comply with the general environmental duty under *the Environment Protection Act 2017*.

6. Erosion and sediment controls must be installed prior to the commencement of works and maintained for the duration of construction, such that water quality within waterways on and adjacent to the site is protected and maintained at pre-construction conditions.

7. Fauna habitat removal

A qualified, experienced and authorised fauna spotter or catcher should be utilised to conduct a pre-clearance survey immediately before the time of vegetation clearing to minimise the impact to native fauna. If deemed necessary, the fauna spotter may be required onsite during vegetation removal. Any interaction with wildlife through habitat clearing activities must be undertaken by a person holding a Section 28A *Wildlife Act 1975* authorisation.

8. Management of excavations and fencing to prevent fauna entrapment

Trenches, pits and other excavations created during construction will be managed to minimise the risk of fauna entrapment. Excavations will be covered when not in active use where practicable. Where covering is not feasible, fauna escape structures (e.g. soil traps or timber planks) will be installed to allow trapped animals to exit. Excavations and temporary exclusion fencing will be inspected regularly, including prior to the commencement of daily works, and any trapped fauna will be removed and released into suitable adjacent habitat by a person holding a Section 28A *Wildlife Act 1975* authorisation.

9. Detailed design and impact minimisation

The alignment and disturbance footprint for the northern access will be refined during detailed design to minimise impacts to native vegetation and scattered trees. The detailed design and final disturbance footprint will be developed in consultation with a suitably qualified arborist to identify opportunities to avoid or reduce vegetation removal where practicable. This process may include minor adjustments to the access alignment, refinement of construction extents, confirmation of the largest vehicle size required and associated road width to support access, and the implementation of appropriate tree protection measures.

This will also include investigation of the use of the secondary (southern) access point (and associated easement) as the main access point (subject to ongoing discussions with AusNet). This would allow the northern access route (where most Project vegetation clearance is currently proposed) to serve as the secondary access for emergency vehicles. This in turn would enable reductions in width and adjustments in alignment of the northern access road to enable further avoidance of native vegetation.

10. Growling Grass Frog

The ephemeral waterway and farm dams are to be protected as no-go zones throughout construction. Temporary amphibian exclusion fencing will be installed along interface between the indicative construction envelope and adjacent aquatic habitats wherever the boundary of the indicative construction envelope lies within 200 m of these habitats to prevent frogs entering the work area. All associated fencing will be situated as far from the aquatic habitats as is practicable to ensure the use of the ephemeral waterway as a dispersal pathway by frogs is not interrupted.

11. Vegetation removal associated with LF4b

Vegetation removal within Patch LF4b must be limited to the minimum extent necessary to establish the southern access road. While the indicative construction envelope allows for a 30 m wide disturbance area to provide design flexibility, the actual cleared width must not exceed 12 m.

Any temporarily impacted areas adjacent to the access must be rehabilitated to enable regeneration of habitat zone LF4b, including along the fenceline.

These measures are to minimise fragmentation and maintain the connectivity of native vegetation along the road reserve.

4.3.2 Operational Phase

During operation, environmental management measures will be implemented through appropriate operational documentation (e.g. an operational environmental management plan). These measures will address ongoing risks to ecological values, including surface water management, biosecurity and asset maintenance activities.

No further removal of native vegetation or modification of habitat outside the approved development footprint will occur. Operational procedures within the operational documentation will prevent the introduction and spread of weeds and pathogens and avoid unintended impacts to adjacent native vegetation and habitats.

Routine monitoring, inspection and maintenance activities will be implemented in accordance with these procedures to ensure that operational impacts to ecological values do not occur. Surface water management measures will maintain existing flow conditions, as far as practicable, and avoid adverse effects associated with increased runoff velocity or discharge to downstream drainage lines and aquatic habitats.

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5.0 Ecological Impact Assessment

This section assesses the likely ecological impacts of the Project upon ecological values recorded within the assessment area or considered to have a moderate or higher likelihood of occurrence, as outlined in **Section 3.0**.

It should be noted that indirect impacts in addition to those discussed below associated with the spread of weeds, pathogens, and erosion / sedimentation are considered unlikely to occur. Appropriate biosecurity hygiene and water quality/erosion mitigation measures are required to be undertaken during construction and operation phases of the Project that suitably mitigate these potential impact pathways (**Section 4.3**).

5.1 Impacts to Vegetation

5.1.1 Patches of Native Vegetation, Scattered Trees and Patch Trees

Project removal of native vegetation comprises 0.671 ha across native vegetation and scattered trees, as summarised by EVC in **Table 5.1**, mapped in **Figure 5.1** and described in further detail below.

Table 5.1 Summary of Project Impacts to Patches of Native Vegetation by EVC

Ecological Vegetation Class	Bioregional Conservation Status	Removal (ha)				Subtotal – as relevant to EES Individual criteria (ha) ⁷	Subtotal – entire (ha)
		Patches	Scattered trees	Large patch trees	Large scattered trees		
Lowland Forest (EVC 16)	Vulnerable	0.148	0.522	4	8	0.026	0.671
Swampy Riparian Woodland (EVC 83)	Endangered	0	0	0	0	0	0
Tall Marsh (EVC 821)	Depleted	0	0	0	0	0	0
Total		0.148	0.522	4	8	0.026	0.671

All removal of patches of native vegetation, scattered trees and large patch trees occurs in association with site access.

The southern access route requires partial clearance of habitat zone LF4b. This habitat zone comprises low-quality Lowland Forest, characterised by dense regrowth of native understorey species, including Bracken Fern and Thatch Saw-sedge, which form a thick understorey along the fenceline separating the powerline easement from the road reserve in the south-east of the assessment area (**Photo 3.4**).

⁷ A subset of vegetation clearance that counts toward individual EES referral criteria relating to vegetation clearance. Vegetation clearance counts towards the individual vegetation clearance criterion where it is of an EVC classified as endangered; or – an EVC that is classified as vulnerable (with a condition score of 0.5 or more) or rare (with a condition score of 0.6 or more); and – that is not authorised for removal under an approved forest management plan or fire protection plan.

Vegetation clearance associated with the northern access includes:

- Partial removal of habitat zones LF2a, and LF2b (high-quality Lowland Forest) either side of the existing access point from Darnum Shady Creek Road (**Photo 5.1**) access to allow heavy vehicle access. This removal occurs within the relatively disturbed edges of these patches and does not include the removal of any large patch trees.
- Removal of habitat zones LF1a (partial removal – see **Photo 5.3**), and LF2b (complete removal – see **Photo 3.2**). Both patches are categorised as moderate-quality Lowland Forest.
- Removal of nine scattered trees (eight of which are large) (**Photo 5.2**) and four large patch trees. All of this vegetation occurs in the vicinity of the existing site access route. Notably, none of the trees proposed to be removed are hollow-bearing.



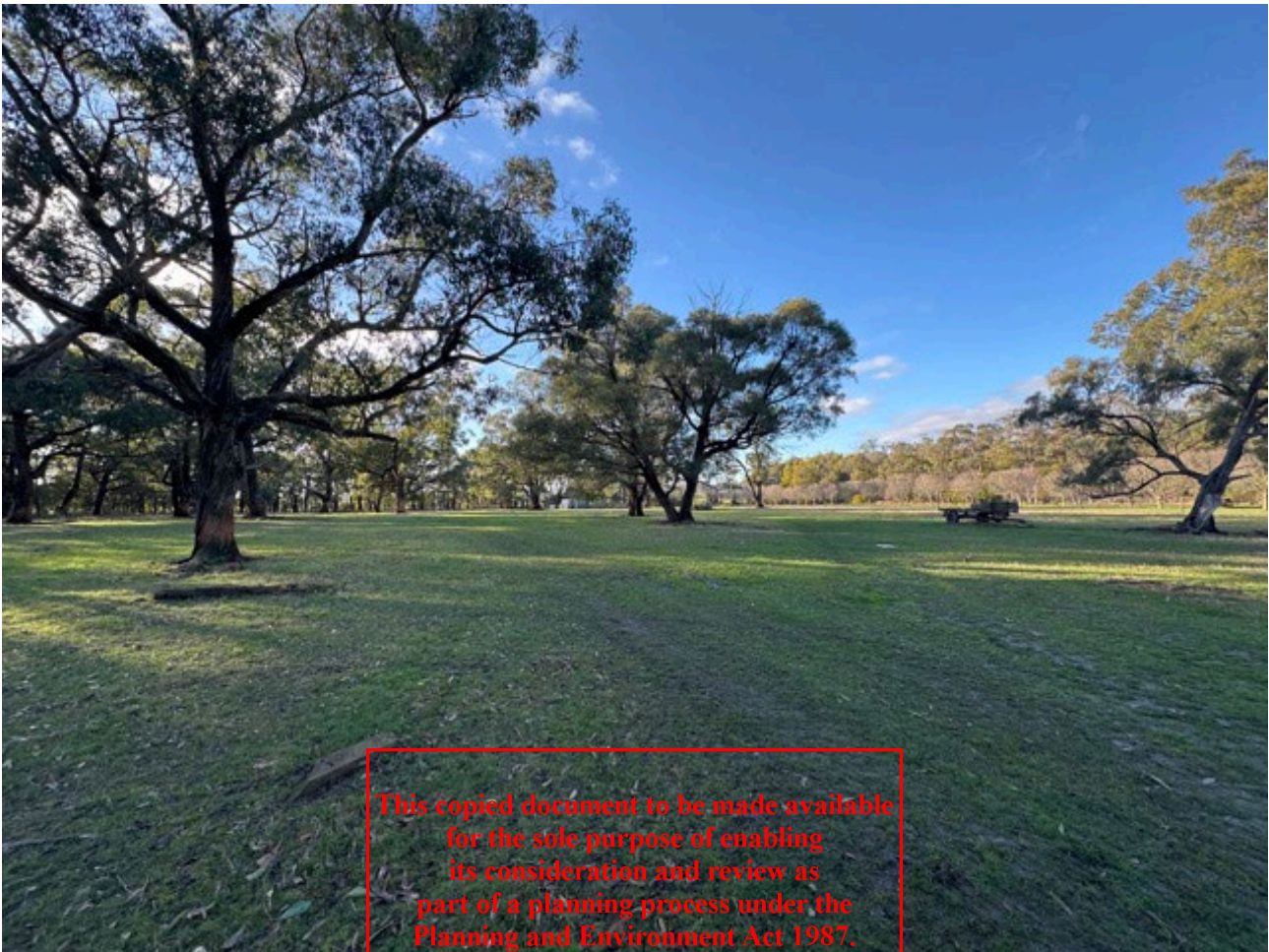
Photo 5.1 Portion of patch LF2a to be removed, adjacent to the northern (existing) access point from Darnum Shady Creek Road



Photo 5.2 Tree 41 – a large scattered tree to be removed.

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Photo 5.3 Habitat zone LF1a (foreground left – portion of habitat zone pictured is portion to be removed), tree 40, (foreground left – a large canopy tree, removed), habitat zone LF1b (photo centre - removed), tree 33 (far-right - scattered tree, retained). Photo taken facing east.

5.1.2 Scattered Native Vegetation

The Project will result in the direct removal of scattered Weeping Grass individuals within areas of exotic improved pasture. These areas support Weeping Grass at low densities (approximately 2.5% cover) and are otherwise dominated (>95% cover) by exotic perennial grasses, including Brown-top Bent, Prairie Grass and Sweet Vernal. Approximately 0.524 ha of this vegetation will be removed in the eastern portion of the assessment area in association with the northern access route.

5.1.3 Exotic Vegetation/Other Areas

Most vegetation removal associated with the Project will comprise exotic improved pasture and Monterey Cypress trees (as described in **Section 3.1.5**, and pictured in **Photo 3.7**), and will occur primarily within the BESS footprint and associated works areas. The BESS will result in the permanent removal of approximately 4.8 ha of improved pasture within the developed footprint of the facility. Areas subject to temporary disturbance in surrounding works areas will be rehabilitated following construction to a condition comparable to their pre-Project state.

Legend

- Roads
- Watercourse
- Parcel
- ▭ Indicative Construction Envelope
- ▨ Monterrey Cypress Shelterbelt
- ⋮ Assessment Area

Patches of Native Vegetation

- ▭ Lowland Forest
- ▭ Swampy Riparian Woodland
- ▭ Tall Marsh
- ▨ Lost

Trees

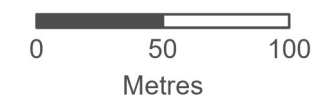
- Patch Tree (Large)
- Patch Tree (Small)
- Scattered Tree (Large)
- Scattered Tree (Small)
- Other
 - Hollow-bearing
- + *Eucalyptus fulgens* (threatened)
- Lost

▭ Notional Root Zone

Threatened and Protected Flora

- + *Dipodium* sp.
- + *Eucalyptus fulgens*

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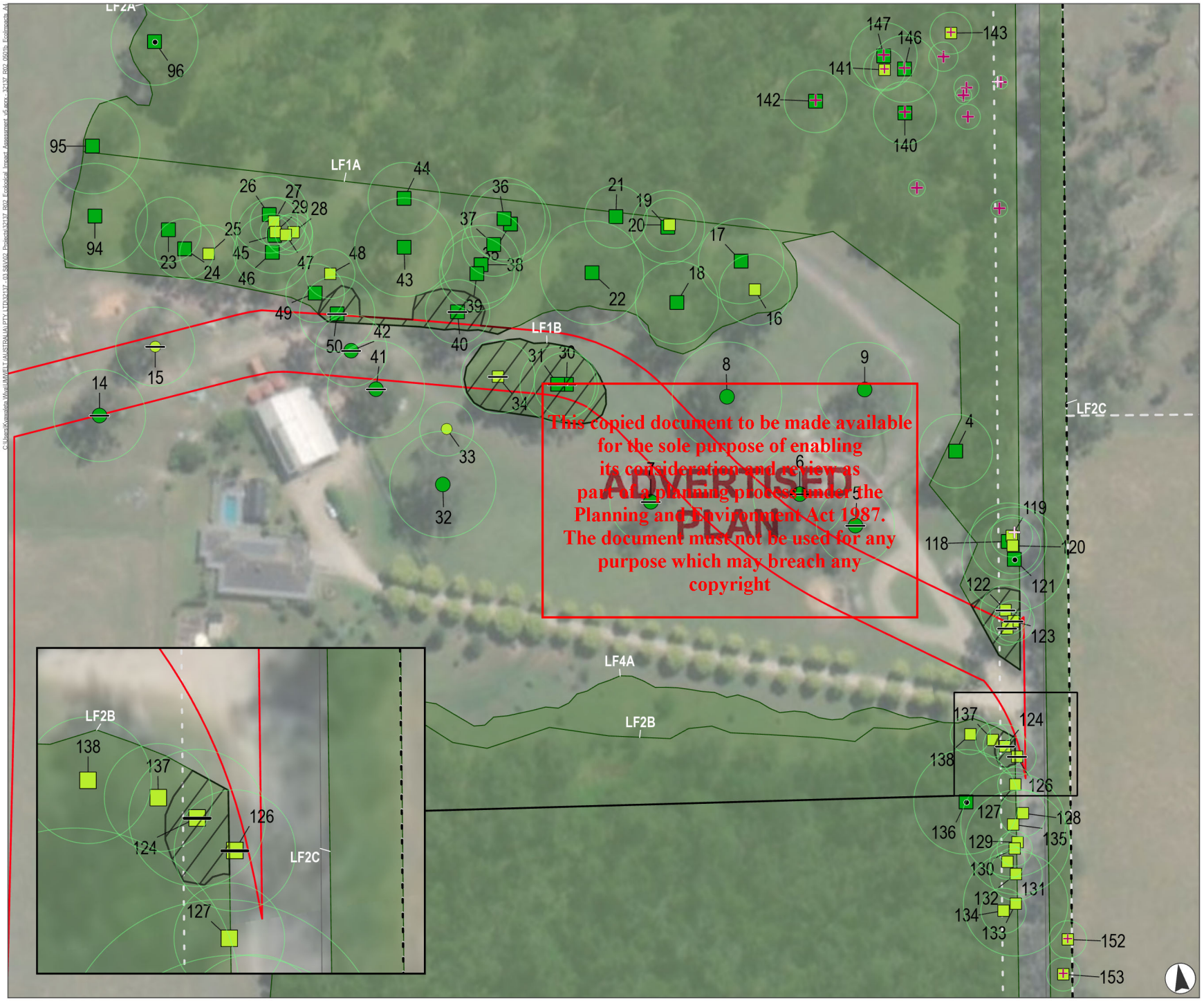
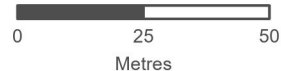


FIGURE 5.1b
Impacts to Ecological Values

- Legend**
- Roads
 - - - Parcel
 - Indicative Construction Envelope
 - Monterrey Cypress Shelterbelt
 - Assessment Area
- Patches of Native Vegetation**
- Lowland Forest
 - Swampy Riparian Woodland
 - Tall Marsh
 - Lost
- Trees**
- Patch Tree (Large)
 - Patch Tree (Small)
 - Scattered Tree (Large)
 - Scattered Tree (Small)
 - Hollow-bearing
 - Eucalyptus fulgens* (threatened)
 - Lost
 - Notional Root Zone
- Threatened and Protected Flora**
- Dipodium* sp.
 - Eucalyptus fulgens*



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5.2 Impacts to Threatened, Protected and Migratory Species

Impacts to threatened, protected and migratory species resulting from the proposed works comprise:

- Removal of 0.669 ha of foraging habitat for Gang-gang Cockatoo, Blue Winged Parrot, and Powerful Owl, Masked Owl and Lace Monitor.
- Permanent removal of 1.612 ha of improved pasture habitat that may be utilised by Growling Grass Frog for foraging within 200 m (but no closer than 100 m) of the ephemeral waterway that may be utilised by the species.
- Removal of 0.04 ha of woodland habitat that may be utilised by Southern Toadlet.

Impacts are discussed below and subsequently summarised in **Table 5.2**.

5.2.1 Flora

All threatened and protected flora recorded (comprising Green Scentbark (vu), and Hyacinth Orchid (p)) will be avoided by the proposed works (including the NRZs of each Green Scentbark).

Apart from recorded individuals of Green Scentbark, and *Orchidaceae* spp., no additional threatened or protected flora species were detected. Given targeted surveys were undertaken across all areas of suitable habitat identified as being potentially impacted by the Project (i.e. the targeted flora survey area), the occurrence of threatened or protected flora species with little indicative disturbance envelope is considered unlikely, with no impacts to threatened or protected flora species likely to occur.

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5.2.2 Avifauna and Lace Monitor

Direct removal of 0.669 ha of Lowland Forest vegetation supporting a mature canopy stratum associated with the northern access track (inclusive of four large patch trees and eight large, scattered trees), constitutes removal of foraging habitat for Gang-gang Cockatoo, Blue Winged Parrot, and Powerful Owl, Masked Owl and Lace Monitor. This removal is considered unlikely to substantially affect these species given the availability of similar habitat present in the assessment area and in the surrounding landscape. Further, given none of the trees proposed to be removed are hollow-bearing, this removal is not considered to affect the ability of the affected avifauna to breed.

Exacerbation of general habitat fragmentation caused by the Project is considered to be minor due to the limited extent of vegetation removal which is largely confined to existing access points and areas of previously modified land. As such, indirect effects on the movement and dispersal of threatened fauna are not expected to be substantial.

5.2.3 Growling Grass Frog and Southern Toadlet

A total of 1.62 ha of potential foraging habitat for Growling Grass Frog is proposed to be removed. Of the approximately 4.8 ha of permanent removal of improved pasture that will accommodate the BESS itself, 1.612 ha occurs within 200 m of (but no closer than 100 m to) the ephemeral waterway and farm dams which may support Growling Grass Frog. This habitat is considered to constitute potential foraging habitat for the species, lacking the structural complexity that would typically be associated with overwintering habitat for the species.

The dispersal capability of Growing Grass Frog, if present, is unlikely to be affected by the Project, with the key dispersal pathway for the species – the ephemeral watercourse – not being impacted by the Project. Further, although parts of the permanent BESS footprint occur within 200 m of this habitat, there are no nearby waterbodies beyond the BESS footprint to the south-east that Growing Grass Frog individuals might disperse to.

A farm dam beyond the assessment area, approximately 175 m to the north-west (observed through aerial imagery) forms potential breeding habitat that this species may disperse to from within the assessment area. The Project is unlikely to interfere with any such dispersal however, with only tree screening planting on the northern boundary of the assessment area occurring in the vicinity of this potential movement pathway.

Although identified as a potential source of impact to the Growing Grass Frog habitat present, stormwater runoff generated by the BESS is considered unlikely to negatively affect Growing Grass Frog habitat present. Stormwater runoff will be managed via retention basin to maintain the hydrologic character of the existing habitat.

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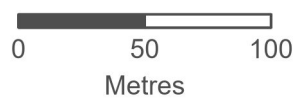
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FIGURE 5.2
Impacts to Growling Grass Frog Habitat

- Legend**
- Roads
 - Watercourse
 - Parcel
 - ▭ Indicative Construction Envelope
 - ▨ Monterrey Cypress Shelterbelt
 - ⋮ Assessment Area
- Growling Grass Frog Habitat**
- ▭ Potential Habitat
 - ▨ Permanent Habitat Loss
- Patches of Native Vegetation**
- ▭ Lowland Forest
 - ▭ Swampy Riparian Woodland
 - ▭ Tall Marsh
- Trees**
- Patch Tree (Large)
 - Patch Tree (Small)
 - Scattered Tree (Large)
 - Scattered Tree (Small)
 - Other
 - Hollow-bearing
 - + *Eucalyptus fulgens* (threatened)
 - Notional Root Zone
- Threatened and Protected Flora**
- + *Dipodium* sp.
 - + *Eucalyptus fulgens*

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5.2.4 Southern Toadlet

Direct removal of 0.04 ha Lowland Forest vegetation supporting relatively complex ground-stratum microhabitat (including habitat zones LF2a, LF2b, and LF4b) is considered to constitute removal of habitat for the Southern Toadlet. The presence of ample coarse, woody debris and understorey vegetation provide shelter opportunities nearby to the informal drainage swale of Darnum-Shady Creek Road which presents suitable breeding habitat for the species.

The dispersal capability of this species is unlikely to be affected by the Project. Similarly to Growling Grass Frog, Southern Toadlet may utilise the ephemeral drainage line as a movement pathway, which will not be impacted by the Project. The Southern Toadlet is also likely to move between woodland patches in the east of the assessment area in the vicinity of the road reserve where connectivity is highest, and in the vicinity of the potential roadside-swale breeding habitat. Although some vegetation clearance will occur in the vicinity of the existing crossover for the northern-most site access reducing connectivity somewhat, clearance in this location is minor, highly localised and is unlikely to meaningfully alter the species' ability to disperse compared to the existing break in vegetation associated with the existing crossover.

Partial clearance of habitat zone LF4b may result in an initial reduction in dispersal potential for the species, with a conservative clearing width of 30 m being proposed to allow for flexibility in the detailed design of the access track. In actuality however, the permanent footprint of this access will be around 6m width – a comparable width to other driveways along Darnum Shady Creek road, and is not expected to materially affect the dispersal capability of this species, should it occur.

5.2.5 Significance of Impact for EPBC Act-listed threatened species

The Project is considered unlikely to result in significant impact to threatened flora and fauna species listed under the EPBC Act. A project is considered likely to have a significant impact on a MNES where there is a real chance or possibility that the Project meets any one criterion in the relevant significant impact criteria. As the Project's impacts to MNES are considered **unlikely** to meet any one criterion in the relevant significant impact criteria (DEWHA (Cth), 2009, 2013) the Project is considered likely to have a significant impact on the relevant MNES. Assessment of impacts and potential impacts discussed above against the relevant significant impact criteria have been completed and are provided in **Appendix E**.

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Table 5.2 Summary of Project impacts to threatened, protected and migratory taxa

Taxon	Conservation Status		Summary of impacts	Percentage clearance of total Victorian Habitat ⁸	Likely sig. Impact ⁹
	EPBC Act	FFG Act			
Threatened flora					
Matted Flax-lily <i>Dianella amoena</i>	Endangered	Critically endangered	Taxon unlikely to be impacted.	0%	No
Green Scentbark <i>Eucalyptus fulgens</i>	-	Endangered	Taxon unlikely to be impacted.	0%	N/a
Strzelecki Gum <i>Eucalyptus strzeleckii</i>	Vulnerable	Critically endangered	Taxon unlikely to be impacted.	0%	No
Green-striped Greenhood <i>Pterostylis chlorogramma</i>	Vulnerable	Endangered	Taxon unlikely to be impacted.	0%	No
Protected flora			This copied document to be made available for the sole purpose of enabling its consideration and review as part of a planning process under the Planning and Environment Act 1987. The document must not be used for any purpose which may breach any copyright		
Orchids (non-threatened) (<i>Orchidaceae</i>)	-	Protected		Taxa unlikely to be impacted.	N/a
Threatened fauna					
Gang-gang Cockatoo <i>Callocephalon fimbriatum</i>	Endangered	Endangered	Removal of 0.699 ha potential foraging habitat.	N/a	No
Growling Grass Frog <i>Ranoidea raniformis</i>	Vulnerable	Vulnerable	Removal of 0.162 ha potential foraging habitat.	<0.001%	No
Blue-winged Parrot <i>Neophema chrysostoma</i>	Vulnerable	Vulnerable	Removal of 0.699 ha potential foraging habitat.	n/a	No
Powerful Owl <i>Ninox strenua</i>	-	Vulnerable	Removal of 0.699 ha potential foraging habitat.	<0.001%	N/a

⁸ Percentage clearance of total Victorian habitat represents the total Project clearance expressed as a percentage of the mapped Victorian habitat extent for each species, as defined by its Habitat Importance Model (HIM)(DEECA (Vic), 2017). Species without a HIM are denoted as 'n/a'.

⁹ Denotes whether the threatened ecological community is considered to be 'significantly impacted', as assessed under the Significant Impact Guidelines 1.1. Applicable to matters listed under the EPBC Act only.

Taxon	Conservation Status		Summary of impacts	Percentage clearance of total Victorian Habitat ⁸	Likely sig. Impact ⁹
	EPBC Act	FFG Act			
Southern Toadlet <i>Pseudophryne semimarmorata</i>	-	Endangered	Removal of 0.04 ha potential habitat	<0.001%	N/a
Masked Owl <i>Tyto novaehollandiae</i>	-	Critically endangered	Removal of 0.699 ha potential foraging habitat.	<0.001%	N/a
Lace Monitor <i>Varanus varius</i>	-	Endangered	Removal of 0.699 ha potential habitat.	<0.001%	N/a

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5.3 Impacts to Other Ecological Values

5.3.1 Ramsar Wetlands

Impacts to Ramsar wetlands associated with the Project are unlikely. Although two Ramsar wetlands were identified in the desktop review as being of relevance to the site, the likelihood of either of these wetlands being impacted by the Project is remote. The closest Ramsar wetland (Western Port), is identified by the PMST as 40–50 km downstream from the assessment area. In consideration of the project type, scale and with appropriate erosion and sedimentation controls in place, it is unlikely that this Ramsar wetland would be impacted by the Project. The other Ramsar wetland identified in the desktop review (Gippsland Lakes – 50–100 km downstream from the assessment area) is considered even less likely to be impacted. It is therefore considered unlikely that any Ramsar wetland would be significantly impacted by the Project.

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6.0 Legislative and Policy Implications

This section outlines potential legislative and policy implications associated with residual impacts identified in **Section 4.3**.

6.1.1 EPBC Act

No referral is required under the EPBC Act (considering only significant impacts upon MNES)

The EPBC Act provides for the listing of nationally threatened species, threatened ecological communities and key threatening processes; and provides the legal framework to protect and manage matters of national environmental significance (MNES). Where the Project is likely to have a significant impact upon MNES, it is required to be referred to the Commonwealth Minister for the Environment via the Department of Climate Change, Energy, the Environment and Water (DCCEEW) for a decision on whether the project requires further assessment under the EPBC Act.

As the Project **is not** likely to have a significant impact on any MNES, a referral under the EPBC Act **is not** required.

6.1.2 EE Act

No referral under the EE Act is required (considering biodiversity criteria only)

The EE Act provides for the assessment of actions that are capable of having a significant effect on the environment. A project is required to be referred to the Victorian Minister for Planning for a decision on whether an Environment Effects Statement (EES) is required, if the project triggers one individual or at least two combination referral criteria specified in the Ministerial guidelines for assessment of environmental effects under the *Environment Effects Act 1978* (DTP, 2023). Biodiversity referral criteria include potential clearing of 10 ha or more of native vegetation (particularly endangered EVCs, potentially significant impacts on species or ecological communities threatened in Victoria, and potentially significant impacts on the ecological character of internationally or nationally important wetlands.

No biodiversity-related referral criteria have been triggered by Project impacts and therefore a referral under the EE Act is not required based on the application of biodiversity criteria only. Assessment of Project impacts against the referral criteria is provided in **Appendix F**.

6.1.3 FFG Act

A permit to take under the FFG Act is not required

The FFG Act provides a framework for biodiversity conservation in Victoria, including providing for the listing of threatened species and communities of flora and fauna, as well as threatening processes. Under the Act, a permit to take is required to remove threatened flora, threatened flora communities and other protected flora (e.g. *Orchidaceae*) from Crown land.

As no threatened flora listed under the FFG Act, and no protected flora listed under the FFG Act will be removed, a permit to take under the FFG Act is not required.

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6.1.4 P & E Act

Planning approval for native vegetation removal is required

The P&E Act regulates the use and development (including works involving vegetation removal) of land in Victoria and provides the framework and procedures for preparing and amending planning schemes, obtaining planning permits and enforcing compliance with planning schemes.

Planning approval pursuant to Clause 52.17 of the Baw Baw Planning Scheme is required for the removal of:

- 0.671 ha of Lowland Forest (EVC 16) comprising:
 - 0.148 ha of patches (including four large patch trees).
 - 0.522 ha scattered trees, comprising nine trees, eight of which are large.
- Scattered Weeping Grass individuals (outside of native vegetation patches) within a 0.524 ha area of primarily exotic improved pasture that supports scattered Weeping Grass individuals at 2.5% cover.

6.1.5 The Guidelines

Native vegetation offsets and assessment under the Guidelines required

The planning permit assessment process and offset requirements for impacts to native vegetation associated with Clause 52.17 of the planning scheme are undertaken in accordance with the Guidelines for the removal, destruction or logging of native vegetation (DEECA (Vic), 2025a). The Guidelines guide how impacts on biodiversity should be considered, including whether a permit should be granted when assessing a planning permit application.

Under the guidelines, applications to remove native vegetation are required to address the relevant application requirements.

The relevant application requirements have been addressed by this assessment. **Table 6.1** is provided below to indicate where/how the application requirements are addressed in this report.

Table 6.1 Summary of Application Requirements under the Guidelines, and where they have been Addressed in this Report

N.b. some application requirements have been summarised for brevity.

No. Application requirement including where/how it is addressed in this report.	
Application requirements for all applications for a permit to remove native vegetation.	
1	Application requirement: Information about the native vegetation to be removed, including • The assessment pathway and reason for the assessment pathway. This includes the location category of the native vegetation to be removed. • A description of the native vegetation to be removed. • Maps showing the native vegetation and property in context. • The offset requirement, determined in accordance with section 5 of the Guidelines, that will apply if the native vegetation is approved to be removed.

No.	Application requirement including where/how it is addressed in this report.
	Information provided in this report addressing application requirement: - Assessment pathway - this Project is required to be assessed under the detailed assessment pathway, as >0.5 ha of vegetation is to be removed, including areas of location category 3 (see NVRR, Appendix G). - Description of native vegetation to be removed - particulars relating to vegetation description are outlined in the attached NVRR (Appendix G). - Maps showing the native vegetation and property in context - the required maps are included as part of the attached NVRR (Appendix G). - Offset requirement - per the attached NVR report, (Appendix G), the offset requirement for the Project is: 0.1620 General Habitat Units (West Gippsland CMA or Baw Baw Shire LGA vicinity) are required, with a minimum strategic biodiversity score of 0.3378, including 12 large trees.
2	Application requirement: Topographic and land information relating to the native vegetation to be removed. Information provided in this report addressing application requirement: A description of the topography and waterways of the assessment area are provided in Table 1.1, with waterways mapped in Figure 1.1.
3	Application requirement: Recent dated photographs of the native vegetation to be removed. Information provided in this report addressing application requirement: Photographs showing vegetation to be removed are provided - see Photo 3.2, Photo 5.1, Photo 5.2, and Photo 5.3 - dated 4 August 2025.
4	Application requirement: Details of any other native vegetation approved to be removed, or that was removed without the required approval, on the same property or on contiguous land in the same ownership as the applicant, in the five year period before the application for a permit is lodged. Information provided in this report addressing application requirement: No evidence of other native vegetation clearance within the last 5 years was observed within the assessment area. It has been assumed for the purposes of this assessment that no other native vegetation clearance has occurred within the last 5 years.
5	Application requirement: An avoid and minimise statement. The statement describes any efforts to avoid the removal of, and minimise the impacts on the biodiversity and other values of native vegetation, and how these efforts focussed on areas of native vegetation that have the most value. The statement should include a description of strategic level planning and that no feasible opportunities exist to further avoid and minimise impacts on native vegetation without undermining the key objectives of the proposal. Information provided in this report addressing application requirement: An avoid and minimise statement is provided in Section 4.2.
6	Application requirement: A copy of any Property Vegetation Plan contained within an agreement made pursuant to section 69 of the Conservation, Forests and Lands Act 1987 that applies to the native vegetation to be removed. Information provided in this report addressing application requirement: Not applicable – there is no Property Vegetation Plan for this property.

No.	Application requirement including where/how it is addressed in this report.
7	Application requirement: Where the removal of native vegetation is to create defensible space, a written statement explaining why the removal of native vegetation is necessary. This statement must have regard to other available bushfire risk mitigation measures. This statement is not required when the creation of defensible space is in conjunction with an application under the Bushfire Management Overlay. Information provided in this report addressing application requirement: Not applicable – there is no vegetation proposed to be removed to create defensible space.
8	Application requirement: If the application is under Clause 52.16, a statement that explains how the proposal responds to the Native Vegetation Precinct Plan considerations at decision guideline 8. Information provided in this report addressing application requirement: Not applicable – the application is not under Clause 52.16.
9	Application requirement: An offset statement providing evidence that an offset that meets the offset requirements for the native vegetation to be removed has been identified and can be secured in accordance with the Guidelines. A suitable statement includes evidence that the required offset: is available to purchase from a third party or will be established as a new offset and has the agreement of the proposed offset provider, or can be met by a first party offset. Information provided in this report addressing application requirement: The required offset is available to purchase from a third party, as evidenced in the native vegetation credit register extracts supplied in Appendix H.
Additional application requirements for applications in the Detailed Assessment Pathway	
10	Application requirement: A site assessment report of the native vegetation to be removed, including: a habitat hectare assessment of any patches of native vegetation, including the condition, extent (in hectares), Ecological Vegetation Class and bioregional conservation status; The location, number, circumference (in cm measured at 1.3 m above ground level) and species of any large trees within patches; and the location, number, circumference (in cm measured at 1.3 m above ground level) and species of any scattered trees, and whether each tree is small or large. Information provided in this report addressing application requirement: - A habitat hectare assessment for patches of native vegetation to be removed was undertaken. The results are provided in Appendix I. - Other particulars including condition, extent, ecological vegetation class and bioregional conservation status are outlined in the attached NVRR (Appendix G). 12 large trees are proposed to be removed as per the attached NVRR (Appendix G). Details of these trees are provided in the attached tree register (Appendix D), with locations as mapped in Figure 5.1.
11	Application requirement: Information about impacts on rare or threatened species habitat, including: - The relevant section of the Habitat importance map for each rare or threatened species requiring a species offset. - For each rare or threatened species that the native vegetation to be removed is habitat for, according to the Habitat importance maps: - the species' conservation status.

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No. Application requirement including where/how it is addressed in this report.

- the proportional impact of the removal of native vegetation on the total habitat for that species.
- whether their habitats are highly localised habitats, dispersed habitats, or important areas of habitat within a dispersed species habitat.

Information provided in this report addressing application requirement:

All information required to address this information is provided in the attached NVRR (Appendix G).

6.1.6 CaLP Act

Environmental management required during construction and operation of the Project.

The CaLP Act defines requirements to avoid land degradation, conserve soil, protect water resources, and eradicate and prevent the spread and establishment of noxious weed and pest animal species.

The CaLP Act defines four categories of noxious weeds: State Prohibited Weeds, Regionally Prohibited Weeds, Regionally Controlled Weeds and Restricted Weeds. Noxious weed species and the category they are placed in are specific to individual CMA regions.

Mitigation measures to control pest plant and animal species and to prevent an increase in the population of the species as a result of the construction and operation of the Project will be required to be incorporated into environmental management documentation (e.g. a Construction Environmental Management Plan (CEMP) for the construction phase).

6.1.7 Wildlife Act

Construction environmental management required.

The Wildlife Act establishes procedures to protect and conserve Victoria's wildlife. It is an offence under the Wildlife Act to kill, take, control or harm wildlife or to damage, disturb or destroy wildlife habitat unless authorised to do so under the Act or associated Wildlife Regulations 2013. Approval to damage, disturb or destroy wildlife habitat is not required under this Act where authorised under another Act (e.g. permit to remove native vegetation under the P&E Act).

Where vegetation clearance occurs, it may be necessary to relocate wildlife to suitable habitat outside of the construction area. Any persons engaged by the Project to relocate or otherwise handle wildlife will need to hold the appropriate authorisation under the Wildlife Act. This requirement will need to be addressed by the relevant construction contractor and should be included in construction phase environmental management documentation for the Project.

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7.0 Conclusions

Umwelt undertook an ecological impact assessment of likely project impacts upon ecological values, including fieldwork undertaken 04 August 2025 to 05 August 2025, 25 September 2025, and 8 December 2025.

Ecological values

The assessment area was found to be predominantly clear of native vegetation, with exotic vegetation (improved pasture) covering most of its extent, though areas of extant native vegetation were recorded in the north-west and east of the assessment area.

Native vegetation recorded comprised patches of native vegetation across three EVCs totalling 14.42 ha, 32 scattered trees, and low densities of Weeping grass outside of patches of native vegetation in the east of the assessment area.

No threatened ecological communities listed under the EPBC Act or FFG Act were recorded within the assessment area.

Four threatened flora species are considered likely to occur in the assessment area, with one threatened species (Green Scentbark (vu)) having been recorded within the assessment area. One generally protected flora species was recorded on Crown land, Hyacinth Orchid.

Seven threatened fauna species are considered likely to utilise habitat within the assessment area.

Likely project impacts to ecological values

Proposed native vegetation removal comprises:

- 0.671 ha of lowland Forest (EVC 16) comprising:
 - 0.148 ha of patches, including four large patch trees.
 - 0.522 ha scattered trees, comprising nine trees, eight of which are large.
- Removal of Scattered Weeping Grass individuals (outside of native vegetation patches) within a 0.524 ha area of primarily exotic improved pasture that supports scattered Weeping Grass individuals at 2.5% cover.

Impacts to threatened, migratory and protected species include:

- Removal of 0.669 ha of foraging habitat for Gang-gang Cockatoo, Blue Winged Parrot, and Powerful Owl, Masked Owl and Lace Monitor (figure is inclusive of scattered trees).
- Permanent removal of 1.612 ha of improved pasture that may be utilised by Growling Grass Frog for foraging.
- Removal of 0.04 ha of woodland habitat that may be utilised by Southern Toadlet

No removal of threatened or protected flora will occur.

Legislative and policy implications

Planning approval, pursuant to clause 52.17 of the Baw Baw Planning Scheme (including assessment under the Guidelines) for the removal of 0.671 ha of Lowland Forest. Offset requirement for native vegetation removal is 0.1620 General Habitat Units (West Gippsland CMA or Baw Baw Shire LGA vicinity), with a minimum strategic biodiversity score of 0.3378, including 12 large trees.

No referral under the EPBC Act is required (considering only significant impacts upon MNES). No referral under the EE Act is required (considering only biodiversity criteria). No permit to take under the FFG Act is required.

Next steps/further assessment required

1. Submit this report; alongside the Planning Permit Application to the responsible authority seeking approval to remove the required extent of native vegetation.
2. Continue to avoid and minimise impacts to native vegetation through the detailed design and construction phase. Opportunities to reduce clearance of native vegetation (particularly large canopy trees) will be investigated during detailed design of the access road including:
 - a. Confirmation of the largest vehicle required to access site, potentially enabling reductions in access road width.
 - b. Investigation of the use of the secondary (southern) access point (and associated easement) as the main access point (subject to ongoing discussions with AusNet). This would allow the northern access route (where most Project vegetation clearance is currently proposed) to serve as the secondary access for emergency vehicles. This in turn would enable reductions in width and adjustments in alignment of the northern access road to would enable further avoidance of native vegetation.
 - c. Consultation with an arborist to avoid and minimise impacts to canopy trees.

A conservative approach has been used in this assessment to reflect the worst case.

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Appendix A

Threatened Species Likelihood of Occurrence Assessment

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Table A.1 Criterion Utilised to undertake Likelihood of Occurrence Assessment

Recorded Taxon recorded by the present study or known to occur with supporting evidence	High likelihood (likely) - Recent records of the taxon in the vicinity, and/or - High quality habitat for the taxon is present.
Moderate likelihood (possible) - Limited records of the taxon in the vicinity, and/or - Habitat is present.	Low likelihood (improbable) - The taxon is only likely to rarely occur (irregularly and infrequently) and/or - Occurrence of the taxon is likely to be restricted to overfly (criterion not utilised for wind energy developments), and/or - No previous or only historic records of the taxon in the vicinity, and/or - Limited or no suitable habitat for the taxon is present, and/or - The taxon was not observed during surveys and would likely have been observed if present, and/or - The location in question lies outside the known geographic range of the taxon.
Negligible - Conditions within the project area are incongruous with requirements of the taxon (e.g. marine pelagic taxon could not occur in a terrestrial project area; or a highly degraded environment lacking in habitat features required for taxon), and/or - The taxon has been deemed absent after sufficient survey effort (criterion generally reserved for particularly conspicuous taxa).	N/a - Where taxon is recorded, legislation protecting taxon does not apply within the project area, as: - The project area is outside the natural geographic range of the taxon, and/or - The taxon is present for non-conservation purposes (e.g., planted for amenity, or has become naturalised in the area).

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Table A.2 Likelihood of Occurrence of Threatened Flora within or Adjacent to the Assessment Area

Scientific Name	Common Name	EPBC Act	FFG Act	PMST	Number of Records	Last Record	Habitat Information	Likelihood of Occurrence	Justification
<i>Acacia howittii</i>	Sticky Wattle	-	vu	N/a	1	1/07/1988	Confined to eastern Victoria from the upper Macalister River area near Mt Howitt south to near Yarram and east to near Tabberabbera. Grows in moist forest. Widely cultivated and naturalising in some areas (e.g. Daylesford, Greater Melbourne, Dandenong Ranges etc.).	Low	Outside the geographic range of this species.
<i>Amphibromus fluitans</i>	River Swamp Wallaby-grass	VU	-	Y	N/A	N/a	Largely confined to permanent swamps, principally along the Murray River between Wodonga and Eudora, uncommon to rare in the south-eastern (e.g. Casterton, Moe, Yarram), probably due to historic drainage of wetlands largely restricted in the Melbourne area to seasonal lands and mudflats of River Red Gum swamps of the Lower Yarra and Plenty/Merri volcanic plains north of Melbourne (Cam Beardsell pers. comm.).	Low	No records of the species in the vicinity of assessment area. Assessment area lacks natural permanent swamps preferred by this species.
<i>Astelia australiana</i>	Tall Astelia	VU	en	Y	0	N/a	Rare, confined to a few gully-heads and stream margins in the Powelltown-Beenak district, and a similar site near Lavers Hill in the Otways. Plants form large colonies on humus-rich, waterlogged soils in Nothofagus and Eucalyptus regnans forests.	Low	No records of the species in the vicinity of assessment area. Assessment area lacks <i>Nothofagus</i> and <i>Eucalyptus regnans</i> forest habitat preferred by this species..

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Scientific Name	Common Name	EPBC Act	FFG Act	PMST	Number of Records	Last Record	Habitat Information	Likelihood of Occurrence	Justification
<i>Caladenia tessellata</i>	Thick-lip Spider-orchid	VU	vu	Y	0	N/a	Confined to eastern Victoria from near-coastal heathy woodlands to open forests on well-drained sandy soils. Flowers Sep–Oct.	Low	Assessment area is outside the natural range of this species. No records of the species in the vicinity of the assessment area. No preferred, near coastal heathy woodland habitat.
<i>Dianella amoena</i>	Matted Flax-lily	EN	cr	Y	0	N/a	Largely confined to drier grassy woodland and grassland communities south of the Dividing Range and now much depleted through its range.	Moderate	Suitable habitat is present within the assessment area as forested areas and derelict areas outside of managed pasture, though there are no records of the species in the vicinity of the assessment area.
<i>Eucalyptus fulgens</i>	Green Scentbark	-	cr	N	1	21/11/2006	Occurs east from Healesville and Woori Yallock to the Latrobe Valley near Driffield. Open forest often with moist conditions.	Recorded	Species recorded in the east of the assessment area.
<i>Eucalyptus strzeleckii</i>	Strzelecki Gum	VU	cr	Y	600	8/03/2022	Favours ridges, slopes and streambanks, and deep fertile soils. Flowers Spring.	High	Suitable swampy/riparian habitat present in the north-west of the assessment area. Abundant records occur in the vicinity of the assessment area.

Scientific Name	Common Name	EPBC Act	FFG Act	PMST	Number of Records	Last Record	Habitat Information	Likelihood of Occurrence	Justification
<i>Glycine latrobeana</i>	Clover Glycine	VU	vu	Y	0	N/a	Widespread but of sporadic occurrence and rarely encountered. Grows mainly in grasslands and grassy woodlands.	Low	No records of the species in the Assessment area. Further, the assessment area sits outside the distribution of records of the species, which are not strongly aligned with the South Gippsland region generally. Forested habitat within the assessment area only considered to be marginal as it is not strongly aligned with the species' preferred grassland and grassy woodland habitat.
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<i>Melaleuca armillaris subsp. armillaris</i>	Giant Honey-myrtle	-	en	N/a	1	2/04/2012	Mainly confined to near-coastal sandy heaths, scrubs slightly raised above saltmarsh, riparian scrubs, rocky coastlines and foothill outcrops eastwards from about Marlo. Occurrences to the west are naturalized from cultivated stock. Commonly grown for ornament across Victoria, as a windbreak or street tree and sometimes giving rise to seedlings, particularly after fire.	Low	Assessment area is outside the natural geographic distribution of this species.

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Scientific Name	Common Name	EPBC Act	FFG Act	PMST	Number of Records	Last Record	Habitat Information	Likelihood of Occurrence	Justification
<i>Pomaderris vacciniifolia</i>	Round-leaf Pomaderris	CR	cr	Y	0	N/a	Endemic in moist forest and scrubs in upper catchment of the Yarra, Plenty and Yea Rivers.	Low	Assessment area is outside the natural geographic distribution of this species.
<i>Prasophyllum spicatum</i>	Dense Leek-orchid	VU	cr	Y	0	N/a	Localised across southern Victoria in coastal heathland and near-coastal heathy forest on sandy soils.	Low	Assessment area is outside the natural geographic distribution of this species.
<i>Pterostylis chlorogramma</i>	Green-striped Greenhood	VU	en	Y	0	N/a	Southern and western Victoria between Sale and Tallageira. Grows in heathy and shrubby woodland and open forest. Fairly widely but sporadically distributed and uncommon, occurring in small, sparse populations.	Moderate	Potentially suitable open forest habitat present. No records in the vicinity of the assessment area.
<i>Thesium australe</i>	Austral Toad-flax	VU	en	Y	0	N/a	Although once widespread, only currently known from highland areas where associated with grasslands.	Low	No records in the vicinity of the assessment area. No preferred highland grassland habitat present.
<i>Utricularia gibba</i>	Floating Bladderwort		en	N/a	1	8/04/2008	Occurs in fresh-water swamps and wetlands at low elevations. Collections from urban areas around Melbourne are believed to be introduced. Flowers Nov.-Jun.	Low	Assessment area is outside the natural geographic distribution of this species.
<i>Xerochrysum palustre</i>	Swamp Everlasting	VU	cr	Y	0	N/a	Occurs in lowland swamps, usually on black cracking clay soils, scattered from near the South Australian border north-west of Portland to Bairnsdale district, but rare due to habitat depletion.	Low	Assessment area is outside the natural geographic distribution of this species.

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Table A.3 Likelihood of Occurrence of Threatened Fauna within or Adjacent to the Assessment Area

Scientific Name	Common Name	EPB C Act	FFG Act	PMST	Number of Records	Last Record	Habitat Information	Likelihood of Occurrence	Justification
<i>Actitis hypoleucos</i>	Common Sandpiper	-	vu	Y	1	20/02/1992	Shallow, pebbly, muddy or sandy edges of rivers and streams, coastal to far inland; dams, lakes, sewage ponds; margins of tidal rivers; waterways in mangroves or saltmarsh; mudflats; rocky or sandy beaches; causeways, riverside lawns, drains, street gutters.	Low	Species may irregularly/infrequently visit farm dams present within assessment area, though these features are unlikely to present important habitat for the species.
<i>Anthochaera phrygia</i>	Regent Honeyeater	CR	cr	Y	N/A	N/A	Dry open forest, woodlands, or red ironbark, yellow box, white and yellow gum, mistletoe on river she-oaks, trees in farmlands, streets, gardens.	Low	No records of the species in the vicinity of the assessment area, and not near core sighting area for the species. Further, based on the broader distribution of records for the species, the Central to South Gippsland region more broadly does not appear to be regularly utilised by this species.
<i>Apus pacificus</i>	Fork-tailed Swift	-	-	Y	N/A	N/A	Aerial, over open country, from semi deserts to coasts, islands, sometimes over forests or cities.	Low	Occurrence of the taxon is likely to be restricted to overfly.
<i>Biziura lobata</i>	Musk Duck	-	vu	N/a	4	8/10/2017	Well-vegetated swamps, wetlands, both brackish and fresh lakes, reservoirs, shallow bays, inlets; occasionally at sea.	Low	Species may irregularly/infrequently visit farm dams present within assessment area, though these features are unlikely to

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Scientific Name	Common Name	EPB C Act	FFG Act	PMST	Number of Records	Last Record	Habitat Information	Likelihood of Occurrence	Justification
									present important habitat for the species.
<i>Botaurus poiciloptilus</i>	Australasian Bittern	EN	cr	Y	N/A	N/A	Narrow habitat preferences, preferring shallow, vegetated freshwater or brackish swamps.	Low	No records of the species in the vicinity of the assessment area. Preferred shallow swamp habitat absent from the assessment area.
<i>Calidris acuminata</i>	Sharp-tailed Sandpiper	VU	vu	Y	3	1/12/2009	Tidal mudflats, saltmarshes, mangroves; shallow fresh, brackish or saline land wetlands; floodwaters, irrigated pasture and crops; sewage ponds and saltfields.	Low	Species may irregularly/infrequently visit farm dams present within assessment area, though these features are unlikely to present important habitat for the species.
<i>Calidris ferruginea</i>	Curlew Sandpiper	CR	cr	Y	0	N/A	Tidal mudflats; saltmarsh, saltfields; fresh, brackish or saline wetlands; sewage ponds.	Low	No records of the species in the vicinity of the assessment area. No preferred wetland habitat present.
<i>Calidris melanotos</i>	Pectoral Sandpiper	-	-	Y	0	N/A	Prefers shallow fresh waters, often with low grass or other herbage; swamp margins, flooded pastures, sewerage ponds; occasionally tidal areas, saltmarshes.	Low	No records of the species in the vicinity of the assessment area. No preferred wetland habitat present.
<i>Callocephalon fimbriatum</i>	Gang-gang Cockatoo	EN	en	Y	30	28/03/2024	During summer months, Gang-gang Cockatoos primarily inhabit mature, wet sclerophyll forests, but also may occur across a	High	Numerous records of the species in the vicinity of the assessment area. Forest habitat (including hollow-

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Scientific Name	Common Name	EPB C Act	FFG Act	PMST	Number of Records	Last Record	Habitat Information	Likelihood of Occurrence	Justification
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<i>Canis lupus dingo</i>	Dingo	-	vu	N/a	1	9/06/2011	Occupies a wide variety of habitats from the hot central deserts to the cool southern forests and mountains.	Low	Limited records in the vicinity of the assessment area. Fragmented nature of the habitat present on site and in the surrounding landscape suggests limited suitability for this species.
<i>Climacteris picumnus victoriae</i>	Brown Treecreeper (south-eastern)	VU	vu	Y	0	N/A	Drier forests, woodlands, scrubs, river red gums on water courses and around lakeshores, paddocks with standing dead timber, stumps, margins of denser wooded areas.	Low	No records of the species in the vicinity of the assessment area.

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Scientific Name	Common Name	EPB C Act	FFG Act	PMST	Number of Records	Last Record	Habitat Information	Likelihood of Occurrence	Justification
<i>Dasyurus maculatus maculatus</i> (SE mainland population)	Spot-tailed Quoll	EN	en	Y	0	N/A	Has a wide range of habitats, including rainforest, open forest, woodland, coastal heathland and inland riparian forest.	Low	Limited records in the vicinity of the assessment area. Fragmented nature of the habitat present on site and in the surrounding landscape suggests limited suitability for this species.
<i>Engaeus phyllocercus</i>	Narracan Burrowing Crayfish	-	en	N/a	2	01/01/1760	Engaeus spp. inhabit a variety of permanent and ephemeral lotic and lentic waters including creeks, streams, rivers, small tributaries, drainage channels, roadside gutters and seepages, swamps, pools, lagoons, ponds and billabongs.	Low	Outside the geographic range of this species.
<i>Engaeus sternalis</i>	Warragul Burrowing Crayfish	-	cr	N/a	332	20/01/2025	Engaeus spp. inhabit a variety of permanent and ephemeral lotic and lentic waters including creeks, streams, rivers, small tributaries, drainage channels, roadside gutters and seepages, swamps, pools, lagoons, ponds and billabongs.	Low	Outside of (albeit nearby to) the geographic range of the species. No burrowing cray chimneys observed during targeted survey of suitable habitat.
<i>Falco hypoleucos</i>	Grey Falcon	VU	vu	Y	0	N/A	Lightly treed inland plains, gibber deserts, sandridges, pastoral lands, timber watercourses; seldom in driest deserts.	Low	No records of this species in the vicinity of the assessment area. Species is confined to arid and semi-arid zones.

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Scientific Name	Common Name	EPB C Act	FFG Act	PMST	Number of Records	Last Record	Habitat Information	Likelihood of Occurrence	Justification
<i>Galaxiella pusilla</i>	Dwarf Galaxias	EN	en	Y	0	N/A	In streams, burrow in moist soil, in yabby burrows, ground water and underground streams.	Low	No records of this species in the vicinity of the assessment area. Farm dams with limited fringing vegetation provide only marginal potential habitat for this species.
<i>Gallinago hardwickii</i>	Latham's Snipe	VU	vu	Y	0	N/a	Freshwater or brackish wetlands, preferring to be close to protective vegetation cover.	Low	No records of the species in the vicinity of the assessment area.
<i>Grantiella picta</i>	Painted Honeyeater	VU	vu	Y	0	N/A	Mistletoes in eucalypt forests/woodlands; black box on watercourses; box-ironbark-yellow gum woodlands; paperbarks, Casuarinas; mulga, other acacias; trees on farmland; gardens.	Low	No records of the species in the vicinity of the assessment area.
<i>Haliaeetus leucogaster</i>	White-bellied Sea-Eagle	-	en	N/a	2	20/11/2018	Coasts, islands, estuaries, inlets, large rivers, inland lakes, reservoirs.	Low	Species may overfly but is unlikely to utilise habitat within the assessment area.
<i>Hirundapus caudacutus</i>	White-throated Needletail	VU	vu	Y	3	15/02/2019	Airspace over forests, woodlands, farmlands, plains, lakes, coasts, towns, feeding companies frequency patrol back and forward along favoured hilltops and timbered ranges.	Low	Species may overfly but is unlikely to utilise habitat within the assessment area.

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Scientific Name	Common Name	EPB C Act	FFG Act	PMST	Number of Records	Last Record	Habitat Information	Likelihood of Occurrence	Justification
<i>Hyridella narracanensis</i>	Narracan Corrugated Mussel	-	en	N/a	2	6/05/2016	Occurs in a small number of streams in the Yarra, Bunyip, La Trobe and South Gippsland river basins and may still be present in streams of the Otway Ranges. Found in areas well-shaded by overhanging vegetation, in shallow water with moderate currents over sandy, compacted substrata with low organic content. Requires clean, clear water that is permanently flowing (FFG-Scientific Advisory).	Low	Low habitat suitability within the Assessment area due to clearance of tree canopy around watercourses, and likely ephemeral nature of the watercourses outside of dams.
<i>Isoodon obesulus obesulus</i>	Southern Brown Bandicoot	EN	en	Y	0	N/A	Prefer sandy soil with scrubby vegetation and/or areas with low ground cover that are burnt out from time to time.	Low	No records within 10 km. Assessment area are outside of the PMST-modelled distribution of this species.
<i>Lathamus discolor</i>	Swift Parrot	CR	cr	Y	0	N/A	Open grassy woodland, with dead trees, near permanent water and forested hills, coastal heaths, pastures with exotic grasses, weeds, roadsides, orchards.	Low	No records of the species in the vicinity of the assessment area.
<i>Lissolepis coventryi</i>	Swamp Skink	EN	en	Y	6	17/02/1982	Low lying marshes and lagoon margins, in paperbark swamps, sedges and Melaleuca thickets.	Low	No suitable habitat for species within assessment area. Swampy riparian woodland within assessment area is degraded and does not support the structurally

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Scientific Name	Common Name	EPB C Act	FFG Act	PMST	Number of Records	Last Record	Habitat Information	Likelihood of Occurrence	Justification
									complex swampy understorey vegetation that characterises habitat for this species.
<i>Ranoidea raniformis</i>	Growling Grass Frog	VU	vu	Y	3	21/11/2006	A largely aquatic species found among vegetation within or at the edges of permanent water – streams, swamps, lagoons, farm dams and ornamental ponds. Often found under debris on low, often flooded river flats. Frequently active by day.	High	Suitable farm dam habitat occurs within the assessment area.
<i>Maccullochella peelii</i>	Murray Cod	VU	en	N	1	1/12/1989	Slow flowing turbid water of rivers and streams at low elevations. Also, fast-moving clear, rocky upland streams. Favours deeper water around boulders, longs, undercut banks and overhanging vegetation.	Low	No records of the species in the vicinity of the assessment area. Outside the geographic range of this species.
<i>Mastacomys fuscus mordicus</i>	Broad-toothed Rat	EN	en	Y	0	N/A	In Victoria, distributed from sea level to >2200 m in elevation, and is climatically characterised by areas with a mean annual rainfall above 1000mm. They prefer a moderate-to-dense ground cover of grasses or sedges, with shrubs usually present and exist in a broad range of habitats for	Low	No records of the species in the vicinity of the assessment area.

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Scientific Name	Common Name	EPB C Act	FFG Act	PMST	Number of Records	Last Record	Habitat Information	Likelihood of Occurrence	Justification
							coastal environments to alpine regions.		
<i>Megascolides australis</i>	Giant Gippsland Earthworm	VU	en	Y	47	15/11/2015	Found predominantly in exotic pastures used for dairying. The primary habitat of this species is generally found along creek banks, adjacent to soaks and on wet south-facing hillslopes, often with terracettes.	Low	Assessment area is outside the geographic range of this species.
<i>Melanodryas cucullata cucullata</i>	South-eastern Hooded Robin	EN	en	Y	0	N/A	This copied document to be made available for the sole purpose of enabling its consideration and review as part of a planning process under the Planning and Environment Act 1987. The document must not be used for any purpose which may breach any copyright. Dried eucalypt forests, woodlands, scrubs with fallen logs, debris, mallee, Casuarina, cypress pine, mulga, cleared paddocks, Banksia dominated coastal scrubs.	Low	No records of the species in the vicinity of the assessment area.
<i>Motacilla flava</i>	Yellow Wagtail	-	-	Y	0	N/A	This species occupies a range of damp or wet habitats with low vegetation, from damp meadows, marshes, waterside pastures, sewage farms and bogs to damp steep and grassy tundra. In the north of its range, it is also found in large forest clearings. It breeds from April to August, although this varies with latitude. Does not breed in Australia.	Low	No records of the species in the vicinity of the assessment area.

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Scientific Name	Common Name	EPB C Act	FFG Act	PMST	Number of Records	Last Record	Habitat Information	Likelihood of Occurrence	Justification
<i>Nannoperca obscura</i>	Yarra Pygmy Perch	EN	en	Y	0	N/A	Recorded from 42 locations, extending from Dandenong Creek in Victoria west through to Lake Alexandrina near the mouth of the Murray River in South Australia. The Yarra Pygmy Perch prefers slow-moving or still waters, such as pools in rivers and streams or in lakes in fresh and brackish water. They prefer sites which have abundant submerged and emergent aquatic vegetation, sometimes with wood debris. These characteristics are essential in providing shelter, protection, feeding and breeding habitat	Low	No records of the species in the vicinity of the assessment area. Aquatic habitat in the assessment area lacks the structural complexity that characterizes habitat for this species.
<i>Nannoperca sp. 1</i>	Flinders Pygmy Perch	-	vu	N/a	13	28/04/2023	Merrimans Creek, South Gippsland, and the La Trobe River catchment, east to the Genoa/Wallagaraugh rivers near the Vic/NSW border. A small and possibly translocated population occurs further west in Pebble Creek, a tributary of the Franklin River system in Corner Inlet. Inhabits slow or still waters with abundant aquatic vegetation, including lakes, ponds and slow-	Low	Assessment area contains only one higher-order, ephemeral headwater stream which is incongruous with the habitat requirements of the species.

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Scientific Name	Common Name	EPB C Act	FFG Act	PMST	Number of Records	Last Record	Habitat Information	Likelihood of Occurrence	Justification
							flowing rivers and creeks, along with pools in moderately flowing streams.		
<i>Neophema chrysostoma</i>	Blue-winged Parrot	VU	vu	Y	1	5/12/2020	The Blue-winged Parrot inhabits a range of habitats from coastal, sub-coastal and inland areas, right through to semi-arid zones. Throughout their range they favour grasslands and grassy woodlands. They are often found near wetlands both near the coast and in semi-arid zones. Blue-winged Parrots can also be seen in altered environments such as airfields, golf-courses and paddocks. Nest in hollows and in Victoria, birds are known to breed mainly in heathy forests and woodlands and in wetter forests soon after fire or logging.	High	Species recorded in the vicinity of the assessment area. Forest habitat (including hollow-bearing trees) represents potentially suitable habitat for this species.
<i>Ninox strenua</i>	Powerful Owl	-	vu	N/a	18	21/04/2018	Pairs occupy a large, probably permanent, home range in mountain forests, gullies and forest margins, sparser hilly woodlands, coastal forests, woodlands, scrubs, exotic pine plantations, large trees in private/public gardens, some in cities.	High	Numerous records of the species in the vicinity of the assessment area. Forest habitat (including hollow-bearing trees) represents potentially suitable habitat for this species.

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Scientific Name	Common Name	EPB C Act	FFG Act	PMST	Number of Records	Last Record	Habitat Information	Likelihood of Occurrence	Justification
<i>Ornithorhynchus anatinus</i>	Platypus	-	vu	N/a	1	27/11/2021	Creeks and rivers along Australia's eastern seaboard. Formerly at various locations along the Murray River. Burrows in banks of waterways, with an identifiably horizontally oval cross-section. Generally, breeds in September.	Low	Aquatic habitat present lacks suitable banks for burrowing.
<i>Oxyura australis</i>	Blue-billed Duck	-	vu	N/a	12	2/07/2019	Found on temperate, fresh to saline, terrestrial wetlands including coverage ponds, rivers, bill lakes and salt pans. Preferring deep, permanent open water with or near dense vegetation.	Low	Species may irregularly/infrequently visit farm dams present within assessment area, though these features are unlikely to present important habitat for the species.
<i>Pandion haliaetus</i>	Osprey	-	-	Y	0	N/A	Occur in littoral and coastal habitats and terrestrial wetlands of tropical and temperate Australia and offshore islands.	Low	No records of the species in the vicinity of the assessment area.
<i>Petauroides volans</i>	Southern Greater Glider	EN	en	Y	17	16/05/2018	A variety of eucalypt-dominated habitats, ranging from low, open forests on the coast to tall forests on in the ranges and low woodland westward of the Dividing Range.	Low	Fragmented nature of the habitat present on site and in the surrounding landscape suggests limited suitability for this species.

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Scientific Name	Common Name	EPB C Act	FFG Act	PMST	Number of Records	Last Record	Habitat Information	Likelihood of Occurrence	Justification
<i>Petaurus australis</i>	Yellow-bellied Glider	VU	vu	Y	N/A	N/A	In Victoria extending from the east coast to Melbourne. Occurs in eucalypt-dominated woodlands and forests, including both wet and dry sclerophyll forests.	Low	Fragmented nature of the habitat present on site and in the surrounding landscape suggests limited suitability for this species.
<i>Potorous tridactylus trisulcatus</i>	Long-nosed Potoroo	VU	vu	Y	0	N/A	Inhabits coastal heath and dry and wet sclerophyll forests. Prefers relatively thick ground cover and is concentrated in areas where soil is light and sandy. Generally restricted to areas where rainfall > 760mm.	Low	No records of the species in the vicinity of the assessment area. Assessment area not within the geographic range of the species.
<i>Prototroctes maraena</i>	Australian Grayling	VU	vu	Y	0	N/A	Predominately a freshwater fish but is considered diadromous because the fry has a marine phase. The majority of its life is spent in freshwater, inhabiting rivers and streams, usually in cool (5-26°C), clear waters with a gravel substrate and alternating pool and riffle zones but it has also been recorded to occur in turbid water with muddy-bottomed, heavily silted habitat as well. Grayling can penetrate well inland and have been reported over 100 km upstream	Low	No records in the vicinity of the assessment area. No preferred stream habitat present.

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Scientific Name	Common Name	EPB C Act	FFG Act	PMST	Number of Records	Last Record	Habitat Information	Likelihood of Occurrence	Justification
							from the sea, provided there are no barriers to movement.		
<i>Pseudomys fumeus</i>	Smoky Mouse	EN	en	Y	0	N/A	Ridgetop sclerophyll forest with a diverse understorey of heath dominated by legumes. Population highly disjunct, with isolated groupings occurring in a variety of habitats, but rare. Local populations occur in areas of heathy understorey. Likely to now be extinct in the Otway Ranges, coastal East Gippsland and ACT.	Low	No records of the species in the vicinity of the assessment area. Connectivity of the forest and woodland vegetation within the assessment area with the surrounding landscape is poor.
<i>Pseudomys novaehollandiae</i>	New Holland Mouse	VU	vu	Y	0	N/A	Found in dry heath and open forest localities in coastal locations. It has a marked preference for soft substrates.	Low	No records of the species in the vicinity of the assessment area. Outside the coastal range of the species.
<i>Pseudophryne semimarmorata</i>	Southern Toadlet	-	en	N/a	13	29/04/2017	In Victoria, the Southern Toadlet is mainly found on and south of the Great Dividing Range although there are records as far north as the Little Desert. is generally found at lower elevations in damp areas usually under leaf litter, logs or rocks. It is recorded from forests, woodlands, heaths and grasslands in a variety of damp situations, but not necessarily near permanent water. It shelters under leaf litter, logs and rocks	High	Numerous records in the vicinity of the assessment area. Suitable forest habitat present within the assessment area.

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Scientific Name	Common Name	EPB C Act	FFG Act	PMST	Number of Records	Last Record	Habitat Information	Likelihood of Occurrence	Justification
							and lives in small tunnels that fill with water during the breeding season (March-May). It can live for at least 10 years and has a very small home range of about 5 metres from the breeding site.		
<i>Pteropus poliocephalus</i>	Grey-headed Flying-fox	VU	vu	Y	7	19/11/2024	Camps of this species are found in gullies, typically not far from water and usually in vegetation with a dense canopy.	Low	No known camps in the vicinity of the assessment area. Species occurrence likely limited to overfly or sporadic foraging.
<i>Pycnoptilus floccosus</i>	Pilotbird	VU	vu	Y	1	26/11/1874	The pilotbird is found from the Wollemi National Park and Blue Mountains National Park in New South Wales through to the Dandenong Ranges, near Melbourne in Victoria. Its natural habitat is temperate wet sclerophyll forests and occasionally temperate rainforest, where there is dense undergrowth with abundant debris. It is sedentary and common.	Low	No recent records of the species in the vicinity of the assessment area.
<i>Rostratula australis</i>	Australian Painted-snipe	EN	cr	Y	0	N/A	Well-vegetated shallows and margins of wetlands, dams, sewage ponds; wet pastures, marshy areas, irrigation systems,	Low	No records of the species in the vicinity of the assessment area.

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Scientific Name	Common Name	EPB C Act	FFG Act	PMST	Number of Records	Last Record	Habitat Information	Likelihood of Occurrence	Justification
							lignum, tea-tree scrub, open timber.		
<i>Sminthopsis leucopus</i>	White-footed Dunnart	-	vu	N/a	1	22/02/1982	Wide range of habitats including disturbed areas. Heathy woodland and forest, coastal scrub and coastal dune grasslands.	Low	Limited records of the species in the vicinity of the assessment area. Connectivity of the forest and woodland vegetation within the assessment area with the surrounding landscape is poor.
<i>Spatula rhynchotis</i>	Australasian Shoveler	-	vu	N/a	2	5/12/2020	Large water, fresh and saline lakes, well vegetated freshwater wetlands, coastal inlets, sewage ponds, floodwaters.	Low	Species may irregularly/infrequently visit farm dams present within assessment area, though these features are unlikely to present important habitat for the species.
<i>Stagonopleura guttata</i>	Diamond Firetail	VU	vu	Y	0	N/A	Open Eucalypt forests/woodlands; River Red Gum, Mallee, Buloke, Cypress Pine.	Low	No records of the species in the vicinity of the assessment area.
<i>Stictonetta naevosa</i>	Freckled Duck	-	en	N/a	4	10/01/2019	Large, well vegetated swamps; in dry periods moves to open lakes.	Low	Species may irregularly/infrequently visit farm dams present within assessment area, though these features are unlikely to present important habitat for the species.

Scientific Name	Common Name	EPB C Act	FFG Act	PMST	Number of Records	Last Record	Habitat Information	Likelihood of Occurrence	Justification
<i>Tyto novaehollandiae</i>	Masked Owl	-	cr	N/a	3	23/03/2002	Forests, open woodlands, farmlands with large trees, partly forested coastal plains, paperbark woodlands, caves.	High	Numerous records of the species in the vicinity of the assessment area. Forest habitat (including hollow-bearing trees) represents potentially suitable habitat for this species.
<i>Varanus varius</i>	Lace Monitor	-	en	N/a	3	2/06/2004	Coast, ranges, slopes and adjacent plains of eastern and south-eastern Australia, where it occurs in occur in well-timbered areas from dry woodlands to cool temperate forests. It feeds on insects, reptiles and small mammals, but is a major predator of nestling birds. Often forages on the ground, and in trees.	Moderate	Records of the species in the vicinity. Suitable forest habitat present.

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Appendix B

PMST Search Results

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EPBC Act Protected Matters Report

This report provides general guidance on matters of national environmental significance and other matters protected by the EPBC Act in the area you have selected. Please see the caveat for interpretation of information provided here.

Report created: 19-Aug-2025

[Summary](#)

[Details](#)

[Matters of NES](#)

[Other Matters Protected by the EPBC Act](#)

[Extra Information](#)

[Caveat](#)

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Summary

Matters of National Environment Significance

This part of the report summarises the matters of national environmental significance that may occur in, or may relate to, the area you nominated. Further information is available in the detail part of the report, which can be accessed by scrolling or following the links below. If you are proposing to undertake an activity that may have a significant impact on one or more matters of national environmental significance then you should consider the [Administrative Guidelines on Significance](#).

World Heritage Properties:	None
National Heritage Places:	None
Wetlands of International Importance (Ramsar	2
Great Barrier Reef Marine Park:	None
Commonwealth Marine Area:	None
Listed Threatened Ecological Communities:	None
Listed Threatened Species:	42
Listed Migratory Species:	9

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Other Matters Protected by the EPBC Act

This part of the report summarises other matters protected under the Act that may relate to the area you nominated. Approval may be required for a proposed activity that significantly affects the environment on Commonwealth land, when the action is outside the Commonwealth land, or the environment anywhere when the action is taken on Commonwealth land. Approval may also be required for the Commonwealth or Commonwealth agencies proposing to take an action that is likely to have a significant impact on the environment anywhere.

The EPBC Act protects the environment on Commonwealth land, the environment from the actions taken on Commonwealth land, and the environment from actions taken by Commonwealth agencies. As heritage values of a place are part of the 'environment', these aspects of the EPBC Act protect the Commonwealth Heritage values of a Commonwealth Heritage place. Information on the new heritage laws can be found at <https://www.dcceew.gov.au/parks-heritage/heritage>

A [permit](#) may be required for activities in or on a Commonwealth area that may affect a member of a listed threatened species or ecological community, a member of a listed migratory species, whales and other cetaceans, or a member of a listed marine species.

Commonwealth Lands:	None
Commonwealth Heritage Places:	None
Listed Marine Species:	19
Whales and Other Cetaceans:	None
Critical Habitats:	None
Commonwealth Reserves Terrestrial:	None
Australian Marine Parks:	None
Habitat Critical to the Survival of Marine Turtles:	None

Extra Information

This part of the report provides information that may also be relevant to the area you have

State and Territory Reserves:	3
Regional Forest Agreements:	2
Nationally Important Wetlands:	None
EPBC Act Referrals:	13
Key Ecological Features (Marine):	None
Biologically Important Areas:	None
Bioregional Assessments:	1
Geological and Bioregional Assessments:	None

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Details

Matters of National Environmental Significance

Wetlands of International Importance (Ramsar Wetlands)			[Resource Information]
Ramsar Site Name	Proximity	Buffer Status	
Gippsland lakes	50 - 100km upstream from Ramsar site	In feature area	
Western port	40 - 50km upstream from Ramsar site	In buffer area only	

Listed Threatened Species			[Resource Information]
Status of Conservation Dependent and Extinct are not MNES under the EPBC Act. Number is the current name ID.			
Scientific Name	Threatened Category	Presence Text	Buffer Status
BIRD			
Anthochaera phrygia Regent Honeyeater [82338]	Critically Endangered	Species or species habitat likely to occur within area	In feature area
Botaurus poiciloptilus Australasian Bittern [1001]	Endangered	Species or species habitat known to occur within area	In feature area
Calidris acuminata Sharp-tailed Sandpiper [874]	Vulnerable	Species or species habitat likely to occur within area	In feature area
Calidris ferruginea Curlew Sandpiper [856]	Critically Endangered	Species or species habitat may occur within area	In feature area
Callocephalon fimbriatum Gang-gang Cockatoo [768]	Endangered	Species or species habitat known to occur within area	In feature area
Climacteris picumnus victoriae Brown Treecreeper (south-eastern) [67062]	Vulnerable	Species or species habitat may occur within area	In feature area

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Scientific Name	Threatened Category	Presence Text	Buffer Status
Falco hypoleucos Grey Falcon [929]	Vulnerable	Species or species habitat likely to occur within area	In feature area
Gallinago hardwickii Latham's Snipe, Japanese Snipe [863]	Vulnerable	Species or species habitat known to occur within area	In feature area
Grantiella picta Painted Honeyeater [470]	Vulnerable	Species or species habitat may occur within area	In feature area
Hirundapus caudacutus White-throated Needletail [682]	Vulnerable	Species or species habitat known to occur within area	In feature area
Lathamus discolor Swift Parrot [744]	Critically Endangered	Species or species habitat likely to occur within area	In feature area
Melanodryas cucullata cucullata South-eastern Hooded Robin, Hooded Robin (south-eastern) [67093]	Endangered	Species or species habitat may occur within area	In feature area
Neophema chrysostoma Blue-winged Parrot [726]	Vulnerable	Species or species habitat known to occur within area	In feature area
Pycnoptilus floccosus Pilotbird [525]	Vulnerable	Species or species habitat known to occur within area	In feature area
Rostratula australis Australian Painted Snipe [77037]	Endangered	Species or species habitat likely to occur within area	In feature area
Stagonopleura guttata Diamond Firetail [59398]	Vulnerable	Species or species habitat may occur within area	In feature area

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Galaxiella pusilla Eastern Dwarf Galaxias, Dwarf Galaxias [56790]	Endangered	Species or species habitat likely to occur within area	In feature area
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Scientific Name	Threatened Category	Presence Text	Buffer Status
Nannoperca obscura Yarra Pygmy Perch [26177]	Endangered	Species or species habitat may occur within area	In buffer area only
Prototroctes maraena Australian Grayling [26179]	Vulnerable	Species or species habitat may occur within area	In feature area
FROG			
Litoria raniformis Southern Bell Frog, Growling Grass Frog, Green and Golden Frog, Warty Swamp Frog, Golden Bell Frog [1828]	Vulnerable	Species or species habitat known to occur within area	In feature area
MAMMAL			
Dasyurus maculatus maculatus (SE mainland population) Spot-tailed Quoll, Spotted-tail Quoll, Tiger Quoll (southeastern mainland population) [75184]	Endangered	Species or species habitat may occur within area	In feature area
Isoodon obesulus obesulus Southern Brown Bandicoot (eastern), Southern Brown Bandicoot (south-eastern) [68050]	Endangered	Species or species habitat likely to occur within area	In feature area
Mastacomys fuscus mordicus Broad-toothed Rat (mainland), Tooarrana [87617]	Endangered	Species or species habitat may occur within area	In buffer area only
Petauroides volans Greater Glider (southern and central) [254]	Endangered	Species or species habitat known to occur within area	In feature area
Petaurus australis australis Yellow-bellied Glider (south-eastern) [87600]	Vulnerable	Species or species habitat likely to occur within area	In feature area
Potorous tridactylus trisulcatus Long-nosed Potoroo (southern mainland) [86367]	Vulnerable	Species or species habitat may occur within area	In buffer area only
Pseudomys fumeus Smoky Mouse, Konoom [88]	Endangered	Species or species habitat likely to occur within area	In buffer area only
Pseudomys novaehollandiae New Holland Mouse, Pookila [96]	Vulnerable	Species or species habitat may occur within area	In buffer area only

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Scientific Name	Threatened Category	Presence Text	Buffer Status
Pteropus poliocephalus Grey-headed Flying-fox [186]	Vulnerable	Foraging, feeding or related behaviour may occur within area	In feature area
OTHER			
Megascolides australis Giant Gippsland Earthworm [64420]	Vulnerable	Species or species habitat known to occur within area	In buffer area only
PLANT			
Amphibromus fluitans River Swamp Wallaby-grass, Floating Swamp Wallaby-grass [19215]	Vulnerable	Species or species habitat likely to occur within area	In feature area
Astelia australiana Tall Astelia [10851]	Vulnerable	Species or species habitat may occur within area	In buffer area only
Caladenia tessellata Thick-lipped Spider-orchid, Daddy Long-legs [2119]	Vulnerable	Species or species habitat may occur within area	In feature area
Dianella amoena Matted Flax-lily [64886]	Endangered	Species or species habitat likely to occur within area	In feature area
Eucalyptus strzeleckii Strzelecki Gum [55400]	Vulnerable	Species or species habitat known to occur within area	In feature area
Glycine latrobeana Clover Glycine, Purple Clover [13910]	Vulnerable	Species or species habitat likely to occur within area	In feature area
Pomaderris vacciniifolia Round-leaf Pomaderris [4256]	Critically Endangered	Species or species habitat may occur within area	In buffer area only
Prasophyllum spicatum Dense Leek-orchid [55146]	Vulnerable	Species or species habitat may occur within area	In buffer area only
Pterostylis chlorogramma Green-striped Greenhood [56510]	Vulnerable	Species or species habitat likely to occur within area	In feature area

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Scientific Name	Threatened Category	Presence Text	Buffer Status
Thesium australe Austral Toadflax, Toadflax [15202]	Vulnerable	Species or species habitat may occur within area	In feature area
Xerochrysum palustre Swamp Everlasting, Swamp Paper Daisy [76215]	Vulnerable	Species or species habitat likely to occur within area	In feature area
REPTILE			
Lissolepis coventryi Swamp Skink, Eastern Mourning Skink [84053]	Endangered	Species or species habitat known to occur within area	In feature area
Listed Migratory Species		[Resource Information]	
Scientific Name	Threatened Category	Presence Text	Buffer Status
Migratory Marine Birds			
Apus pacificus Fork-tailed Swift [678]		Species or species habitat likely to occur within area	In feature area
Migratory Terrestrial Species			
Hirundapus caudacutus White-throated Needletail [682]	Vulnerable	Species or species habitat known to occur within area	In feature area
Motacilla flava Yellow Wagtail [644]	This copied document to be made available for the sole purpose of enabling its consideration and review as part of a planning process under the Planning and Environment Act 1987. The document must not be used for any purpose which may breach any copyright	Species or species habitat may occur within area	In feature area
Migratory Wetlands Species			
Actitis hypoleucos Common Sandpiper [59309]		Species or species habitat may occur within area	In feature area
Calidris acuminata Sharp-tailed Sandpiper [874]	Vulnerable	Species or species habitat likely to occur within area	In feature area
Calidris ferruginea Curlew Sandpiper [856]	Critically Endangered	Species or species habitat may occur within area	In feature area
Calidris melanotos Pectoral Sandpiper [858]	ADVERTISED PLAN	Species or species habitat may occur within area	In feature area

Scientific Name	Threatened Category	Presence Text	Buffer Status
Gallinago hardwickii Latham's Snipe, Japanese Snipe [863]	Vulnerable	Species or species habitat known to occur within area	In feature area
Pandion haliaetus Osprey [952]		Species or species habitat likely to occur within area	In feature area

Other Matters Protected by the EPBC Act

Listed Marine Species		[Resource Information]	
Scientific Name	Threatened Category	Presence Text	Buffer Status
Bird			
Actitis hypoleucos Common Sandpiper [59309]		Species or species habitat may occur within area	In feature area
Apus pacificus Fork-tailed Swift [678]	This copied document to be made available for the sole purpose of enabling its consideration and review as part of a planning process under the Planning and Environment Act 1987. The document must not be used for any purpose which may breach any copyright	Species or species habitat likely to occur within area overfly marine area	In feature area
Bubulcus ibis as Ardea ibis Cattle Egret [66521]		Species or species habitat may occur within area overfly marine area	In feature area
Calidris acuminata Sharp-tailed Sandpiper [874]		Species or species habitat likely to occur within area	In feature area
Calidris ferruginea Curlew Sandpiper [856]	Critically Endangered	Species or species habitat may occur within area overfly marine area	In feature area
Calidris melanotos Pectoral Sandpiper [858]		Species or species habitat may occur within area overfly marine area	In feature area

Scientific Name	Threatened Category	Presence Text	Buffer Status
Gallinago hardwickii Latham's Snipe, Japanese Snipe [863]	Vulnerable	Species or species habitat known to occur within area overfly marine area	In feature area
Haliaeetus leucogaster White-bellied Sea-Eagle [943]		Species or species habitat known to occur within area	In feature area
Hirundapus caudacutus White-throated Needletail [682]	Vulnerable	Species or species habitat known to occur within area overfly marine area	In feature area
Lathamus discolor Swift Parrot [744]	Critically Endangered	Species or species habitat likely to occur within area overfly marine area	In feature area
Merops ornatus Rainbow Bee-eater [670]		Species or species habitat may occur within area overfly marine area	In feature area
Monarcha melanopsis Black-faced Monarch [609]		Species or species habitat known to occur within area overfly marine area	In feature area
Motacilla flava Yellow Wagtail [644]		Species or species habitat may occur within area overfly marine area	In feature area
Myiagra cyanoleuca Satin Flycatcher [612]		Breeding known to occur within area overfly marine area	In feature area
Neophema chrysostoma Blue-winged Parrot [726]	Vulnerable	Species or species habitat known to occur within area overfly marine area	In feature area
Pandion haliaetus Osprey [952]		Species or species habitat likely to occur within area	In feature area

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Scientific Name	Threatened Category	Presence Text	Buffer Status
Rhipidura rufifrons Rufous Fantail [592]		Species or species habitat known to occur within area overfly marine area	In feature area
Rostratula australis as Rostratula benghalensis (sensu lato) Australian Painted Snipe [77037]	Endangered	Species or species habitat likely to occur within area overfly marine area	In feature area
Sterna striata White-fronted Tern [799]		Migration route may occur within area	In buffer area only

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Extra Information

State and Territory Reserves			[Resource Information]
Protected Area Name	Reserve Type	State	Buffer Status
Neerim East G210 B.R.	Natural Features Reserve	VIC	In buffer area only
Neerim East G79 B.R	Natural Features Reserve	VIC	In buffer area only
Sweetwater Creek N.C.R	Natural Features Reserve	VIC	In buffer area only

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Regional Forest Agreements	[Resource Information]
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Note that all areas with completed RFAs have been included. Please see the associated resource information for specific caveats and use limitations associated with RFA boundary information.

RFA Name	State	Buffer Status
Central Highlands RFA	Victoria	In feature area
Gippsland RFA	Victoria	In buffer area only

EPBC Act Referrals					[Resource Information]
Title of referral	Reference	Referral Outcome	Assessment Status	Buffer Status	
Controlled action					
Installation of replacement crude-condensate pipeline, Vic	2014/7202	Controlled Action	Post-Approval	In buffer area only	
Not controlled action					
Biodiversity Impacts Audit	2011/6191	Not Controlled Action	Completed	In buffer area only	
Improving rabbit biocontrol: releasing another strain of RHDV, sthrn two thirds of Australia	2015/7522	Not Controlled Action	Completed	In feature area	

Title of referral	Reference	Referral Outcome	Assessment Status	Buffer Status
Not controlled action				
INDIGO Central Submarine Telecommunications Cable	2017/8127	Not Controlled Action	Completed	In feature area
Industrial Development	2009/4823	Not Controlled Action	Completed	In buffer area only
Regional Fast Rail Project - Latrobe Valley Country Works Package	2002/654	Not Controlled Action	Completed	In buffer area only
Removal of Strzelecki Gum as part of the Regional Fast Rail Project	2006/2936	Not Controlled Action	Completed	In buffer area only
Residential Development, 245 Copelands Road, Warragul, Vic	2018/8342	Not Controlled Action	Completed	In buffer area only
Not controlled action (particular manner)				
Gippsland Rail Line Upgrade - Longwarry East to Traralgon	2019/8564	Not Controlled Action (Particular Manner)	Post-Approval	In buffer area only
INDIGO Marine Cable Route Survey (INDIGO)	2017/7996	Not Controlled Action (Particular Manner)	Post-Approval	In feature area
Regional Fibre Optic Project (RFOP)	2003/916	Not Controlled Action (Particular Manner)	Post-Approval	In buffer area only
Referral decision				
All actions taken in response to the current severe bushfires in Victoria.	2009/4787	Referral Decision	Completed	In feature area
Removal of native vegetation, 241 Copelands Rd, Warragul, Vic	2018/8274	Referral Decision	Completed	In buffer area only
Bioregional Assessments			[Resource Information]	
SubRegion	BioRegion	Website		Buffer Status
Gippsland	Gippsland Basin	BA website		In feature area

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Caveat

1 PURPOSE

This report is designed to assist in identifying the location of matters of national environmental significance (MNES) and other matters protected by the Environment Protection and Biodiversity Conservation Act 1999 (Cth) (EPBC Act) which may be relevant in determining obligations and requirements under the EPBC Act.

The report contains the mapped locations of:

- World and National Heritage properties;
- Wetlands of International and National Importance;
- Commonwealth and State/Territory reserves;
- distribution of listed threatened, migratory and marine species;
- listed threatened ecological communities; and
- other information that may be useful as an indicator of potential habitat value.

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2 DISCLAIMER

This report is not intended to be exhaustive and should only be relied upon as a general guide as mapped data is not available for all species or ecological communities listed under the EPBC Act (see below). Persons seeking to use the information contained in this report to inform the referral of a proposed action under the EPBC Act should consider the limitations noted below and whether additional information is required to determine the existence and location of MNES and other protected matters.

Where data is available to inform the mapping of protected species, the presence type (e.g. known, likely or may occur) that can be determined from the data is indicated in general terms. It is the responsibility of any person using or relying on the information in this report to ensure that it is suitable for the circumstances of any proposed use. The Commonwealth cannot accept responsibility for the consequences of any use of the report or any part thereof. To the maximum extent allowed under governing law, the Commonwealth will not be liable for any loss or damage that may be occasioned directly or indirectly through the use of, or reliance on the contents of this report.

3 DATA SOURCES

Threatened ecological communities

For threatened ecological communities where the distribution is well known, maps are generated based on information contained in recovery plans, State vegetation maps and remote sensing imagery and other sources. Where threatened ecological community distributions are less well known, existing vegetation maps and point location data are used to produce indicative distribution maps.

Threatened, migratory and marine species

Threatened, migratory and marine species distributions have been discerned through a variety of methods. Where distributions are well known and if time permits, distributions are inferred from either thematic spatial data (i.e. vegetation, soils, geology, elevation, aspect, terrain, etc.) together with point locations and described habitat; or modelled (MAXENT or BIOCLIM habitat modelling) using point locations and environmental data layers.

Where little information is available for a species or large number of maps are required in a short time-frame, maps are derived either from 0.04 or 0.02 decimal degree cells; by an automated process using polygon capture techniques (static two kilometre grid cells, alpha-hull and convex hull); or captured manually or by using topographic features (national park boundaries, islands, etc.).

In the early stages of the distribution mapping process (1999-early 2000s) distributions were defined by degree blocks, 100K or 250K map sheets to rapidly create distribution maps. More detailed distribution mapping methods are used to update these distributions when time permits.

4 LIMITATIONS

The following species and ecological communities have not been mapped and do not appear in this report:

- threatened species listed as extinct or considered vagrants;
- some recently listed species and ecological communities;
- some listed migratory and listed marine species, which are not listed as threatened species; and
- migratory species that are very widespread, vagrant, or only occur in Australia in small numbers.

The following groups have been mapped, but may not cover the complete distribution of the species:

- listed migratory and/or listed marine seabirds, which are not listed as threatened, have only been mapped for recorded breeding sites; and
- seals which have only been mapped for breeding sites near the Australian continent

The breeding sites may be important for the protection of the Commonwealth Marine environment.

Refer to the metadata for the feature group (using the Resource Information link) for the currency of the information.

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Acknowledgements

This database has been compiled from a range of data sources. The department acknowledges the following custodians who have contributed valuable data and advice:

- [-Office of Environment and Heritage, New South Wales](#)
- [-Department of Environment and Primary Industries, Victoria](#)
- [-Department of Primary Industries, Parks, Water and Environment, Tasmania](#)
- [-Department of Environment, Water and Natural Resources, South Australia](#)
- [-Department of Land and Resource Management, Northern Territory](#)
- [-Department of Environmental and Heritage Protection, Queensland](#)
- [-Department of Parks and Wildlife, Western Australia](#)
- [-Environment and Planning Directorate, ACT](#)
- [-Birdlife Australia](#)
- [-Australian Bird and Bat Banding Scheme](#)
- [-Australian National Wildlife Collection](#)
- [-Natural history museums of Australia](#)
- [-Museum Victoria](#)
- [-Australian Museum](#)
- [-South Australian Museum](#)
- [-Queensland Museum](#)
- [-Online Zoological Collections of Australian Museums](#)
- [-Queensland Herbarium](#)
- [-National Herbarium of NSW](#)
- [-Royal Botanic Gardens and National Herbarium of Victoria](#)
- [-Tasmanian Herbarium](#)
- [-State Herbarium of South Australia](#)
- [-Northern Territory Herbarium](#)
- [-Western Australian Herbarium](#)
- [-Australian National Herbarium, Canberra](#)
- [-University of New England](#)
- [-Ocean Biogeographic Information System](#)
- [-Australian Government, Department of Defence](#)
- [Forestry Corporation, NSW](#)
- [-Geoscience Australia](#)
- [-CSIRO](#)
- [-Australian Tropical Herbarium, Cairns](#)
- [-eBird Australia](#)
- [-Australian Government – Australian Antarctic Data Centre](#)
- [-Museum and Art Gallery of the Northern Territory](#)
- [-Australian Government National Environmental Science Program](#)
- [-Australian Institute of Marine Science](#)
- [-Reef Life Survey Australia](#)
- [-American Museum of Natural History](#)
- [-Queen Victoria Museum and Art Gallery, Inveresk, Tasmania](#)
- [-Tasmanian Museum and Art Gallery, Hobart, Tasmania](#)
- [-Other groups and individuals](#)

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The Department is extremely grateful to the many organisations and individuals who provided expert advice and information on numerous draft distributions.

Please feel free to provide feedback via the [Contact us](#) page.

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Appendix C

Taxa Recorded During Site Assessments

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Table C.1 Taxa Recorded during Site Assessments

Scientific Name	Common Name
Flora	
<i>Acacia dealbata</i>	Silver Wattle
<i>Acacia melanoxylon</i>	Blackwood
<i>Acacia mucronata</i> subsp. <i>longifolia</i>	Narrow-leaf Wattle
<i>Acacia stricta</i>	Hop Wattle
<i>Agrostis capillaris</i> *	Brown-top Bent
<i>Anthoxanthum odoratum</i> *	Sweet Vernal-grass
<i>Arctotheca calendula</i> *	Cape Weed
<i>Austrostipa</i> spp.	Spear Grass
<i>Banksia marginata</i>	Silver Banksia
<i>Billardiera scandens</i> s.l.	Common Apple-berry
<i>Bromus catharticus</i> *	Prairie Grass
<i>Burchardia umbellata</i>	Milkmaids
<i>Carex appressa</i>	Tall Sedge
<i>Cassinia aculeata</i> subsp. <i>aculeata</i>	Common Cassinia
<i>Centaureum erythraea</i> *	Common Centaury
<i>Centaureum</i> spp.*	Centaury
<i>Chiloglottis valida</i>	Common Bird orchid
<i>Cirsium vulgare</i> *	Spear Thistle
<i>Coprosma quadrifida</i>	Prickly Currant-bush
<i>Dactylis glomerata</i> *	Cocksfoot
<i>Dichondra repens</i>	Kidney-weed
<i>Dipodium</i> spp.	Hyacinth Orchid
<i>Eleocharis sphacelata</i>	Tall Spike-sedge
<i>Epacris impressa</i>	Common Heath
<i>Eucalyptus fulgens</i>	Green Scentbark
<i>Eucalyptus globulus</i> subsp. <i>bicostata</i>	Eurabbie
<i>Eucalyptus nitens</i>	Shining Gum
<i>Eucalyptus obliqua</i>	Messmate Stringybark
<i>Eucalyptus ovata</i>	Swamp Gum
<i>Eucalyptus radiata</i> s.l.	Narrow-leaf Peppermint
<i>Eucalyptus</i> spp.	Eucalypt
<i>Gahnia radula</i>	Thatch Saw-sedge
<i>Gahnia sieberiana</i>	Red-fruit Saw-sedge
<i>Geranium</i> spp.	Crane's Bill
<i>Gonocarpus tetragynus</i>	Common Raspwort
<i>Goodenia ovata</i>	Hop Goodenia

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Scientific Name	Common Name
<i>Hesperocyparis macrocarpa</i> *	Monterrey Cypress
<i>Holcus lanatus</i> *	Yorkshire Fog
<i>Hypericum gramineum</i>	Small St John's Wort
<i>Hypochaeris radicata</i> *	Flatweed
<i>Juncus</i> spp.	Rush
<i>Kunzea ericoides</i> s.l.	Burgan
<i>Lepidosperma elatius</i>	Tall Sword-sedge
<i>Leptospermum continentale</i>	Prickly Tea-tree
<i>Lolium</i> spp.*	Rye Grass
<i>Lomandra filiformis</i>	Wattle Mat-rush
<i>Lomandra filiformis</i> subsp. <i>filiformis</i>	Wattle Mat-rush
<i>Lomandra longifolia</i>	Spiny-headed Mat-rush
<i>Melaleuca ericifolia</i>	Swamp Paperbark
<i>Microlaena stipoides</i> var. <i>stipoides</i>	Weeping Grass
<i>Olearia lirata</i>	Snowy Daisy-bush
<i>Oxalis</i> spp.	Wood Sorrel
<i>Ozothamnus ferrugineus</i>	Tree Everlasting
<i>Paspalum dilatatum</i> *	Paspalum
<i>Plantago lanceolata</i> *	Ribwort
<i>Poa</i> spp.	Tussock Grass
<i>Pteridium esculentum</i> subsp. <i>esculentum</i>	Austral Bracken
<i>Rubus fruticosus</i> spp. agg.*	Blackberry
<i>Rytidosperma</i> spp.	Wallaby Grass
<i>Sonchus oleraceus</i> *	Common Sow-thistle
<i>Tetrarrhena juncea</i>	Forest Wire-grass
<i>Trifolium repens</i> var. <i>repens</i> *	White Clover
<i>Viola hederacea</i>	Ivy-leaf Violet
Fauna	
<i>Anas superciliosa</i>	Pacific Black Duck
<i>Anthochaera carunculata</i>	Red Wattlebird
<i>Bos taurus</i>	Domestic Cattle
<i>Chenonetta jubata</i>	Australian Wood Duck
<i>Corvus coronoides</i>	Australian Raven
<i>Crinia</i> spp.	Froglet
<i>Dacelo novaeguineae</i>	Laughing Kookaburra
<i>Egretta novaehollandiae</i>	White-faced Heron
<i>Eolophus roseicapilla</i>	Galah
<i>Gymnorhina tibicen</i>	Australian Magpie
<i>Hirundo neoxena</i>	Welcome Swallow

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Scientific Name	Common Name
<i>Malurus cyaneus</i>	Superb Fairy-wren
<i>Microcarbo melanoleucos</i>	Little Pied Cormorant
<i>Ocyphaps lophotes</i>	Crested Pigeon
<i>Oryctolagus cuniculus</i>	European Rabbit
<i>Platycercus elegans</i>	Crimson Rosella
<i>Porphyrio porphyrio</i>	Purple Swamp Hen
<i>Rhipidura albiscapa</i>	Grey Fantail
<i>Rhipidura leucophrys</i>	Willie Wagtail
<i>Tardorna tadornoides</i>	Australian Shelduck

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Appendix D

Tree Register

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Tree ID	Species	HH_VAC	Tree size	DBH (cm)	DSH (cm)	NRZ (m)	Lost/retained	Notes
1	<i>Eucalyptus camaldulensis</i>	Scattered Tree	Large	80	80	9.6	Retained	
2	<i>Eucalyptus camaldulensis</i>	Scattered Tree	Small	60	60	7.2	Retained	
3	<i>Eucalyptus camaldulensis</i>	Scattered Tree	Large	75	86	10.34	Retained	
4	<i>Eucalyptus obliqua</i>	Canopy Tree	Large	88	88	10.56	Retained	
5	<i>Eucalyptus obliqua</i>	Scattered Tree	Large	93	93	11.16	Lost	
6	<i>Eucalyptus obliqua</i>	Scattered Tree	Large	87	112	13.41	Lost	
7	<i>Eucalyptus obliqua</i>	Scattered Tree	Large	98	98	11.76	Lost	
8	<i>Eucalyptus obliqua</i>	Scattered Tree	Large	131	131	15.72	Retained	
9	<i>Eucalyptus obliqua</i>	Scattered Tree	Large	113	113	13.56	Retained	
10	<i>Eucalyptus sp.</i>	Scattered Tree	Large	102	102	12.24	Lost	Dead
11	<i>Eucalyptus sp.</i>	Scattered Tree	Large	77	77	9.24	Lost	Dead
12	<i>Eucalyptus obliqua</i>	Scattered Tree	Large	111	111	13.32	Retained	
13	<i>Eucalyptus obliqua</i>	Scattered Tree	Large	115	115	13.8	Retained	
14	<i>Eucalyptus obliqua</i>	Scattered Tree	Large	110	110	13.2	Lost	
15	<i>Eucalyptus obliqua</i>	Scattered Tree	Small	61	94	11.32	Lost	
16	<i>Eucalyptus obliqua</i>	Canopy Tree	Small	61	85	10.18	Retained	
17	<i>Eucalyptus obliqua</i>	Canopy Tree	Large	102	102	12.24	Retained	
18	<i>Eucalyptus obliqua</i>	Canopy Tree	Large	99	99	11.88	Retained	
19	<i>Eucalyptus obliqua</i>	Canopy Tree	Large	88	88	10.56	Retained	
20	<i>Eucalyptus obliqua</i>	Canopy Tree	Small	64	64	7.68	Retained	
21	<i>Eucalyptus obliqua</i>	Canopy Tree	Large	75	75	9	Retained	
22	<i>Eucalyptus obliqua</i>	Canopy Tree	Large	124	124	14.88	Retained	

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Tree ID	Species	HH_VAC	Tree size	DBH (cm)	DSH (cm)	NRZ (m)	Lost/retained	Notes
23	<i>Eucalyptus obliqua</i>	Canopy Tree	Large	78	78	9.36	Retained	
24	<i>Eucalyptus obliqua</i>	Canopy Tree	Large	72	72	8.64	Retained	
25	<i>Eucalyptus obliqua</i>	Canopy Tree	Small	69	69	8.28	Retained	
26	<i>Eucalyptus obliqua</i>	Canopy Tree	Large	92	92	11.04	Retained	
27	<i>Eucalyptus obliqua</i>	Canopy Tree	Small	57	57	6.84	Retained	
28	<i>Eucalyptus obliqua</i>	Canopy Tree	Small	45	45	5.4	Retained	
29	<i>Eucalyptus obliqua</i>	Canopy Tree	Small	36	36	4.32	Retained	
30	<i>Eucalyptus radiata</i>	Canopy Tree	Large	77	77	9.24	Lost	
31	<i>Eucalyptus radiata</i>	Canopy Tree	Large	90	90	10.8	Lost	
32	<i>Eucalyptus obliqua</i>	Scattered Tree	Large	127	127	15.24	Retained	
33	<i>Eucalyptus radiata</i>	Scattered Tree	Small	53	65	7.75	Retained	
34	<i>Eucalyptus radiata</i>	Canopy Tree	Small	66	88	10.54	Lost	
35	<i>Eucalyptus obliqua</i>	Canopy Tree	Large	96	96	11.52	Retained	
36	<i>Eucalyptus obliqua</i>	Canopy Tree	Large	90	98	11.77	Retained	
37	<i>Eucalyptus obliqua</i>	Canopy Tree	Large	76	76	9.12	Retained	
38	<i>Eucalyptus obliqua</i>	Canopy Tree	Large	94	94	11.28	Retained	
39	<i>Eucalyptus obliqua</i>	Canopy Tree	Large	89	89	10.68	Retained	
40	<i>Eucalyptus obliqua</i>	Canopy Tree	Large	77	77	9.24	Lost	
41	<i>Eucalyptus obliqua</i>	Scattered Tree	Large	116	116	13.92	Lost	
42	<i>Eucalyptus obliqua</i>	Scattered Tree	Large	86	86	10.32	Lost	
43	<i>Eucalyptus obliqua</i>	Canopy Tree	Large	118	118	14.16	Retained	
44	<i>Eucalyptus obliqua</i>	Canopy Tree	Large	86	86	10.32	Retained	

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Tree ID	Species	HH_VAC	Tree size	DBH (cm)	DSH (cm)	NRZ (m)	Lost/retained	Notes
45	<i>Eucalyptus obliqua</i>	Canopy Tree	Large	91	91	10.92	Retained	
46	<i>Eucalyptus obliqua</i>	Canopy Tree	Large	92	92	11.04	Retained	
47	<i>Eucalyptus obliqua</i>	Canopy Tree	Small	35	47	5.61	Retained	
48	<i>Eucalyptus obliqua</i>	Canopy Tree	Small	59	59	7.08	Retained	
49	<i>Eucalyptus obliqua</i>	Canopy Tree	Large	70	70	8.4	Retained	
50	<i>Eucalyptus obliqua</i>	Canopy Tree	Large	90	90	10.8	Lost	
51	<i>Eucalyptus sp.</i>	Scattered Tree	Large	79	79	9.48	Retained	Dead
52	<i>Eucalyptus sp.</i>	Scattered Tree	Large	80	80	9.6	Retained	Dead
53	<i>Eucalyptus sp.</i>	Scattered Tree	Small	69	69	8.28	Retained	Dead
54	<i>Eucalyptus sp.</i>	Scattered Tree	Small	68	68	8.16	Retained	Dead
55	<i>Eucalyptus sp.</i>	Scattered Tree	Large	83	83	9.96	Retained	Dead
56	<i>Eucalyptus sp.</i>	Scattered Tree	Large	75	75	9	Retained	Dead
57	<i>Eucalyptus sp.</i>	Scattered Tree	Large	80	80	9.6	Retained	Dead
58	<i>Eucalyptus sp.</i>	Scattered Tree	Large	86	86	10.32	Retained	Dead
59	<i>Eucalyptus sp.</i>	Scattered Tree	Small	57	57	6.84	Retained	Dead
60	<i>Eucalyptus sp.</i>	Scattered Tree	Small	57	57	6.84	Retained	Dead
61	<i>Eucalyptus sp.</i>	Scattered Tree	Small	35	35	4.2	Retained	Dead
62	<i>Eucalyptus sp.</i>	Scattered Tree	Small	40	40	4.8	Retained	Dead
63	<i>Eucalyptus sp.</i>	Scattered Tree	Small	40	40	4.8	Retained	Dead
64	<i>Eucalyptus sp.</i>	Scattered Tree	Small	38	38	4.56	Retained	Dead
65	<i>Eucalyptus sp.</i>	Canopy Tree	Small	40	40	4.8	Retained	Dead
66	<i>Eucalyptus sp.</i>	Canopy Tree	Large	72	72	8.64	Retained	Dead

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Tree ID	Species	HH_VAC	Tree size	DBH (cm)	DSH (cm)	NRZ (m)	Lost/retained	Notes
67	<i>Eucalyptus sp.</i>	Canopy Tree	Small	35	35	4.2	Retained	Dead
68	<i>Eucalyptus sp.</i>	Canopy Tree	Large	75	75	9	Retained	Dead
69	<i>Eucalyptus sp.</i>	Canopy Tree	Large	80	80	9.6	Retained	Dead
70	<i>Eucalyptus sp.</i>	Canopy Tree	Large	70	70	8.4	Retained	Dead
71	<i>Eucalyptus fulgens</i>	Canopy Tree	Small	60	60	7.2	Retained	
72	<i>Eucalyptus nitens</i>	Other	N/a			0	Retained	Planted
73	<i>Eucalyptus nitens</i>	Other	N/a			0	Retained	Planted
74	<i>Eucalyptus nitens</i>	Other	N/a			0	Retained	Planted
75	<i>Eucalyptus obliqua</i>	Canopy Tree	Large	83	83	9.96	Retained	
76	<i>Eucalyptus sp.</i>	Canopy Tree	Small	65	65	7.8	Retained	Dead
77	<i>Eucalyptus nitens</i>	Other	N/a	77	77	9.24	Retained	Planted
78	<i>Eucalyptus obliqua</i>	Canopy Tree	Large	82	82	9.84	Retained	
79	<i>Eucalyptus nitens</i>	Other	N/a	63	63	7.56	Retained	Planted
80	<i>Eucalyptus sp.</i>	Canopy Tree	Small	39	39	4.68	Retained	Dead
81	<i>Eucalyptus nitens</i>	Other	N/a	23	23	2.76	Retained	Planted
82	<i>Eucalyptus sp.</i>	Canopy Tree	Small	40	40	4.8	Retained	Dead
83	<i>Eucalyptus nitens</i>	Other	N/a			0	Retained	Planted
84	<i>Eucalyptus radiata</i>	Canopy Tree	Small	51	56	6.71	Retained	
85	<i>Eucalyptus obliqua</i>	Canopy Tree	Small	63	63	7.56	Retained	
86	<i>Eucalyptus obliqua</i>	Canopy Tree	Large	94	94	11.28	Retained	
87	<i>Eucalyptus obliqua</i>	Canopy Tree	Large	91	91	10.92	Retained	
88	<i>Eucalyptus obliqua</i>	Canopy Tree	Small	46	46	5.52	Retained	
89	<i>Eucalyptus obliqua</i>	Canopy Tree	Large	84	84	10.08	Retained	
90	<i>Eucalyptus obliqua</i>	Canopy Tree	Large	99	99	11.88	Retained	
91	<i>Eucalyptus obliqua</i>	Canopy Tree	Small	69	69	8.28	Retained	

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Tree ID	Species	HH_VAC	Tree size	DBH (cm)	DSH (cm)	NRZ (m)	Lost/retained	Notes
92	<i>Eucalyptus obliqua</i>	Canopy Tree	Large	106	106	12.72	Retained	
93	<i>Eucalyptus obliqua</i>	Canopy Tree	Large	126	126	15.12	Retained	
94	<i>Eucalyptus obliqua</i>	Canopy Tree	Large	126	126	15.12	Retained	
95	<i>Eucalyptus obliqua</i>	Canopy Tree	Large	114	114	13.68	Retained	
96	<i>Eucalyptus obliqua</i>	Canopy Tree	Large	104	104	12.48	Retained	
97	<i>Eucalyptus obliqua</i>	Canopy Tree	Large	95	95	11.4	Retained	
98	<i>Eucalyptus obliqua</i>	Canopy Tree	Large	91	125	14.94	Retained	
99	<i>Eucalyptus obliqua</i>	Canopy Tree	Large	88	88	10.56	Retained	
100	<i>Eucalyptus obliqua</i>	Canopy Tree	Large	80	80	9.6	Retained	
101	<i>Eucalyptus obliqua</i>	Canopy Tree	Large	70	70	8.4	Retained	
102	<i>Eucalyptus obliqua</i>	Canopy Tree	Large	72	72	8.64	Retained	
103	<i>Eucalyptus obliqua</i>	Canopy Tree	Large	102	102	12.24	Retained	
104	<i>Eucalyptus obliqua</i>	Canopy Tree	Large	100	100	12	Retained	
105	<i>Eucalyptus obliqua</i>	Canopy Tree	Large	108	108	12.96	Retained	
106	<i>Eucalyptus obliqua</i>	Canopy Tree	Large	70	70	8.4	Retained	
107	<i>Eucalyptus obliqua</i>	Canopy Tree	Large	80	80	9.6	Retained	
108	<i>Eucalyptus obliqua</i>	Canopy Tree	Large	86	86	10.32	Retained	
109	<i>Eucalyptus obliqua</i>	Canopy Tree	Large	118	118	14.16	Retained	
110	<i>Eucalyptus obliqua</i>	Canopy Tree	Small	57	73	8.73	Retained	Dead
111	<i>Eucalyptus obliqua</i>	Canopy Tree	Small	50	50	6	Retained	
112	<i>Eucalyptus obliqua</i>	Canopy Tree	Large	90	90	10.8	Retained	
113	<i>Eucalyptus obliqua</i>	Canopy Tree	Large	99	99	11.88	Retained	

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Tree ID	Species	HH_VAC	Tree size	DBH (cm)	DSH (cm)	NRZ (m)	Lost/retained	Notes
114	<i>Eucalyptus obliqua</i>	Canopy Tree	Large	97	97	11.64	Retained	
115	<i>Eucalyptus obliqua</i>	Canopy Tree	Large	84	84	10.08	Retained	
116	<i>Eucalyptus obliqua</i>	Canopy Tree	Large	84	84	10.08	Retained	
117	<i>Eucalyptus obliqua</i>	Canopy Tree	Large	86	86	10.32	Retained	
118	<i>Eucalyptus obliqua</i>	Canopy Tree	Large	92	92	11.04	Retained	
119	<i>Eucalyptus obliqua</i>	Canopy Tree	Small	50	50	6	Retained	
120	<i>Eucalyptus obliqua</i>	Canopy Tree	Small	67	67	8.04	Retained	
121	<i>Eucalyptus obliqua</i>	Canopy Tree	Large	96	96	15	Retained	Dead
122	<i>Eucalyptus obliqua</i>	Canopy Tree	Small	60	60	7.2	Lost	
123	<i>Eucalyptus obliqua</i>	Canopy Tree	Small	50	50	6	Lost	
124	<i>Eucalyptus obliqua</i>	Canopy Tree	Small	40	40	4.8	Lost	
124	<i>Eucalyptus obliqua</i>	Canopy Tree	Small	52	52	6.24	Lost	
126	<i>Eucalyptus globulus subsp. bicostata</i>	Canopy Tree	Small	46	46	5.52	Lost	
127	<i>Eucalyptus obliqua</i>	Canopy Tree	Small	42	42	5.04	Retained	
128	<i>Eucalyptus obliqua</i>	Canopy Tree	Small	56	56	6.72	Retained	
129	<i>Eucalyptus obliqua</i>	Canopy Tree	Small	60	60	15	Retained	Dead
130	<i>Eucalyptus obliqua</i>	Canopy Tree	Small	42	42	5.04	Retained	
131	<i>Eucalyptus obliqua</i>	Canopy Tree	Small	42	42	5.04	Retained	
132	<i>Eucalyptus obliqua</i>	Canopy Tree	Small	63	63	7.56	Retained	
133	<i>Eucalyptus obliqua</i>	Canopy Tree	Small	45	45	15	Retained	Dead
134	<i>Eucalyptus obliqua</i>	Canopy Tree	Small	54	54	6.48	Retained	
135	<i>Eucalyptus obliqua</i>	Canopy Tree	Small	45	45	15	Retained	Dead

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Tree ID	Species	HH_VAC	Tree size	DBH (cm)	DSH (cm)	NRZ (m)	Lost/retained	Notes
136	<i>Eucalyptus obliqua</i>	Canopy Tree	Large	126	126	15	Retained	Dead
137	<i>Eucalyptus obliqua</i>	Canopy Tree	Small	41	41	4.92	Retained	
138	<i>Eucalyptus obliqua</i>	Canopy Tree	Small	48	48	5.76	Retained	
139	<i>Eucalyptus fulgens</i>	Native understorey vegetation	Small	20	20	2.4	Retained	
140	<i>Eucalyptus fulgens</i>	Canopy Tree	Large	75	75	9	Retained	
141	<i>Eucalyptus fulgens</i>	Canopy Tree	Small	50	50	6	Retained	
142	<i>Eucalyptus fulgens</i>	Canopy Tree	Large	75	75	9	Retained	
143	<i>Eucalyptus fulgens</i>	Canopy Tree	Small	50	50	6	Retained	
144	<i>Eucalyptus fulgens</i>	Native understorey vegetation	Small	35	35	4.2	Retained	
145	<i>Eucalyptus fulgens</i>	Native understorey vegetation	Small	30	30	3.6	Retained	
146	<i>Eucalyptus fulgens</i>	Canopy Tree	Large	80	80	9.6	Retained	
147	<i>Eucalyptus fulgens</i>	Canopy Tree	Large	80	80	9.6	Retained	
148	<i>Eucalyptus fulgens</i>	Native understorey vegetation	Small	7	7	2	Retained	
149	<i>Eucalyptus fulgens</i>	Native understorey vegetation	Small	20	20	2.4	Retained	
150	<i>Eucalyptus fulgens</i>	Native understorey vegetation	Small	30	30	3.6	Retained	
151	<i>Eucalyptus fulgens</i>	Native understorey vegetation	Small	20	20	2.4	Retained	
152	<i>Eucalyptus fulgens</i>	Canopy Tree	Small	45	45	5.4	Retained	
153	<i>Eucalyptus fulgens</i>	Canopy Tree	Small	40	40	4.8	Retained	

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Appendix E

MNES Significant Impact Assessment

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Table E.1 Assessment of Project impacts to the Gang-gang Cockatoo (EN) against the significant impact criteria for critically endangered and endangered species (DEWHA (Cth), 2013)

Criterion	Assessment of Project impacts (Section 5.2) against criterion
Project to lead to a long-term decrease in the size of a population	Criterion not met The proposed habitat removal represents a very small proportion of available foraging habitat within the local and regional landscape. Further, the affected vegetation does not provide breeding resources (e.g. tree hollows). Given the highly mobile nature of the species and the availability of comparable foraging habitat elsewhere within the species' range, the action is not considered likely to result in a long-term decrease in the population size.
Project to reduce the area of occupancy of the species	Criterion not met The Project would result in a minor localised reduction in potential foraging habitat only, and its removal would not prevent access to surrounding habitat. Accordingly, the action is not expected to reduce the area of occupancy of the species at a meaningful scale.
Action to fragment an existing population into two or more populations	Criterion not met The assessment area includes a linear wooded road reserve that may contribute to landscape connectivity for the Gang-gang Cockatoo by facilitating movement and foraging along a vegetated corridor. While some vegetation removal within this reserve would occur in the vicinity of an existing crossover, the extent of clearance is expected to be minor and localised, and the overall continuity and function of the linear woodland would be largely retained. Given the limited scale of vegetation removal, the retention of the vast majority of the road reserve vegetation, and the species' capacity for flight across partially modified landscapes, the action is not expected to substantially disrupt connectivity or fragment an existing population into two or more populations.
Action to adversely affect habitat critical to the survival of a species	Criterion not met Foraging habitat can constitute habitat critical to the survival of the Gang-gang Cockatoo, particularly where it occurs at a scale or quality that supports important life-history functions. The proposed action would result in the removal of approximately 0.669 ha of Eucalypt woodland and scattered trees that may provide foraging resources for the species. However, the extent of habitat removal is very small in scale and represents a negligible proportion of available foraging habitat within the local and broader landscape. No breeding habitat, including hollow-bearing trees or known nesting resources, would be affected by the proposal. Similar foraging habitat is present in the surrounding area and would remain accessible to the species. On this basis, while the action would result in a minor localised reduction in potential foraging habitat, it is not expected to adversely affect habitat critical to the survival of the species at a population or recovery scale.
Action to disrupt the breeding cycle of a population	Criterion not met No breeding habitat (including hollow-bearing trees) will be removed, and the. Foraging habitat availability in the broader landscape is sufficient to support breeding individuals. Consequently, the action is not expected to disrupt the breeding cycle of the species.
Action to modify, destroy, remove,	Criterion not met

Criterion	Assessment of Project impacts (Section 5.2) against criterion
isolate or decrease the availability or quality of habitat to the extent that the species is likely to decline	Hollow-bearing trees that may be suitable for nesting by the Gang-gang Cockatoo are known to occur within the broader assessment area; however, no hollow-bearing trees would be removed or directly impacted by the proposed works. The vegetation to be removed comprises non-breeding Eucalypt woodland that may provide foraging resources only. The small-scale removal of foraging habitat is not expected to affect the availability or functionality of nearby nesting resources, nor disrupt access between breeding and foraging areas. Given the limited extent of habitat removal and the retention of all known breeding habitat, the action is not expected to disrupt the breeding cycle of the species at a population level.
Action to result in invasive species that are harmful to a critically endangered or endangered species becoming established in the endangered or critically endangered species habitat	Criterion not met With construction hygiene and weed management measures to be implemented at the construction and operation phases of the Project, the action is not expected to result in the establishment of invasive species harmful to the Gang-gang Cockatoo.
Action to introduce disease that may cause the species to decline	Criterion not met The proposed works do not involve activities known to introduce avian diseases, nor would they increase disease transmission risk beyond existing background levels. The action is not expected to introduce disease that may cause the species to decline.
Action to interfere with the recovery of the species.	Criterion not met Recovery objectives for the Gang-gang Cockatoo emphasise the protection of breeding habitat, particularly hollow-bearing trees, and retention of large areas of woodland. The removal of a small area of non-breeding foraging habitat is not expected to interfere with recovery efforts, particularly given the availability of similar habitat within the region.
Assessment outcome: As Project impacts to Gang-gang cockatoo do not meet any one significant impact criterion for critically endangered and endangered species, the Project is not considered to have a significant impact on Gang-gang Cockatoo.	

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Table E.2 Assessment of Project impacts to the Growling Grass Frog (VU) against the significant impact criteria for Growling Grass Frog (DEWHA (Cth), 2009)

Impact threshold	Assessment of Project impacts (Section 5.2) against criterion
Habitat degradation in an area supporting an important population	
Permanent removal or degradation of terrestrial habitat (for example between ponds, drainage lines or other temporary/permanent habitat) within 200 metres of a water body in temperate regions, or 350 metres of a water body in semi-arid regions, that results in the loss of dispersal or overwintering opportunities for an important population.	Criterion not met 1.612 ha of improved pasture will be permanently removed to accommodate the BESS. Although this habitat occurs within 200 m (but no closer than 100 m) of the ephemeral waterway and farm dams, the lack of water bodies or wetland features on the opposite side of the BESS footprint that frogs would be moving toward, suggests that the BESS would be unlikely to result in loss of dispersal opportunities. In terms of overwintering, the improved pasture within the footprint is relatively structurally simple, and lacks key habitat features for overwintering habitat such as dense ground cover, coarse woody debris or other shelter structures. Higher-quality terrestrial habitat with greater structural complexity would remain available in adjacent areas and would not be affected by the proposal. As such, the action is not expected to result in the loss of important overwintering opportunities.
Alteration of aquatic vegetation diversity or structure that leads to a decrease in habitat quality.	Criterion not met No works are proposed within farm dams, wetlands, or other aquatic habitats, and no alteration to aquatic vegetation is anticipated. The project would therefore not alter aquatic vegetation diversity or structure, and habitat quality would be maintained.
Alteration to wetland hydrology, diversity and structure (for example any changes to timing, duration or frequency of flood events) that leads to a decrease in habitat quality.	Criterion not met The project includes the implementation of stormwater management measures designed to maintain pre-development surface flow conditions. With these measures in place, the project is not expected to alter the timing, duration or frequency of inundation of nearby water bodies or wetlands. Accordingly, wetland/ waterway surface flow regimes, diversity and structure would be maintained, and a decrease in habitat quality is not anticipated.
Introduction of predatory fish and/or disease agents.	Criterion not met The proposal does not involve the creation of new water bodies, modification of existing aquatic habitat, or activities that would facilitate the introduction of predatory fish. With appropriate construction hygiene and biosecurity measures, the project is not expected to introduce disease agents (including chytrid fungus) to nearby habitats.
Isolation and fragmentation of populations	
Net reduction in the number and/or diversity of water bodies available to an important population.	Criterion not met No water bodies would be removed, filled, or modified as part of the project. The number and diversity of farm dams and other aquatic habitats available to the species would therefore be unchanged, resulting in no net reduction in aquatic habitat availability.
Removal or alteration of available terrestrial or aquatic habitat	Criterion not met

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Impact threshold	Assessment of Project impacts (Section 5.2) against criterion
corridors (including alteration of connectivity during flood events).	The key habitat corridor present on site is the ephemeral waterway that connects the two farm dams. None of this habitat is proposed to be impacted by the proposed works.
Construction of physical barriers to movement between water bodies, such as roads or buildings.	Criterion not met Given the lack of water bodies or wetland features on the opposite side of the BESS footprint to where the frogs may occur, the BESS is not considered to be situated between waterbodies such that it presents a physical movement barrier to frogs.
Assessment outcome: As Project impacts to Growling Grass Frog do not meet any one significant impact criterion for the species, the Project is not considered to have a significant impact on Growling Grass Frog.	

Table E.3 Assessment of Project impacts to the Blue-winged Parrot (VU) against the significant impact criteria for vulnerable species (DEWHA (Cth), 2013)

Criterion	Assessment of Project impacts (Section 5.2) against criterion
Project to lead to a long-term decrease in the size an important population of a species	Criterion not met The habitat removal represents a very small proportion of available foraging habitat within the local and regional landscape. Given the limited scale of habitat loss and the availability of comparable habitat in the surrounding area, the action is not expected to result in a long-term decrease in population size.
Project to reduce the area of occupancy of an important population	Criterion not met The Project would result in a minor localised reduction in potential foraging habitat only, and its removal would not prevent access to surrounding habitat. Accordingly, the action is not expected to reduce the area of occupancy of the species at a meaningful scale.
Project to fragment an existing important population into two or more populations	Criterion not met While linear woodland elements within the landscape may contribute to connectivity, the extent of vegetation removal is minor and would not create a barrier to movement. The Blue-winged Parrot is capable of moving across partially cleared and modified landscapes. The action is therefore not expected to fragment an existing population.
Action to adversely affect habitat critical to the survival of a species	Criterion not met The proposed removal of 0.669 ha constitutes a very small and localised loss of potential foraging habitat. No breeding habitat will be affected. Similar habitat is present in the surrounding landscape. The action is not expected to adversely affect habitat critical to the survival of the species.
Action to disrupt the breeding cycle of an important population	Criterion not met The proposal would not remove or disturb breeding habitat, nor impact known or potential nesting sites. The limited loss of foraging habitat is unlikely to affect the ability of breeding individuals to access resources within the broader landscape. The action is not expected to disrupt the breeding cycle of the species.
Action to modify, destroy, remove, isolate or decrease the availability or	Criterion not met Although the action would result in the removal of a small area of potential foraging habitat, the scale of impact is minor and does not materially reduce

Criterion	Assessment of Project impacts (Section 5.2) against criterion
quality of habitat to the extent that the species is likely to decline	habitat availability or quality at a population level. Given the extent of similar habitat in the locality, the action is unlikely to cause a decline in the species.
Action to result in invasive species that are harmful to a vulnerable species becoming established in the vulnerable species' habitat.	Criterion not met With construction hygiene and weed management measures to be implemented at the construction and operation phases of the Project, the action is not expected to result in the establishment of invasive species harmful to the Blue-winged Parrot.
Action to introduce disease that may cause the species to decline	Criterion not met The proposed works do not involve activities known to introduce avian diseases, nor would they increase disease transmission risk beyond existing background levels. The action is not expected to introduce disease that may cause the species to decline.
Action to interfere substantially with the recovery of the species.	Criterion not met Recovery objectives for the Blue-winged Parrot focus on the retention of extensive areas of suitable habitat and maintenance of landscape connectivity. The small-scale removal of non-breeding foraging habitat is not expected to interfere with recovery efforts at a local or regional scale.
Assessment outcome: As Project impacts to Blue-winged Parrot do not meet any one significant impact criterion for vulnerable species, the Project is not considered to have a significant impact on Blue-winged Parrot.	

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Appendix F

Self-assessment of Project Impacts Against EES Referral Criteria

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Table F.1 Self-assessment of Project Impacts against biodiversity-related referral criteria as outlined in the Ministerial guidelines for assessment of environmental effects under the *Environment Effects Act 1978 (DTP (Vic), 2023)*

Criterion	Assessment of Project impacts against criterion
Individual referral criteria - Individual types of potential effects on the environment that warrant referral of a project.	
Potential removal, destruction or lopping of 10 hectares or more of native vegetation ¹⁰ , that consists of, or comprises a combination of: - an ecological vegetation class (EVC) classified as endangered; or - an EVC that is classified as vulnerable (with a condition score of 0.5 or more) or rare (with a condition score of 0.6 or more); and - that is not authorised for removal under an approved forest management plan¹¹ or fire protection plan.	Criterion not triggered Project native vegetation clearance is well under 10 ha.
Potential clearing of an area determined as 'critical habitat' under the <i>Flora and Fauna Guarantee Act 1988</i> .	Criterion not triggered Project will not clear any areas determined as 'critical habitat' under the FFG Act.
Potential for loss of a significant proportion (e.g. 1 percent or greater) of known remaining habitat or population of a threatened species within Victoria.	Criterion not triggered Loss of threatened species habitat is minor.
Potential for long-term change to the ecological character of any wetland listed under the Ramsar Convention or in A Directory of Important Wetlands in Australia.	Criterion not triggered The Project will not impact any wetland listed under the Ramsar Convention or in A Directory of Important Wetlands in Australia.
Potential for extensive or major effects on the use and environmental values of water resources due to changes in water quality, water availability, stream flows, water system function, or regional groundwater levels, or the health or biodiversity of aquatic, estuarine or marine ecosystems, over the long term.	Criterion not triggered Potential impacts to water quality due to erosion and sedimentation will be mitigated.
Potential for extensive or major effects to human health or the environment, or displacement of residents, from pollution or waste emitted to air, land, water or groundwater.	<i>Criterion not assessed</i>
Potential for greenhouse gas emissions exceeding 200,000 tonnes of carbon dioxide equivalent per annum (direct and indirect) attributable to the operation of the facility.	<i>Criterion not assessed</i>

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¹⁰ Native vegetation is defined in the Guidelines for the removal, destruction, or lopping of native vegetation (Department of Environment, Land, Water and Planning, 2017).

¹¹ Forest management plan defined as an approved working plan under section 22 of the *Forests Act 1958*.

Criterion	Assessment of Project impacts against criterion
Combined referral criteria - A combination of two or more types of potential effects on the environment that warrant referral of a project.	
Potential removal, destruction or lopping of 10 hectares or more of native vegetation, unless it is authorised for removal under an approved forest management plan or fire protection plan.	Criterion not triggered Project native vegetation clearance is under 10 ha.
Matters listed under the <i>Flora and Fauna Guarantee Act 1988</i> : - potential loss of a significant area of a listed ecological community; or - potential loss of a genetically important population of an endangered or threatened species (listed or nominated for listing), including from loss or fragmentation of habitats; or - potentially significant effects on habitat values of a wetland supporting migratory bird species.	Criterion not triggered All Project impacts to threatened and migratory species are considered to be minor.
Potential for extensive or major effects on landscape values of regional importance, especially: - where recognised by a planning scheme overlay; - declared as a distinctive area and landscape under the <i>Planning and Environment Act 1987</i>; - within or adjoining land reserved under the <i>National Parks Act 1975</i>.	<i>Criterion not assessed</i>
Potential for extensive or major effects to the environment due to changes in land stability, disturbance of acid sulphate soils or project-induced soil erosion over the short or long term.	<i>Criterion not assessed</i>
Potential for extensive or major effects on social or economic well-being due to direct or indirect displacement of non-residential land use activities.	<i>Criterion not assessed</i>
Potential for extensive displacement of residents or severance of residents' access to their community resources.	<i>Criterion not assessed</i>
Potential for significant effects on the amenity of a substantial number of residents, due to extensive or major, long-term changes in visual, noise and traffic conditions.	<i>Criterion not assessed</i>
Potential for extensive or major effects on Aboriginal cultural heritage values protected under the <i>Aboriginal Heritage Act 2006</i> .	<i>Criterion not assessed</i>
Potential for extensive or major effects on cultural heritage places and sites listed on the Victorian Heritage Register or the Victorian Heritage Inventory under the <i>Heritage Act 2017</i> .	<i>Criterion not assessed</i>

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Appendix G

Native Vegetation Removal Report

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Native Vegetation Removal Report

NVRR ID: 305_20260408_JN3

This report provides information to support an application to remove, destroy or lop native vegetation in accordance with the [Guidelines for the removal, destruction or lopping of native vegetation](#) (the Guidelines). This report is **not an assessment by DEECA** of the proposed native vegetation removal. Native vegetation information and offset requirements have been determined using spatial data provided by the applicant or their consultant.

Report details

Date created: 08/04/2026

Local Government Area: BAW BAW SHIRE

Shapefile name:

NVRMap_Removal_Template_Patches.shp

NVRMap_Removal_Template_Trees.shp

Site assessor name: MT

Registered Aboriginal Party: Gunaikurnai

Coordinates: 146.05112, -38.12578

Address: 875 DARNUM-SHADY CREEK ROAD SHADY CREEK 3821

Regulator Notes

Removal polygons are located:

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Summary of native vegetation to be removed

Assessment pathway	Detailed Assessment Pathway		
Location category	Location 3 Within this area, the removal of less than 0.5 hectares of native vegetation could have a significant impact on the habitat of one or more rare or threatened species. In such cases, a Species Offset will be required.		
Total extent including past and proposed removal (ha) <i>Includes endangered EVCs (ha): 0</i>	0.671	Extent of past removal (ha)	0
		Extent of proposed removal - Patches (ha)	0.148
		Extent of proposed removal - Scattered Trees (ha)	0.522
No. Large Trees proposed to be removed	12	No. Large Patch Trees	4
		No. Large Scattered Trees	8
No. Small Scattered Trees	1		

Offset requirements if approval is granted

Any approval granted will include a condition to obtain an offset, before the removal of native vegetation, that meets the following requirements:

General Offset amount ¹	0.1620 General Habitat Units		
Vicinity	West Gippsland CMA or BAW BAW SHIRE LGA		
Minimum strategic biodiversity value score ²	0.3378		
Large Trees*	12		
*The total number of Large Trees that the offset must protect	12 Large Trees to be protected in either the General, Species or combination across all habitat units protected		

NB: values within tables in this document may not add to the totals shown above due to rounding

Appendix 1 includes information about the native vegetation to be removed

Appendix 2 includes information about the rare or threatened species with mapped habitat at the site

Appendix 3 includes the following figures

- Location map
- Strategic Biodiversity Value map
- Condition map
- Endangered EVCs map
- Aerial photograph showing mapped native vegetation
- Property in context
- Habitat Importance maps

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1. The General Offset amount required is the sum of all General Habitat Units in Appendix 1.

2. Minimum strategic biodiversity value score is 80 per cent of the weighted average score across habitat zones where a General Offset is required.

3. The Species Offset amount(s) required is the sum of all Species Habitat Units in Appendix 1.



Next steps

Any proposal to remove native vegetation must meet the application requirements of the Detailed Assessment Pathway and it will be assessed under the Detailed Assessment Pathway.

If you wish to remove the mapped native vegetation you are required to apply for approval from the responsible authority. The responsible authority will refer your application to DEECA for assessment, as required. **This report is not a referral assessment by DEECA.**

This *Native vegetation removal report* must be submitted with your application for approval to remove, destroy or lop native vegetation.

Refer to the Guidelines for a full list of application requirements This report provides information that meets the following application requirements:

- The assessment pathway and reason for the assessment pathway.
- A description of the native vegetation to be removed (partly met).
- Maps showing the native vegetation and property (partly met).
- Information about the impacts on rare or threatened species.
- The offset requirements determined in accordance with Section 5 of the Guidelines that apply if approval is granted to remove native vegetation.

Additional application requirements must be met including:

- Topographical and land information
- Recent dated photographs.
- Details of past native vegetation removal.
- An avoid and minimise statement.
- A copy of any Property Vegetation Plan as applicable.
- A defensible space statement as applicable.
- A statement about the Native Vegetation Precinct Plan (NVPP) as applicable.
- A site assessment report including a habitat hectare assessment of any patches of native vegetation and details of trees.
- An offset statement that explains that an offset has been identified and how it will be secured.

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Appendix 1: Description of native vegetation to be removed

The Species-General Offset Test was applied to your proposal. This test determines if the proposed removal of native vegetation has a proportional impact on any rare or threatened species habitats above the Species Offset threshold. The threshold is set at 0.005 per cent of the mapped habitat value for a species. When the proportional impact meets or exceeds the Species Offset threshold, a Species Offset is required. This test is completed for all species with mapped habitat at the site. Multiple Species Offsets will be required if the Species Offset threshold is exceeded for multiple species.

Where a zone requires Species Offset(s), the Species Habitat Units for each species in that zone are calculated by the following equation in accordance with the Guidelines: ***Species Habitat Units = extent without overlap x condition score x species landscape factor x 2, where the species landscape factor = 0.5 + (habitat importance score/2)***

The Species Offset amount(s) required is the sum of all Species Habitat Units per zone.

Where a zone does not require a Species Offset, the General Habitat Units in that zone are calculated by the following equation in accordance with the Guidelines: ***General Habitat Units = extent without overlap x condition score x general landscape factor x 1.5, where the general landscape factor = 0.5 + (strategic biodiversity value score/2)***

The General Offset amount required is the sum of all General Habitat Units per zone.

Native vegetation to be removed

Information provided by or on behalf of the applicant							Information calculated by NVR Map						
Zone	Type	DBH (cm)	EVC code	Bioregional conservation status	Partial Removal	Condition score	Large Tree(s)	Polygon extent (ha)	Extent without overlap (ha)	SBV score	HI Score	Habitat Units	Offset Type
LF1a-a	Patch	-	GipP0016	Vulnerable	no	0.280	2	0.034	0.034	0.480	-	0.011	General
LF1b-a	Patch	-	GipP0016	Vulnerable	no	0.270	2	0.076	0.076	0.480	-	0.023	General

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Information provided by or on behalf of the applicant							Information calculated by NVR Map						
Zone	Type	DBH (cm)	EVC code	Bioregional conservation status	Partial Removal	Condition score	Large Tree(s)	Polygon extent (ha)	Extent without overlap (ha)	SBV score	HI Score	Habitat Units	Offset Type
LF2a-a	Patch	-	GipP0016	Vulnerable	no	0.570	-	0.021	0.021	0.500	-	0.013	General
LF2b-a	Patch	-	GipP0016	Vulnerable	no	0.500	-	0.005	0.005	0.500	-	0.003	General
LF4b-a	Patch	-	GipP0016	Vulnerable	no	0.200	-	0.013	0.013	0.300	-	0.002	General
10-a	Scattered Tree	102	GipP0016	Vulnerable	no	0.200	-	0.070	0.065	0.320	-	0.013	General
11-a	Scattered Tree	77	GipP0016	Vulnerable	no	0.200	1	0.070	0.065	0.320	-	0.013	General
14-a	Scattered Tree	110	GipP0016	Vulnerable	no	0.200	1	0.070	0.070	0.320	-	0.014	General
15-a	Scattered Tree	61	GipP0016	Vulnerable	no	0.200	-	0.031	0.031	0.320	-	0.006	General
41-a	Scattered Tree	116	GipP0016	Vulnerable	no	0.200	1	0.070	0.054	0.480	-	0.012	General
42-a	Scattered Tree	86	GipP0016	Vulnerable	no	0.200	1	0.070	0.045	0.480	-	0.010	General
5-a	Scattered Tree	93	GipP0016	Vulnerable	no	0.200	1	0.070	0.061	0.480	-	0.013	General

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Information provided by or on behalf of the applicant							Information calculated by NVR Map						
Zone	Type	DBH (cm)	EVC code	Bioregional conservation status	Partial Removal	Condition score	Large Tree(s)	Polygon extent (ha)	Extent without overlap (ha)	SBV score	HI Score	Habitat Units	Offset Type
6-a	Scattered Tree	87	GipP0016	Vulnerable	no	0.200	1	0.070	0.061	0.480	-	0.013	General
7-a	Scattered Tree	98	GipP0016	Vulnerable	no	0.200	1	0.070	0.070	0.480	-	0.016	General

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Appendix 2: Information about impacts to rare or threatened species' habitats on site

This table identifies all rare or threatened species with mapped habitat at the site and the proportional impact associated with the proposed native vegetation removal.

Species common name	Species scientific name	Taxon ID	Conservation status	Group	Habitat impacted	Proportional impact (%)
Grey Goshawk	Accipiter novaehollandiae novaehollandiae	10220	Endangered	Dispersed	Top ranking map	0.0021
Strzelecki Gum	Eucalyptus strzeleckii	504558	Critically Endangered	Dispersed	Habitat importance map	0.0001
Grey Goshawk	Accipiter novaehollandiae novaehollandiae	10220	Endangered	Dispersed	Habitat importance map	0.0000
Black Falcon	Falco subniger	10238	Critically Endangered	Dispersed	Habitat importance map	0.0000
Masked Owl	Tyto novaehollandiae novaehollandiae	10250	Critically Endangered	Dispersed	Habitat importance map	0.0000
White-throated Needletail	Hirundapus caudacutus	10334	Vulnerable	Dispersed	Habitat importance map	0.0000
Swamp Skink	Lissolepis coventryi	12407	Endangered	Dispersed	Habitat importance map	0.0000
Southern Toadlet	Pseudophryne semimarmorata	13125	Endangered	Dispersed	Habitat importance map	0.0000
Rough Blown-grass	Lachnagrostis rudis subsp. rudis	500159	Endangered	Dispersed	Habitat importance map	0.0000
Austral Moonwort	Botrychium australe	500445	Critically Endangered	Dispersed	Habitat importance map	0.0000
Orange-tip Finger-orchid	Caladenia aurantiaca	500523	Endangered	Dispersed	Habitat importance map	0.0000
Spurred Helmet-orchid	Corybas aconitiflorus	500835	Endangered	Dispersed	Habitat importance map	0.0000
Fringed Helmet-orchid	Corybas fimbriatus	500839	Endangered	Dispersed	Habitat importance map	0.0000

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Species common name	Species scientific name	Taxon ID	Conservation status	Group	Habitat impacted	Proportional impact (%)
Lanky Buttons	Leptorhynchos elongatus	501941	Endangered	Dispersed	Habitat importance map	0.0000
Heath Platysace	Platysace ericoides	502571	Endangered	Dispersed	Habitat importance map	0.0000
Golden Pomaderris	Pomaderris aurea	502651	Endangered	Dispersed	Habitat importance map	0.0000
Fisch's Greenhood	Pterostylis fischii	502795	Endangered	Dispersed	Habitat importance map	0.0000
Cobra Greenhood	Pterostylis grandiflora	502798	Endangered	Dispersed	Habitat importance map	0.0000
Rush Lily	Sowerbaea juncea	503207	Vulnerable	Dispersed	Habitat importance map	0.0000
One-flower Early Nancy	Wurmbea uniflora	503583	Vulnerable	Dispersed	Habitat importance map	0.0000
Grey Billy-buttons	Craspedia canens	504845	Critically Endangered	Dispersed	Habitat importance map	0.0000
Forest Red-box	Eucalyptus polyanthemos subsp. longior.	504754	Endangered	Dispersed	Habitat importance map	0.0000
Green Scentbark	Eucalyptus fulgens	505175	Endangered	Dispersed	Habitat importance map	0.0000
Silky Kidney-weed	Dichondra sp. 1	505786	Endangered	Dispersed	Habitat importance map	0.0000

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Habitat Group

- Highly localised habitat means there is 2,000 hectares or less mapped habitat for the species.
- Dispersed habitat means there is more than 2,000 hectares of mapped habitat for the species.

Habitat Impacted

The Species General Offset test, as described in Section 5.3.1 of the Guidelines, is used to determine if proposed native vegetation removal will result in a proportionally significant impact on the habitat value of rare or threatened species. The test is applied where the native vegetation proposed for removal:

- Intersects the Habitat Importance Map for a rare or threatened species; or
- Intersects the 'top ranking' modelled habitat for a rare or threatened species with dispersed habitat, as identified in its Top Ranking Habitat Importance Map.

Top Ranking Maps consist of the 2,000 hectares of habitat with the highest Habitat Importance Scores for each dispersed species.

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The 'Habitat impacted' column identifies whether the Habitat Importance Map or its Top Ranking Map was used to determine the proportional impact for a species with dispersed habitat.

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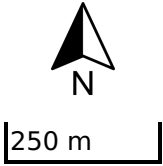
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Appendix 3: Images of mapped native vegetation

1. Property in context



- Proposed Removal
- Past Removal
- Partial Removal
- Property Boundaries



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2. Aerial photograph showing mapped native vegetation



- Proposed Removal
- Past Removal
- Partial Removal

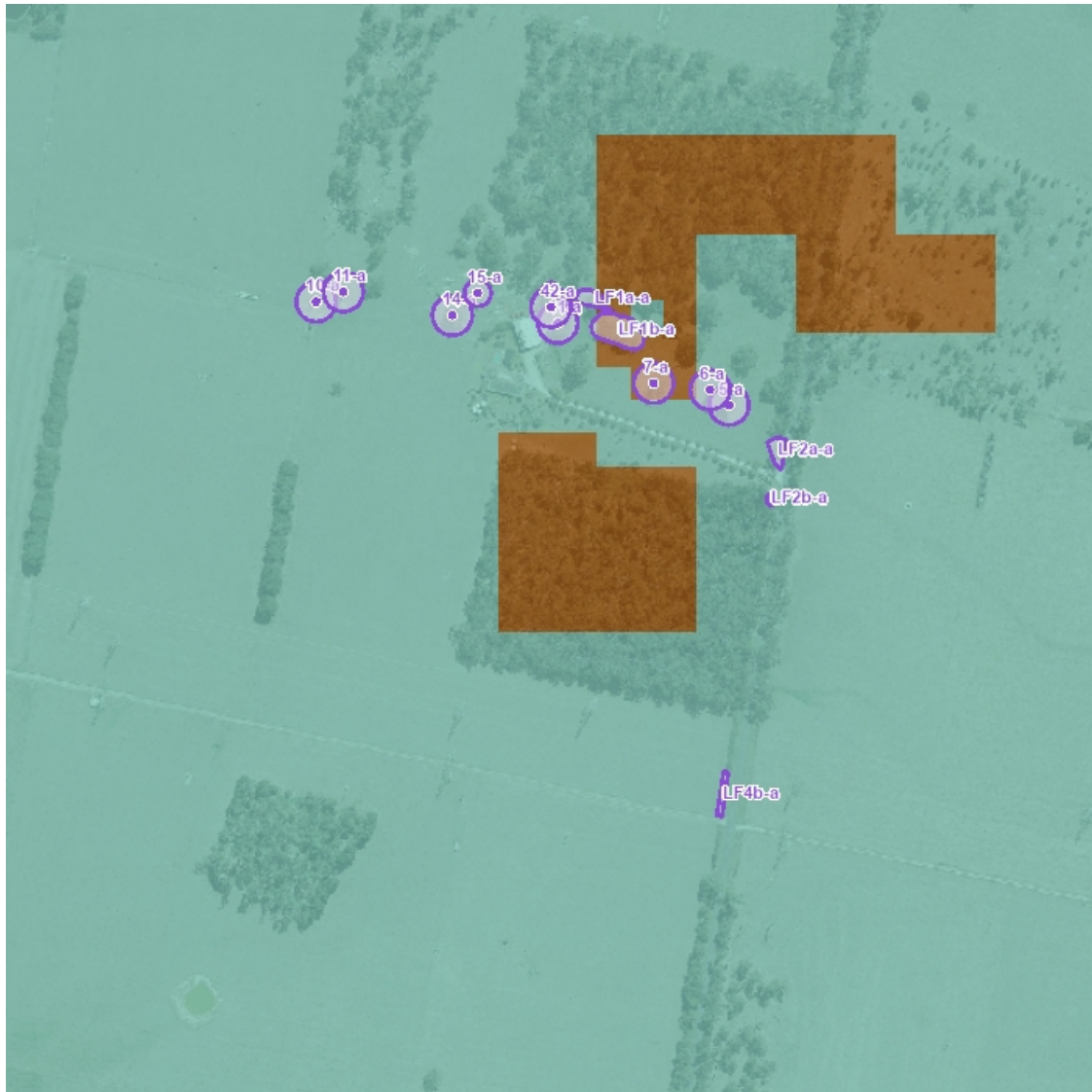


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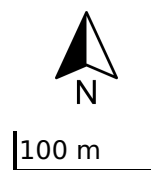
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3. Location Risk Map



- Proposed Removal
- Past Removal
- Partial Removal

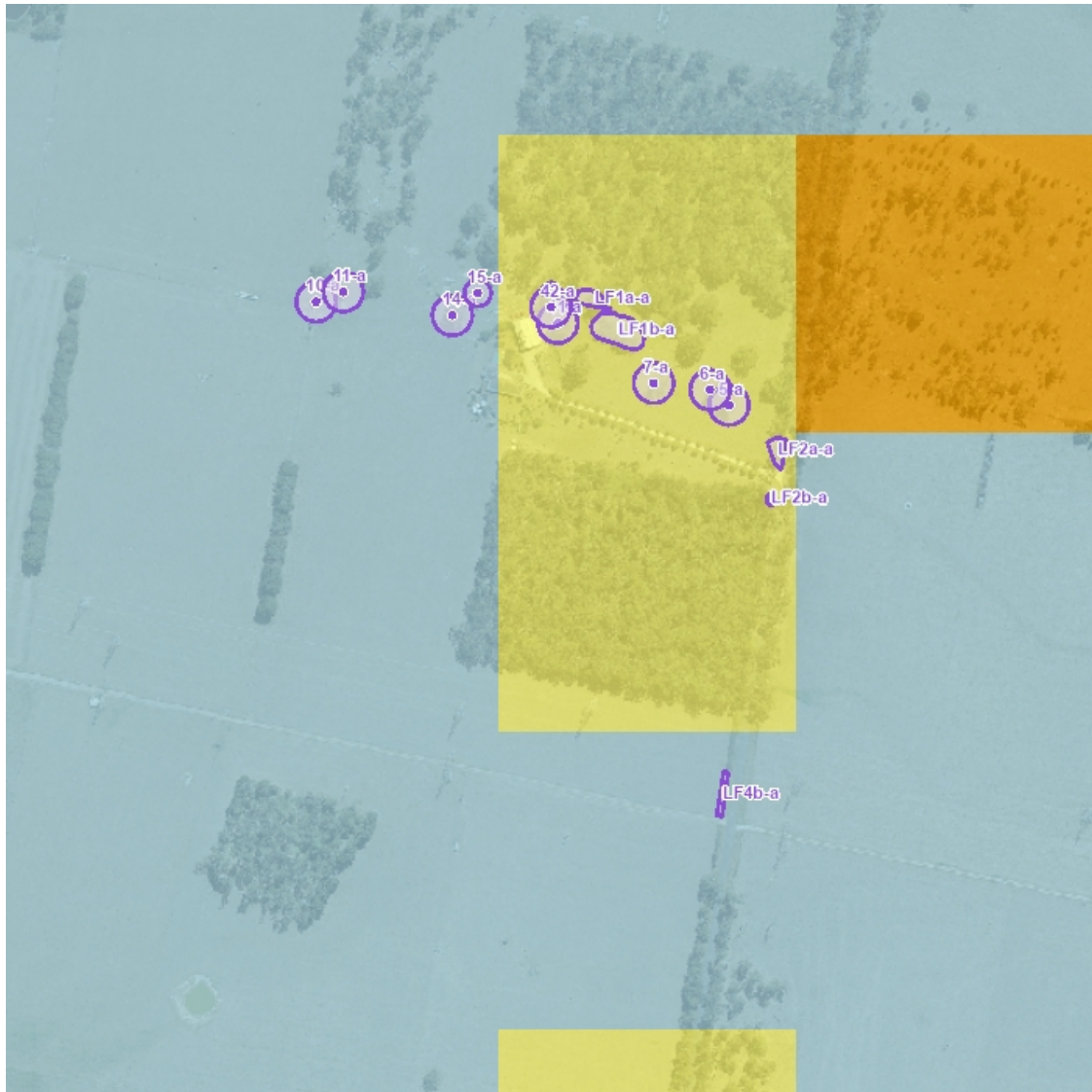
- Location 1
- Location 2
- Location 3



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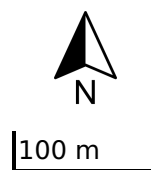
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4. Strategic Biodiversity Value Score Map



- Proposed Removal
- Past Removal
- Partial Removal

- 0.81 - 1.00
- 0.61 - 0.80
- 0.41 - 0.60
- 0.21 - 0.40
- 0.00 - 0.20



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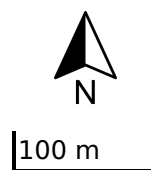
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5. Modelled Condition Score Map



- Proposed Removal
- Past Removal
- Partial Removal

- 0.81 - 1.00
- 0.61 - 0.80
- 0.41 - 0.60
- 0.21 - 0.40
- 0.00 - 0.20



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6. Modelled Endangered EVCs

Not Applicable

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7. Habitat Importance maps

Not Applicable

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Appendix H

Native Vegetation Credit Register Extract

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Report of available native vegetation credits

This report lists native vegetation credits available to purchase through the Native Vegetation Credit Register.

This report is **not evidence** that an offset has been secured. An offset is only secured when the units have been purchased and allocated to a permit or other approval and an allocated credit extract is provided by the Native Vegetation Credit Register.

Date and time: 08/04/2026 04:37

Report ID: 34956

What was searched for?

General offset

General habitat units	Strategic biodiversity value	Large trees	Vicinity (Catchment Management Authority or Municipal district)
0.162	0.3378	12	UMA West Gippsland or LGA Baw Baw Shire

Details of available native vegetation credits on 08 April 2026 04:37

These sites meet your requirements for general offsets.

Credit Site ID	GHU	LT	CMA	LGA	Land owner	Trader	Fixed price	Broker(s)
BBA-0119	2.741	73	West Gippsland	South Gippsland Shire	Yes	Yes	No	VegLink
BBA-0138	12.119	419	West Gippsland	Wellington Shire	Yes	Yes	No	Ecocentric
BBA-2810	7.758	613	West Gippsland	Latrobe City	Yes	Yes	No	VegLink
BBA-2833	5.401	20	West Gippsland	Wellington Shire	Yes	Yes	No	Ethos
BBA-2875	32.787	1032	West Gippsland	Wellington Shire	Yes	Yes	No	Abezco
TFN-C1442	2.726	58	West Gippsland	Baw Baw Shire	Yes	Yes	No	TFN
TFN-C1692	0.164	222	West Gippsland	South Gippsland Shire	Yes	Yes	No	VegLink
VC_CFL-3696_01	0.330	183	West Gippsland	Bass Coast Shire	Yes	Yes	No	Bio Offsets, Ethos, VegLink
VC_CFL-3797_01	6.353	883	West Gippsland	Wellington Shire	Yes	Yes	No	Bio Offsets, Ecocentric, VegLink

These sites meet your requirements using alternative arrangements for general offsets.

Credit Site ID	GHU	LT	CMA	LGA	Land owner	Trader	Fixed price	Broker(s)
----------------	-----	----	-----	-----	------------	--------	-------------	-----------

There are no sites listed in the Native Vegetation Credit Register that meet your offset requirements when applying the alternative arrangements as listed in section 11.2 of the Guidelines for the removal, destruction or lopping of native vegetation.

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These potential sites are not yet available, land owners may finalise them once a buyer is confirmed.

Credit Site ID	GHU	LT	CMA	LGA	Land owner	Trader	Fixed price	Broker(s)
----------------	-----	----	-----	-----	------------	--------	-------------	-----------

There are no potential sites listed in the Native Vegetation Credit Register that meet your offset requirements.

LT - Large Trees

CMA - Catchment Management Authority

LGA - Municipal District or Local Government Authority

Next steps

If applying for approval to remove native vegetation

Attach this report to an application to remove native vegetation as evidence that your offset requirement is currently available.

If you have approval to remove native vegetation

Below are the contact details for all brokers. Contact the broker(s) listed for the credit site(s) that meet your offset requirements. These are shown in the above tables. If more than one broker or site is listed, you should get more than one quote before deciding which offset to secure.

Broker contact details

Broker Abbreviation	Broker Name	Phone	Email	Website
	Fully traded			
Abezco	Abzeco Pty. Ltd.	(03) 9431 5444	offsets@abzeco.com.au	www.abzeco.com.au
Baw Baw SC	Baw Baw Shire Council	(03) 5624 2411	bawbaw@bawbawshire.vic.gov.au	www.bawbawshire.vic.gov.au
Bio Offsets	Biodiversity Offsets Victoria	0452 215151	info@biooffsets.vic.gov.au	www.offsetsvictoria.com.au
Contact NVOR	Native Vegetation Offset Register	136 186	nativevegetation.offsetregister@delwp.vic.gov.au	www.environment.vic.gov.au/native-vegetation
Ecocentric	Ecocentric Environmental Consulting	0410 904 139	ecocentric@ecocent.com.au	Not available
Ethos	Ethos NRM Pty Ltd	(03) 5153 0037	offsets@ethosnrm.com.au	www.ethosnrm.com.au
IDES	ID Ecological Management	(03) 9437 0555		www.idecological.com.au
Nillumbik SC	Nillumbik Shire Council	(03) 9433 3316	offsets@nillumbik.vic.gov.au	www.nillumbik.vic.gov.au
TFN	Trust for Nature	8631 5888	offsets@tfn.org.au	www.trustfornature.org.au
VegLink	Vegetation Link Pty Ltd	(03) 8578 4250 or 1300 834 546	offsets@vegetationlink.com.au	www.vegetationlink.com.au
Yarra Ranges SC	Yarra Ranges Shire Council	1300 368 333	biodiversityoffsets@yarraranges.vic.gov.au	www.yarraranges.vic.gov.au

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For more information contact the DEECA Customer Service Centre 136 186 or the Native Vegetation Credit Register at nativevegetation.offsetregister@delwp.vic.gov.au

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Obtaining this publication does not guarantee that the credits shown will be available in the Native Vegetation Credit Register either now or at a later time when a purchase of native vegetation credits is planned.

Notwithstanding anything else contained in this publication, you must ensure that you comply with all relevant laws, legislation, awards or orders and that you obtain and comply with all permits, approvals and the like that affect, are applicable or are necessary to undertake any action to remove, lop or destroy or otherwise deal with any native vegetation or that apply to matters within the scope of Clauses 52.16 or 52.17 of the Victoria Planning Provisions and Victorian planning schemes

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Appendix I

Habitat Hectare Assessment Results of Native Vegetation to be Removed

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Table I.1 Habitat Hectare Assessment Results of Native Vegetation to be Removed

Habitat Zone ID	LF1a	LF1b	LF2a	LF2b	LF4b
Large Tree	10	10	10	9	0
Tree Canopy Cover	5	5	5	4	0
Lack of Weeds	0	0	11	7	7
Understorey	5	5	10	10	5
Recruitment	0	0	10	10	1
Organic Litter	5	5	5	5	5
Logs	0	0	3	2	0
Standardiser	1	1	1	1	1
Site Condition Score	25	25	54	47	18
Patch Size	2	1	2	2	2
Neighbourhood	1	1	1	1	0
Distance to Core Area	0	0	0	0	0
Landscape Context Score	3	2	3	3	2
Final Habitat Score	28	27	57	50	20

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