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Biodiversity Assessment, Heywood Battery Energy Storage System, 100 Golf Course Road, Heywood, Victoria

Version B

Prepared for:

Atmos Renewables

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Cover Photograph

A photograph of vegetation within the study area taken during the current assessment.

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Executive Summary

Ecolink Consulting Pty Ltd was engaged by Atmos Renewables to undertake a Biodiversity Assessment for the proposed Heywood Battery Energy Storage System (BESS) development site. The study area for the current assessment includes an underground cable connection located in an existing powerline easement though the Mount Clay State Forest and the BESS site at 100 Golf Course Road, Heywood, Victoria, (the study area). The Biodiversity Assessment was undertaken to determine the ecological constraints of the study area and to support a planning permit application for the proposed BESS development within the study area.

The study area is irregular in shape, covering the proposed BESS Site and underground cable connection to Heywood Terminal Station. It is zoned Farming Zone and Public Conservation and Resource Zone within the Glenelg Planning Scheme. The study area is partially covered by an Environmental Significance Overlay (ESO3). The ESO3 seeks to ensure that Southeastern Red-tailed Black Cockatoo *Calyptorhynchus banksii* habitat is protected. No other ecologically relevant overlays such as Vegetation Protection or Significant Landscape Overlays cover the study area.

The Department of Energy, Environment and Climate Action (DEECA) modelling shows that the study area occurs along the boundary of the Victorian Volcanic Plain and Glenelg Plain bioregions of Victoria. DEECA modelling of the vegetation within the study area suggest it was historically covered by Ecological Vegetation Class (EVC) 16: Lowland Forest and EVC 23: Herb-rich Foothill Forest within the Victorian Volcanic Plain and EVC 713: Damp Sands Herb-rich Woodland/Damp Heathland/Damp Heathy Woodland Mosaic within the Glenelg Plain. Twelve patches were recorded within the study area, two patches of EVC 23: Herb-rich Foothill Forest and eight patches of and EVC 16: Lowland Forest within the Victorian Volcanic Plain and two patches of EVC 3 Damp Sands Herb-rich Woodland within the Glenelg Plain were recorded during the current assessment.

One hundred and seven flora species were recorded during the current assessment (excluding the planted trees). This comprised 77 indigenous species and 30 exotic species. Approximately half of the study area consisted of pastures comprising exotic grasses and environmental weeds. Some small patches and scattered trees occurred as relics of formerly widespread remnant vegetation. Most of the indigenous vegetation recorded within the study area consisted of a modified forest, presenting as a heathland, in the powerline easement. This area lacked any canopy due to clearing under the powerlines, but retained a diverse midstorey and ground storey.

One threatened flora species, Western Peppermint *Eucalyptus falciformis* has been recorded within the study area in 1979. Five threatened flora species have been recorded within three kilometres of the study area, and one was observed during the current assessment. Western Peppermint, listed as Vulnerable under the *Flora and Fauna Guarantee Act 1988* (Vic) (FFG Act)was observed along the boundaries of the study area, both in the easement and within the northern paddocks. A previous ecological assessment undertaken by Biosis (2024) assessed the EVC 16: Lowland Forest vegetation to the west of the easement, but outside the study area of the current assessment. This assessment recorded the FFG Act species Parsley Xanthosia *Xanthosia leiophylla*, Tiny Violet *Viola sieberiana* and Hairy Brunonia *Boronia pilosa* subsp. *torquata*. The previous ecological assessment also suggested the potential for Green-striped Greenhood *Pterostylis chlorogramma* (Biosis Pty Ltd 2024). The

current assessment did not identify these species; however, the current assessment was undertaken during the end of summer and many of these annual species are not likely to have been visible at this time of year. A targeted survey is suggested to map the potential presence of state and federally listed flora species within the powerline easement, and to inform a permit for the removal of 'Generally Protected Flora'.

Twenty-three fauna species were recorded within the study area during the current assessment. This comprised 18 birds (one introduced; 17 native) and five mammals, two introduced and three native. Thirteen threatened fauna species have been recorded within three kilometres of the study area. There is a multiple records of Brolga *Antigone rubicunda* from 2020 from within the study area, however no threatened fauna was observed within the study area, during the current assessment (Department of Energy Environment and Climate Action 2025d). There is a moderate to high likelihood that Red-tailed Black-Cockatoo (south-eastern) *Calyptorhynchus banksii graptogyne*, Southern Bent-winged Bat (southern ssp.) *Miniopterus orianae bassani*, White-throated Needletail *Hirundapus caudacutus*, Powerful Owl *Ninox strenua*, Gang-gang Cockatoo *Callocephalon fimbriatum*, Grey-headed Flying Fox *Pteropus poliocephalus*, Blue-winged Parrot *Neophema chrysostoma*, Swamp Antechinus *Antechinus minimus maritimus*, Southern Brown Bandicoot *Isoodon obesulus obesulus*, Long-nosed Potoroo *Potorous tridactylus trisulcatus* and Heath Mouse *Pseudomys shortridgei* may utilise the study area. Given that the proposed works are located within an area already cleared of trees, there are unlikely to impacts to highly mobile species of birds and bats. Impacts to ground-dwelling fauna are proposed to be mitigated in accordance with recommendations made within this report.

The project's iterative design has demonstrated that it has avoided and minimised the impacts to native vegetation and biodiversity values in accordance with the *Guidelines for the Removal, Destruction or Lopping of Native Vegetation* (the Guidelines), where feasible, by:

- Locating roads, and the BESS facility in areas where vegetation has been cleared (i.e. there are no patches of native vegetation);
- Locating the underground cable within the existing powerline easement; and
- Ensuring TPZs of trees adjacent to the easement will not be impacted during construction of the underground cable.

Based on the relevant legislation and policies, and the current development design, the outstanding recommendations are made:

- To inform regulatory approvals:
    - Undertake a targeted survey for threatened flora species, and to inform a Protected Flora Permit;
    - Undertake a 'Significant Impact Test' to determine if there is a significant impact to EPBC Act-listed fauna;
    - Determine if a referral to the Commonwealth Department of Climate Change, Energy, the Environment and Water is required following the outcome of the flora surveys;
- Post approval, subject to regulatory approvals:

- Engage a zoologist or wildlife handler salvage any wildlife from vegetation prior to its removal.
- Secure appropriate offsets for any approved impacts to native vegetation through an accredited Offset Broker. In the unlikely event that native vegetation cannot be retained on site, this offset would comprise:
  - 0.6310 General Habitat Units:
  - With a minimum Strategic Biodiversity Score of 0.6785;
  - Located with the Glenelg Hopkins Catchment Management Authority area or the Glenelg Shire Council municipality;
- Prepare a Fauna Management Plan to manage fauna during the construction of the powerline connection;
- Prepare a Rehabilitation Plan to ensure that areas of ground disturbance are successfully recolonised and/or revegetated with appropriate vegetation;
- Prepare a Construction Environment Management Plan (or equivalent) which includes:
  - Protection of retained scattered trees within the study (if any); and
  - Using clean fill (if required);
  - Managing vehicle tracking throughout the easement.
  - Managing noise and vibrational impacts;
  - Avoiding off-site impacts; and
  - Measures to minimise impacts associated with weed introduction and spread targeting noxious weeds such as:
    - Blackberry *Rubus fruticosus* spp. agg.;
    - Gorse *Ulex europaeus*;
    - Paterson's Curse *Echium plantagineum*;
    - Saffron Thistle *Carthamus lanatus*; and
    - Spear Thistle *Cirsium vulgare*.

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Introduction

Ecolink Consulting Pty Ltd was engaged by Atmos Renewables to undertake a Biodiversity Assessment for the proposed Heywood Battery Energy Storage System (BESS) development site. The study area for the current assessment includes a powerline connection located in an existing powerline easement though the Mount Clay State Forest and the BESS site at 100 Golf Course Road (the primary parcel), Heywood, Victoria (Figure 1). The Biodiversity Assessment was undertaken to determine the ecological constraints of the study area and to support a planning permit application for the proposed BESS development within the study area.

The assessment addresses the requirements of Clause 52.17 of the Glenelg Planning Scheme. Clause 52.17 requires mapping and assessing the location, extent and quality of native vegetation in accordance with the *Guidelines for the Removal, Destruction or Lopping of Native Vegetation* (Department of Environment Land Water and Planning 2017). The Biodiversity Assessment also identifies the likely ecological constraints of the study area and recommends mitigation measures and offset requirements based on other relevant legislation and policies, where appropriate.

Therefore, the purpose of the Biodiversity Assessment is to:

- Determine the ecological values of the study area;
- Evaluate the extent and quality of native vegetation within the study area, required under the *Guidelines for the Removal, Destruction or Lopping of Native Vegetation* (Department of Environment Land Water and Planning 2017);
- Evaluate any impacts that are likely to occur to any ecological values as a result of the proposed development at the study area; and,
- Make recommendations to avoid or mitigate impacts to identified ecological values, as appropriate.

Methods

Desktop Assessment

In order to determine the ecological values that have previously been recorded within the study area, and its vicinity, the following databases and literature were consulted:

- The Commonwealth Department of Climate Change, Energy, the Environment and Water (DCCEEW) Protected Matters Search Tool to determine Matters of National Environmental Significance (MNES), under the *Environment Protection and Biodiversity Conservation Act 1999* (Cth) (EPBC Act), that are modelled to occur in the vicinity of the study area (Department of Climate Change Energy the Environment and Water 2025a);
- Planning Maps to identify the planning zones and overlays relating to environmental matters e.g. Vegetation Protection Overlays or Environmental Significance Overlays (Department of Transport and Planning 2025);
- The NatureKit webpage (Department of Environment Land Water and Planning 2023b) from the Department of Energy, Environment, and Climate Action (DEECA) to identify the historic and current Ecological Vegetation Classes (EVCs);
- The Victorian Biodiversity Atlas (Department of Energy Environment and Climate Action 2025d) for records of threatened[1] flora and fauna within three kilometres of the study area;
- Nearmap aerial photography to understand previous land use (Nearmap 2025);
- The Native Vegetation Information Management System (NVIM) to determine biodiversity offset requirements (Department of Energy Environment and Climate Action 2025b);
- Heywood BESS Flora and Fauna Ecological Assessment (Biosis Pty Ltd 2024);
- The 'Weeds of National Significance' database (Department of Climate Change Energy the Environment and Water 2025b); and,
- Other relevant legislation and policies (as required).

Site Assessment

A site assessment was undertaken on 10 February 2025 by Principal Ecologist Simon Scott and Consultant Ecologist, Liam McCormack. Both are suitably qualified and experienced to undertake such assessments and holds a current Vegetation Quality Assessments (Habitat Hectares) Accreditation with DEECA (Department of Energy Environment and Climate Action 2025c).

All flora species observed within the study area were recorded, with the exception of planted vegetation that was not considered a 'weed' (i.e. planted vegetation that was not spreading or reproducing). Where a species was not able to be confidently identified in the field, a sample was collected and later identified. Plants were identified to species level wherever possible, however,

[1] Threatened flora and fauna includes species listed under the Commonwealth *Environment Protection and Biodiversity Conservation Act 1999 (Cth)*, and the *Flora and Fauna Guarantee Act 1988 (Vic*).

some plants that were planted, cultivars, hybrids, or plants that did not contain suitable fertile material used for identification were recorded to genus level.

Vegetation communities such as EVCs and nationally significant vegetation communities were recorded (if observed) and compared with their corresponding benchmarks or thresholds to ensure that they were accurately assigned.

A list of all fauna species observed within, and immediately surrounding, the study area was produced. This list consists of species seen, heard, or identified by other evidence of their presence (e.g. feathers, scats). Leica 12 X 50 binoculars and call mimicry/playback were used to assist in the identification species.

The species, size (Diameter and Breast Height and Tree Protection Zone) and location of all 'scattered' indigenous trees was recorded using an iPad mini tablet that has an internal Global Positioning System (GPS) and the GIS Pro application (accuracy +/- 5 metres). The presence of hollows and birds' nests was also noted.

The presence of fauna habitat was noted, particularly in relation to potential habitats for threatened species. The greatest amount of time was spent surveying the highest quality fauna habitats (e.g. trees, water bodies, crevices or underground debris) during the assessment.

Guidelines for the Removal, Destruction or Lopping of Native Vegetation

The *Guidelines for the Removal, Destruction or Lopping of Native Vegetation* (the Guidelines) (Department of Environment Land Water and Planning 2017) are required to be addressed under Clause 52.17 of the Planning Scheme. The Guidelines require that information regarding the biodiversity values of the site were obtained through:

- Site-based information that was measured or observed at a site, including:
    - Extent of native vegetation patches;
    - Large trees;
    - Native vegetation condition assessed in accordance with the *Vegetation Quality Assessment Manual – Guidelines for Applying the Habitat Hectares Scoring Method* (Department of Sustainability and Environment 2004);
    - Ecological Vegetation Classes (EVC); and
    - Sensitive wetlands and coastal areas.
- Landscape scale information that cannot be measured or observed at the site and includes maps and models procured from DEECA.

The Guidelines require a Habitat Hectare assessment in instances where the impact is to be assessed under the Detailed Assessment Pathway. It was not possible to determine the risk-based pathway for the loss of native vegetation prior to the site assessment, and we therefore opted to complete the Habitat Hectare assessment in accordance with the methodology prescribed within the *Vegetation Quality Assessment Manual – Guidelines for Applying the Habitat Hectares Scoring Method*

(Department of Sustainability and Environment 2004) where patches[2] of vegetation were observed. All indigenous vegetation was assessed, and then assigned a quality rating based on the Habitat Hectare score (Department of Sustainability and Environment 2004). In addition, the location and species of indigenous 'scattered trees'[3], and any 'large trees'[4] within patches were mapped.

Limitations and Qualifications

The following limitations and qualifications apply to this report:

- The results of the desktop assessment are reliant on data obtained from various databases and other reports. These databases all have internal vetting procedures, however the accuracy of these historical data and some of the results provided within these reports cannot be verified. The desktop assessment does, however, rely on the most accurate data available.
- As with all ecological assessments, a greater survey effort is likely to yield additional flora and fauna records. Where these additional flora and fauna records may alter the recommendations made within this report (e.g. where additional threatened species may utilise habitats within the study area, or where threatened species may be impacted by the proposed development), further assessment has been recommended within this report, depending on the implications of relevant policies and legislation.
- Some flora and fauna species may only be recorded during certain times or seasons (e.g. plants that only contain above-ground biomass and are only visible annually, nocturnal mammals and birds, migratory birds, or fauna identified through seasonal breeding calls such as some frog species).

On the basis of the above, the author has made an informed decision about the likely presence of threatened species that may be present, or that may utilise habitats within the study area, based on a desktop assessment, a review of the species' biology, and an understanding of the ecological values of the local area.

Despite the limitations to the assessment listed above, the results gained by both a desktop and a field-assessment are adequate to address the purposes of this report.

[2] A 'patch' is defined as an area with at least 25% cover abundance of perennial native vegetation, or a group (i.e. three or more) trees forming a continuous canopy.

[3] Scattered trees are defined as a native canopy tree that does not form a patch

[4] Large trees are defined as meeting the size threshold specified in the bioregional EVC Benchmark

Results

The Study Area

Study Area Description and Land Use History

The study area is located approximately five kilometres south of the town of Heywood and directly adjacent to the Heywood Terminal Station. Portland occurs approximately 20 kilometres south of the study area and Cobboboonee National Park is located ten kilometres to the west. The study area also includes part of the Narrawong Flora Reserve and Mt Clay State Forest, located to the north of the Heywood Terminal Station. The majority of land surrounding the study area is utilised for pastoralism and consists of paddocks, although the Heywood Golf Club occurs two kilometres to the east.

The study area itself comprised a small farm, excluding the houses and sheds, that was actively being grazed by sheep. It also includes a powerline easement through the Mt Clay State Forest, terminating at the Heywood Terminal Station. It abuts large tracts of remnant vegetation to the south and Golf Course Road to the north.

Local Planning Controls

The study area is irregular in shape, covering the proposed BESS Site, powerline connection and a portion of Golf Course Road. It is zoned Farming Zone and Public Conservation and Resource Zone within the Glenelg Planning Scheme. The study area is entirely covered by an Environmental Significance Overlay (ESO3). The ESO3 seeks to ensure that Southeastern Red-tailed Black Cockatoo *Calyptorhynchus banksii* habitat is protected. Specifically, the overlay seeks to retain live and dead hollow bearing trees especially Brown Stringybark *Eucalyptus baxteri* and Desert Stringybark *Eucalyptus arenacea*. No other ecologically relevant overlays such as Vegetation Protection or Significant Landscape Overlays cover the study area (Department of Transport and Planning 2025).

Flora

Flora Communities

The study area is located along the boundary of the Victorian Volcanic Plain and Glenelg Plain bioregions of Victoria. DEECA modelling of the vegetation within the study area suggest it was historically covered by Ecological Vegetation Class (EVC) 16: Lowland Forest and EVC 23: Herb-rich Foothill Forest within the Victorian Volcanic Plain and EVC 713: Damp Sands Herb-rich Woodland/Damp Heathland/Damp Heathy Woodland Mosaic within the Glenelg Plain(Department of Environment Land Water and Planning 2023b) as listed below:

- EVC 16: Lowland Forest is described as '*Open forest to 25 m tall characterised by the diversity of species and lifeforms in each stratum. Includes a variety of heathy understorey shrubs. It grows on a wide variety of geology and soils'* (Department of Energy Environment and Climate Action 2025a). EVC 16: Lowland Forest is listed as Least Concern within the Victorian Volcanic Plain bioregion.
- EVC 23: Herb-rich Foothill Forest is described as '*Occurring on relatively fertile, moderately well-drained soils on an extremely wide range of geological types and in areas of moderate to*

high rainfall. Occupies easterly and southerly aspects mainly on lower slopes and in gullies. A medium to tall open forest or woodland to 25 m tall with a small tree layer over a sparse to dense shrub layer. A high cover and diversity of herbs and grasses in the ground layer characterise this EVC' (Department of Energy Environment and Climate Action 2025a). • EVC 23: Herb-rich Foothill Forest is listed as Vulnerable within the Victorian Volcanic Plain bioregion.

- EVC 3: Damp Sands Herb-rich Woodland is described as '*A low, grassy or bracken-dominated eucalypt forest or open woodland to 15 m tall with a large shrub layer and ground layer rich in herbs, grasses, and orchids. Occurs mainly on flat or undulating areas on moderately fertile, relatively well-drained, deep sandy or loamy topsoils over heavier subsoils (duplex soils)'* (Department of Energy Environment and Climate Action 2025a). EVC 3: Damp Sands Herb-rich Woodland is listed as Vulnerable within the Glenelg Plain bioregion.
- EVC 710: Damp Heathland is described as '*Developed on sites of intermittent waterlogging, typically wet in winter and dry in summer, with low nutrient availability. Closed tall heathland, or scrub if long unburnt. There is a dense ground layer of rushes and sedges, and sometimes emergent* eucalypts' (Department of Energy Environment and Climate Action 2025a). EVC 710: Damp Heathland is listed as Depleted within the Glenelg Plain bioregion.
- EVC 793: Damp Heathy Woodland is described as '*Woodland to 10 m tall with tall dense heathy understorey, which becomes tall scrub if long unburnt in high rainfall areas. The ground layer consists of grasses, herbs, small shrubs and tough-leaved monocots. Developed on sandy soils of moderate to low fertility, typically wet in winter due to impeding layer in soil and dry in summer'* (Department of Energy Environment and Climate Action 2025a). EVC 793: Damp Heathy Woodland is listed as Depleted within the Glenelg Plain bioregion.

Current vegetation modelling, by DEECA, suggests that some of each of these EVC's persists within the study area, however, the vegetation observed on site, shows a smaller extent than that which is modelled to remain.

Flora Species

One hundred and seven flora species were recorded during the current assessment (excluding the planted trees). This comprised 77 indigenous species and 30 exotic species.

Much of the northern portion of the study area consisted of pastures comprising exotic grasses and environmental weeds such as Sweet Vernal-grass *Anthoxanthum odoratum*, Toowoomba Canary-grass *Phalaris aquatica*, Couch *Cynodon dactylon* and Kikuyu *Cenchrus clandestinus,* as well as environmental weeds, such as Rough Sow-thistle *Sonchus asper*, Spear Thistle *Cirsium vulgare* and Buck's-horn Plantain *Plantago lanceolata* (Plate 1). Some small patches and scattered trees occurred as relics in these areas.

Within the northern portion of the study area indigenous vegetation took the form of modified relics. These areas usually consisting of scattered trees or stands of canopy tree species with little to no understorey beneath (Plate 2). Species observed here included canopy trees such as Brown Stringybark *Eucalyptus baxteri*, Western Peppermint *Eucalyptus falciformis*, Manna Gum *Eucalyptus viminalis* subsp. *cygnetensis* and Swamp Gum *Eucalyptus ovata* (Plate 2). The midstorey occasionally

included Prickly Tea-tree *Leptospermum continentale* and Prickly Moses *Acacia verticillata*. Some low diversity of indigenous graminoids were noted here, mostly Bristly Wallaby-grass *Rytidosperma setaceum*.

The southern portion of the study area, consisted of an easement under a high-voltage power line. This portion of the study area has had trees removed underneath the powerline, and was also burnt in 2023 (Biosis Pty Ltd 2024). Due to this the vegetation in this are consisted completely of midstorey and understorey, within the midstorey species observed included Austral Bracken *Pteridium esculentum* subsp. *esculentum*, Blackwood *Acacia melanoxylon*, Common Beard-heath *Leucopogon virgatus*, Common Flat-pea *Platylobium obtusangulum*, Common Heath *Epacris impressa*, Cranberry Heath *Styphelia humifusa,* Heath Tea-tree *Gaudium myrsinoides*, Mitchell's Wattle *Acacia mitchellii*, Myrtle Wattle *Acacia myrtifolia* amongst a range of other prostrate to medium shrubs. The understorey was equally diverse between grasses and herbs and species observed included Running Postman *Kennedia prostrata*, Short Purple-flag *Patersonia fragilis*, Slender Dodder-laurel *Cassytha glabella*, Slender Platysace *Platysace heterophylla* var. *heterophylla*, Small Grass-tree *Xanthorrhoea minor* subsp. *lutea*, Small Poranthera *Poranthera microphylla*, Spreading Rope-rush *Empodisma minus*, Supple Spear-grass *Austrostipa mollis*, Tall Sedge *Carex appressa*, Tall Spear-grass *Austrostipa pubinodis*, Tassel Rope-rush *Hypolaena fastigiata* amongst many others (Plate 4-6).

At the southern end of the study area, the vegetation became fragmented by several tracks, here the invasion of weeds was slightly higher, and diversity of plants slightly lower (Plate 7).

Vegetation Quality Assessment

Most patches scored moderately with Habitat Hectare Scores of 28, 30 and 42 (out of 100). These patches lacked in Understorey and Recruitment components but assessed well in Large Tree components compared against the EVC Benchmark. Patch 1 scored highly, despite its lack of canopy, with a Habitat Hectare Score of 59 (out of 100). All Patches scored well in the Landscape Assessment (Department of Energy Environment and Climate Action 2025a)(Table 1).

Table 1. Habitat Hectare assessment results

Patch			1	2	3	4	5	6
Bioregion			Victorian Volcanic Plain	Victorian Volcanic Plain	Victorian Volcanic Plain	Victorian Volcanic Plain	Victorian Volcanic Plain	Victorian Volcanic Plain
EVC name			Lowland Forest	Lowland Forest	Lowland Forest	Lowland Forest	Lowland Forest	Lowland Forest
EVC number			16	16	16	16	16	16
Conservation rating within bioregion			Least Concern	Least Concern	Least Concern	Least Concern	Least Concern	Least Concern
Assessment Criteria		**Maximum Score**	**Patch Score**	**Patch Score**	**Patch Score**	**Patch Score**	**Patch Score**	**Patch Score**
Site Condition	a. Large old trees	10	0	0	0	0	0	0
	b. Canopy cover	5	0	0	0	0	0	0
	c. Understorey	25	15	10	10	10	10	10
	d. Lack of weeds	15	13	13	13	13	13	13
	e. Recruitment	10	10	6	6	6	6	6
	f. Organic litter	5	3	3	3	3	3	3
	g. Logs	5	0	0	0	0	0	0
	h. Total (sum of a-g)	75	41	32	32	32	32	32
Landscape Value	j. Patch size	10	8	1	1	8	1	1
	k. Neighbourhood	10	5	5	5	5	5	5
	l. Distance to core	5	5	4	4	4	4	4
m. Habitat Score (sum of h-l)		100	59	42	42	42	42	42
n. Habitat score out of 1 (m÷100)			**0.59**	**0.42**	**0.42**	**0.42**	**0.42**	**0.42**
Size (ha)			**5.251**	**0.018**	**0.014**	**0.030**	**0.014**	**0.032**
Large Old Trees (LOTs)*			**0**	**0**	**0**	**0**	**0**	**0**

Patch			7	8	9	10	11	12
Bioregion			Victorian Volcanic Plain	Victorian Volcanic Plain	Victorian Volcanic Plain	Victorian Volcanic Plain	Glenelg Plain	Glenelg Plain
EVC name			Lowland Forest	Lowland Forest	Herb-rich Foothill Forest	Herb-rich Foothill Forest	Damp-sands Herb-rich Woodland	Damp-sands Herb-rich Woodland
EVC number			16	16	23	23	16	16
Conservation rating within bioregion			Least Concern	Least Concern	Vulnerable	Vulnerable	Vulnerable	Vulnerable
Assessment Criteria		**Maximum Score**	**Patch Score**	**Patch Score**	**Patch Score**	**Patch Score**	**Patch Score**	**Patch Score**
Site Condition	a. Large old trees	10	0	0	7	9	7	9
	b. Canopy cover	5	0	0	2	2	2	2
	c. Understorey	25	10	10	5	5	5	5
	d. Lack of weeds	15	13	13	2	2	2	2
	e. Recruitment	10	6	6	1	1	1	1
	f. Organic litter	5	3	3	3	3	3	3
	g. Logs	5	0	0	0	0	0	0
	h. Total (sum of a-g)	75	32	32	20	22	20	22
Landscape Value	j. Patch size	10	8	1	1	1	1	1
	k. Neighbourhood	10	5	5	3	3	3	3
	l. Distance to core	5	4	4	4	4	4	4
m. Habitat Score (sum of h-l)		100	42	42	28	30	28	30
n. Habitat score out of 1 (m÷100)			**0.42**	**0.42**	**0.28**	**0.30**	**0.28**	**0.30**
Size (ha)			**0.053**	**0.063**	**0.059**	**0.099**	**0.114**	**0.143**
Large Old Trees (LOTs)*			**0**	**0**	**1**	**2**	**2**	**4**

Table Note:

*Large Tree DBH is 70cm DBH within EVC 3: Damp-sands Herb-rich Woodland and EVC 23 Herb-rich Foothill Forest

Tree Assessment

A scattered tree assessment was undertaken on the trees located outside the patches of native vegetation (Table 2).

Table 2. Scattered Tree Assessment results.

Tree #	Common Name	Species Name	Size (DBH cm)	Size Class
1	Gum	*Eucalyptus sp.*	76	Large
2	Manna Gum	*Eucalyptus viminalis subsp. cygnetensis*	91	Large
3	Swamp Gum	*Eucalyptus ovata*	52	Small
4	Western Peppermint	*Eucalyptus falciformis*	78	Large

Table Notes:
*Large Tree DBH is 70cm DBH within EVC 3: Damp-sands Herb-rich Woodland and EVC 23 Herb-rich Foothill Forest

Threatened Flora Species and Ecological Communities

Five threatened flora species have previously been recorded within three kilometres of the study area (Department of Energy Environment and Climate Action 2025d). Thirteen threatened flora species are predicted to occur within the study area based on the Protected Matters Search Tool (Department of Climate Change Energy the Environment and Water 2025a). A consolidated list of these threatened flora species, as well as their conservation status under the EPBC Act, the *Flora and Fauna Guarantee Act 1988* (Vic) (FFG Act) Threatened List (Department of Energy Environment and Climate Action 2024), their preferred habitats and the likelihood of occurrence for each species is provided in Table A3.

One threatened flora species, Western Peppermint, has been recorded within the study area in 1979 (Department of Energy Environment and Climate Action 2025d). Five threatened flora species have been recorded within three kilometres of the study area, and one was observed during the current assessment; Western Peppermint which is listed as Vulnerable under the FFG Act, was observed along the western boundary of the study area. It was also noted to occur on either side of the power line easement, but not within the powerline easement itself, where trees have been removed. .

A previous ecological assessment undertaken by Biosis (2024) assessed the EVC 16: Lowland Forest vegetation to the west of the easement. This assessment recorded the Flora and Fauna Guarantee Act 1988 (Vic) (FFG Act) species Parsley Xanthosia *Xanthosia leiophylla*, Tiny Violet *Viola sieberiana* and Hairy Brunonia *Boronia pilosa* subsp. *torquata*. The previous ecological assessment also suggested the potential for Green-striped Greenhood *Pterostylis chlorogramma* (Biosis Pty Ltd 2024). The current assessment did not identify these species; however, the current assessment was undertaken during the end of summer and many of these species are unlikely to have been visible at this time of year.

The modelling used by the Protected Matters Search Tool suggests that up to two nationally significant vegetation community may also occur within the study area:

- Natural Temperate Grassland of the Victorian Volcanic Plain (Critically Endangered); and,
- Grassy Eucalypt Woodland of the Victorian Volcanic Plain (Critically Endangered).

The vegetation within the study area is not representative of any of these threatened ecological communities, based on its topography, EVC classification and the observed species mix and weediness.

Fauna

Fauna Species and Habitats

Twenty-three fauna species were recorded within the study area during the current assessment. This comprised 18 birds (one introduced; 17 native) and five mammals, two introduced and three native. All these species are common to the area. No reptiles were recorded during the current assessment, although it is likely that skinks and snakes would occur within the study area, amongst areas containing understorey vegetation and organic litter or debris. It is expected that a greater diversity of fauna species would be recorded with a greater amount of time on-site.

The open areas that comprise much of the study area are likely to provide habitat to generalist species, such as Australian Magpie *Gymnorhina tibicen* and Australian Raven *Corvus coronoides*, which are widespread and common species throughout open paddocks throughout Victoria. This habitat has low ecological value, as it is generally homogenous and lacks important components of structure, floral diversity and fauna resources that a diverse range of species might exploit. Galah *Eolophus roseicapilla* were observed utilising the Gum species for habitat. Whilst smaller, less gregarious birds, such as Superb Fairy-wren *Malurus cyaneus* were observed utilising the denser vegetation cover.

Tree hollows provide nesting opportunities for birds and roost habitats for bats. It is probable that arboreal mammals such as Common Ringtail Possum *Pseudocheirus peregrinus*, Common Brushtail Possum *Trichosurus vulpecula* and bats may utilise the trees. Hollows are generally a limited resource within the landscape (Gibbons and Lindenmayer 2002; Gibbons *et al.* 2002; Lindenmayer, Cunningham Donnelly 1994), which makes these large trees of greater ecological value than younger trees that do not support hollows. Some hollows were observed within the study area during the current assessment and those observed varied between smaller hollows in canopy branches and larger ground hollows and spouts. Species likely to use these tree hollows include common mammals discussed above and the microbats, as well as a wide variety of birds, particularly parrots and cockatoos.

Underneath the easement, Eastern Grey *Kangaroo Macropus* giganteus and Black Wallaby *Wallabia bicolor* were observed resting and grazing amongst the vegetation. Square shaped scats of Common Wombat *Vombatus ursinus* were also observed atop logs.

Threatened Fauna Species and Communities

Seventeen threatened fauna species have previously been recorded within three kilometres of the study area (Department of Energy Environment and Climate Action 2025d) (Figure 2). A further 25 threatened fauna species are predicted to occur within the study area, based on the Protected Matters Search Tool (Department of Climate Change Energy the Environment and Water 2025a). A consolidated list of these threatened fauna species, as well as their conservation status under the EPBC Act and the FFG Act Threatened List (Department of Environment Land Water and Planning

2023a), their preferred habitats and the likelihood of occurrence for each species is provided in Table A4.

No threatened fauna species were recorded within the study area during the current assessment (Table A4, Figure 2). Many of the species modelled to occur by the Protected Matters Search Tool, and recorded within the three-kilometre buffer area, are species that are dependent on habitats that are not provided by the study area, such as aquatic species like Australian Grayling *Prototroctes maraena*. None of these species are likely to be impacted by the proposed development of the study area (Table A4).

There are records of threatened fauna species within the study area, being Brolga *Antigone rubicunda* in 2020 (Department of Energy Environment and Climate Action 2025d). The Glenelg Plain is a known stronghold for Brolgas within Victoria. This species forages widely throughout the region in wetland margins, stubble pastures and crops. Although there is no breeding habitat for Brolgas, which prefer large dams or wetlands with islands, or shallow areas which deter Red Fox predation (often being loyal to a known breeding site), there study area is likely to provide some foraging habitat for this species. Therefore, the study area is unlikely to provide important resources for Brolgas, and the development of the study area is unlikely to impact this species.

Red-tailed Black-Cockatoo (south-eastern) *Calyptorhynchus banksii graptogyne*, Gang-gang Cockatoo *Callocephalon fimbriatum* and Blue-winged Parrot *Neophema chrysostoma* were all either recorded in the previous ecological assessment or the primary subject of the ESO that covers the study area (Biosis Pty Ltd 2024). All of these parrots are listed under the *Environment Protection and Biodiversity Conservation Act 1999 (Cth)* (EPBC Act) and have a moderate likelihood in finding habitat within the canopy trees adjacent the study area.

A breeding pair of Powerful Owl *Ninox strenua* are likely to include the study area within their home territory. Powerful Owl prefer large hollows in large old trees for nesting and are likely to find suitable hollows in the adjacent, intact, EVC 16: Lowland Forest vegetation as opposed to the scattered trees and relics recorded within the study area.

The understorey vegetation recorded in the powerline easement is likely to support significant habitat for foraging and cover for a range of indigenous mammals. Species likely to occur in this area include Swamp Antechinus *Antechinus minimus maritimus*, Southern Brown Bandicoot *Isoodon obesulus obesulus*, Long-nosed Potoroo *Potorous tridactylus trisulcatus* and Heath Mouse *Pseudomys shortridgei*.

Southern Bent-winged Bat (southern ssp.) *Miniopterus orianae bassani* may forage within the EVC 16: Lowland Forest vegetation adjacent to the study area or above the more degraded vegetation within the study area. The absence of trees being removed, means that the proposed development is unlikely to significantly impact this species.

The study area may also provide foraging opportunities for Grey-headed Flying Fox *Pteropus poliocephalus* or air space over which some threatened species, such as White-throated Needletails *Hirundapus caudacutus* may fly on occasions when moving around the landscape. However, the study

area itself does not provide important resources to either of these species, and the development of the study area is unlikely to impact these species.

No fauna communities listed under the Victorian FFG Act were recorded within the study area.

Discussion

A detailed summary of the legislation that was considered when preparing this report is provided in Appendix 2. The discussion presented in this section of the report does not reiterate information provided in Appendix 2, but summarises the results and recommendations arising from the interpretation of this legislation.

Environment Protection and Biodiversity Conservation Act 1999 (Cth)

The desktop assessment identified 13 threatened flora and 31 threatened fauna species, as well as up to four threatened ecological communities, listed under the EPBC Act, which may occur within the study area.

Almost all of the EPBC Act-listed flora and fauna species that were identified during the desktop assessment, are, in fact, unlikely to occur due to the absence of suitable habitats or the degraded nature of habitats within the study area. There is a moderate likelihood that Red-tailed Black-Cockatoo (south-eastern), Gang-gang Cockatoo, Blue-winged Parrot, Grey-headed Flying-foxes, Southern Bent-winged Bat (southern ssp.) forage at the study area, or that White-throated Needletails fly over the study area, however the proposed development is unlikely to significantly impact any of these species, because none of these species are likely to rely on the habitat within the study area for important phases of their lifecycle.

The powerline easement is likely to provide some habitat to Swamp Antechinus, Southern Brown Bandicoot, Long-nosed Potoroo and Heath Mouse. A Significant Impact Test will be undertaken to determine if there is a significant impact to these species and a Fauna Management Plan will be prepared prior to construction to outline mitigation measures for these species.

The previous ecological assessment also suggested the potential for Green-striped Greenhood *Pterostylis chlorogramma*. Green-striped Greenhood is considered to have low-moderate chances of occurring within the powerline easement, a survey is recommended for this species.

The limited and degraded native vegetation within the study area does not meet thresholds to classify as any of the threatened ecological communities listed under the EPBC Act.

A referral to the Commonwealth DCCEEW may be recommended for the project pending the outcome of the targeted flora surveys and the Significant Impact Test for Swamp Antechinus, Southern Brown Bandicoot, Long-nosed Potoroo and Heath Mouse.

Flora and Fauna Guarantee Act 1988 (Vic)

The desktop assessment identified 18 flora species and 38 fauna species listed under the FFG Act that may occur within the study area (Tables A3 and A4). As stated above, there is a moderate likelihood that some mobile animals, with large home ranges, may utilise or fly over the study area on occasion (that Red-tailed Black-Cockatoo (south-eastern), Gang-gang Cockatoo, Brolga, White-throated Needletails or Grey-headed Flying Foxes). However, the development of the study area is unlikely to significantly impact these threatened species.

DEECA have agreed that targeted surveys for Swamp Antechinus, Southern Brown Bandicoot, Long-nosed Potoroo and Heath Mouse are not warranted and that the application for the proposed development can proceed with the assumed presence of these species (DEECA Pre-lodgement Advice, *in litt*. 17 April 2025).

Parsley Xanthosia, Tiny Violet and Hairy Brunonia have a high probability of occurring under the powerline easement, targeted surveys are recommended to inform the routing of the connection to the Heywood Terminal Station.

The FFG Act, which was amended in 2021, contains an obligation or duty on public authorities and ministers to consider potential biodiversity impacts when exercising their functions. The FFG Act requires ministers and public authorities (including Councils) reasonably consider the objectives of the Act where projects may impact upon biodiversity, so far as is consistent with the proper exercising of their functions. It is therefore anticipated that regulators (DEECA and Glenelg Shire Council) will give due consideration to the FFG Act when considering the approval for the project.

Flora listed as 'Protected' under the FFG Act includes three categories:

1. Flora listed as 'threatened' on the FFG Act (discussed above);
2. Members of communities which are listed as threatened on the FFG Act; and
3. Declared Protected Flora.

The 'incidental take' of declared flora taxa within these categories may require a permit from the Department of Energy, Environment and Climate Action (DEECA), as discussed below. The FFG Act provides two different categories for declared flora taxa: 'generally protected flora' and 'restricted use protected flora'. These categories can include whole families or genera. 'Generally protected flora' includes all plants from the family *Orchidaceae* (i.e. orchids) and 'Restricted use protected flora' includes, for example, most species of genus Acacia (wattles), most species of family Asteraceae (daisies), family *Ericaceae* (heaths), all of family *Polypodiopsida* (ferns) except Austral Bracken, and all genus *Thysanotus* (fringe-lilies) among other species and groups (Department of Energy Environment and Climate Action 2024a).

A Permit is required for the removal of 'generally protected flora' from public land from DEECA in development situations. An action is exempt from requiring a Permit to take 'generally protected flora' from private land, where the flora is being taken by the landowner, or with the permission of the landowner (Department of Energy Environment and Climate Action 2024a). A Permit is not required from DEECA for the incidental take of 'restricted use protected flora' from public land.

There is potential for the presence of threatened flora species and generally protected flora species underneath the powerline easement. A targeted survey should be undertaken to ascertain presence of these species and mitigate any potential impacts. This survey would also map any other 'Generally Protected Flora' in the form of unlisted, indigenous orchids, likely to occur in the study area. Most orchid species are subterranean, or at least, unidentifiable unless flowering, which occurs in Spring, largely in the months of September, October and November, and targeted surveys should occur at this time.

Planning and Environment Act 1987 (Vic)

Due to the presence of native vegetation within the study area, the proposed development would require a planning permit from the Glenelg Shire Council under Clause 52.17 prior to the removal, destruction or lopping of native vegetation (Department of Environment Land Water and Planning 2025). The applicant is required to demonstrate how it applied the three-step approach to avoid, minimise and offset impacts to native vegetation (discussed below).

The ESO3 seeks to seeks to ensure that Southeastern Red-tailed Black Cockatoo habitat is protected by retaining hollow bearing trees. This is largely consistent with the intentions of *the Guidelines.* Brown Stringybark is noted to occur within the study area, and adjacent it, in turn it is likely that Southeastern Red-tailed Black Cockatoo utilises these trees on occasion. Nevertheless, the vegetation in the powerline easement is treeless and does not contain foraging, roosting or breeding habitat for this species. The arboricultural assessment has confirmed that trees adjoining the transmission easement will not be impacted and therefore significant impacts to this species will be avoided (Ryder Arboriculture and Environment Pty Ltd 2025).

Catchment and Land Protection Act 1994 (Vic)

Primary considerations of the *Catchment and Land Protection Act 1994* (Vic) relate to soil and water conservation, as well as the management of pest plants and animals. Five weed species that are listed as 'noxious' within the Glenelg Hopkins Catchment Management Area were present within the study area (Table A1, Appendix 1). These weeds include:

- Blackberry *Rubus fruticosus* spp. agg., Gorse *Ulex europaeus* and Paterson's Curse *Echium plantagineum* which are listed as 'Regionally Controlled' within the catchment. The proponent is required to 'control the spread' of all 'regionally controlled' species from their property; and,
- Saffron Thistle *Carthamus lanatus* and Spear Thistle *Cirsium vulgare* which are listed as 'Restricted'. There are restrictions on the 'trade' of this species.

Blackberry and Gorse are also listed as 'Weeds of National Significance' were observed within the study area.

The project should aim to remove these plants when construction commences, and ensure they are removed during the future landscaping and maintenance of the study area. It is expected that weed management would form part of best practice land management and *Catchment and Land Protection Act 1994* (Vic). As a minimum, this should include:

- Controlling weeds prior to the commencement of works, during works and after works are complete; and
- Avoiding downstream and off-site impacts through erosion and sediment control measures.

Wildlife Act 1975 (Vic)

It is likely that some locally common species of fauna will be displaced by the proposed development. Furthermore, there remains a low likelihood that animals may be accidentally injured when disturbing soil and removing vegetation. All native vertebrate wildlife is protected under the *Wildlife Act 1975* (Vic), and therefore contractors must use due care when removing vegetation and fill from the study area. It is recommended that a zoologist or wildlife handler salvage any wildlife from trees prior to their removal (if required).

Guidelines for the Removal, Destruction or Lopping of Native Vegetation

The Three-step Approach

Applicants who wish to remove native vegetation must generally demonstrate how the application meets the three-step approach to:

1. Avoid the removal, destruction or lopping of native vegetation;
2. Minimise impacts from the removal, destruction or lopping of native vegetation that cannot be avoided; and
3. Provide an offset to compensate for the biodiversity impact from the removal, destruction or lopping of native vegetation (Department of Environment Land Water and Planning 2017).

Avoidance and Minimisation Statement

Avoidance is generally demonstrated through appropriate development design.

The previous iteration of this report recommended that, where practicable:

- Development design is considerate of the native vegetation and that the development (including roads and infrastructure) be sited away from the highest quality native vegetation where possible;
- Any retained trees, inclusive of their Tree Protection Zone, be avoided wherever safe and practicable as recommended in the arborist report;
- Retained trees include protection of the Tree Protection Zone as per the Australian Standards for the Protection of Trees on Development Sites (Standards Australia 2009);
- Any tree pruning for the proposed development should be undertaken by a suitably qualified arborist, and should not exceed 30% of the overall tree canopy;
- Vegetation which is to be retained is protected from construction activities, in accordance with a Construction Environment Management Plan;
- Explore the potential for Horizontal Directional Drilling be utilised to avoid trenching and minimising the impacts to native vegetation in the transmission easement;
- Undertake a targeted flora survey to inform the need for a referral, cable routing paths and a Protected Flora Permit;
- A Rehabilitation Plan is commissioned to manage revegetation and recolonisation of indigenous species in areas where the ground is disturbed;

- A Construction Environment Management Plan to manage impacts during construction, particularly including, but not limited to weeds light, noise vibration, fill disposal, vehicle hygiene, dust, and the protection of retained native vegetation (including ensuring an appropriate location for laydown or stockpile areas);
- Sediment, erosion and pollution control measures, in accordance with the EPA Guidelines (EPA Victoria 1991; EPA Victoria 1996), are incorporated in the Construction Environment Management Plan to avoid indirect impacts to downstream/downhill areas of greater ecological significance; and,
- Where native vegetation cannot be avoided, offsets will be required.

The original project design involved an underground cable and substation located within the densely vegetated area of Mt Clay State Park. Biosis (2023) undertook a flora and fauna assessment of the project at that time and identified the impacts would include 3.176 hectares of native patch vegetation including several threatened flora species. Forty-four trees with hollows were also to be impacted resulting in impact to habitats of the Gang-gang Cockatoo, Blue-winged Parrot *Neophema chrysostoma* and Red-tailed Black Cockatoo.

Due to the unacceptable nature of these impacts, Atmos Renewables moved the substation to treeless land, which is maintained for the transmission line easement that connects the battery site and Heywood Terminal Station. Whilst not initially the preferred option by AusNet, engineering studies and extensive consultation with AusNet's technical operations team demonstrated that the cable could be installed and operated safely. Moving the cable to within the existing transmission easement has resulted in the avoidance of the highest quality native vegetation and has avoided all impacts to trees or habitat for the threatened bird and bat species that utilise the area.

Atmos Renewables also investigated horizontal directional drilling (HDD) as an installation method for the underground cable. Whilst this reduced the extent of impacts, the HDD launch and exit pads still resulted in large areas of native vegetation and associated impacts on threatened flora and fauna.

The current design requires a ten metre wide corridor extending from the private property down to the Heywood Terminal Station. Arboricultural advice has confirmed that the construction corridor area will be able to avoid impacts to the trees and their roots located west of the powerline easement (Ryder Arboriculture and Environment Pty Ltd 2025). Therefore, impacts are limited to the ten metre wide construction footprint within this existing easement.

Offsets

All native vegetation near the BESS facility is proposed to be retained. Only the native vegetation associated with the powerline connection, located within the Mt Clay State Park, is proposed to be removed. Offsets were calculated by submitting the impact to the Vegetation Information Management System (Department of Energy Environment and Climate Action 2025b) and creating a Native Vegetation Removal report (Appendix 3).

This report uses the native vegetation points and polygons collected during the current assessment and modelled vegetation quality scores to determine offset requirements. The Native Vegetation Removal report includes the species specific offset test, which determines if the proposed vegetation

removal will have a proportional impact on any Victorian rare or threatened species habitat above a specific offset threshold, which is set at 0.005 per cent of total habitat for each species. This test was applied to current proposal, and it was determined that species specific offsets would not be required (Table 3).

Table 3. Offset requirements for removal of all native vegetation within the study area.

Offset Parameter	Result
Location Category	Location 1
Assessment Pathway	Detailed Assessment Pathway
Total Extent Removed	0.775 hectares
General Offset Requirements	0.6310 General Habitat Units
Minimum Strategic Biodiversity Score	0.6785
Offset Location	Glenelg Hopkins Catchment Management Authority (CMA) or within the Glenelg Shire municipality
Large Tree Offset	Nil

It is expected that offsets would be achieved through a third-party offset, through a vegetation broker, as securing the offsets on site is not practicable. We have confirmed that these offsets are readily available at multiple sites, with multiple brokers the Native Vegetation Credit Register (Appendix 4).

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Plates

Plate 1. The proposed BESS site mostly consisted of pasture (10 February 2025).

Plate 2. Some scattered trees occurred along the northwestern boundary of the BESS site (10 February 2025).

Plate 3. Patches in the northern portion of the study area mostly lacked understorey (10 February 2025).

Plate 4. Patch 1 supported a diverse and abundant midstorey (10 February 2025).

Plate 5. Patch 1 directly abutted EVC 16: Lowland Forest vegetation (10 February 2025).

Plate 6. Patch 1 supported a diverse and abundant understorey (10 February 2025).

Plate 7. In the south of the study area, vegetation was fragmented by several vehicle tracks (10 February 2025).

Figures

Figure 1: Results of the current assessment.

Heywood Battery Energy Storage System

Legend

- Study Area

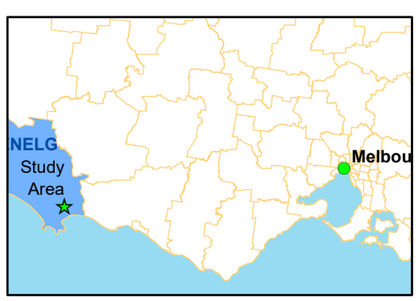
Proposed Development

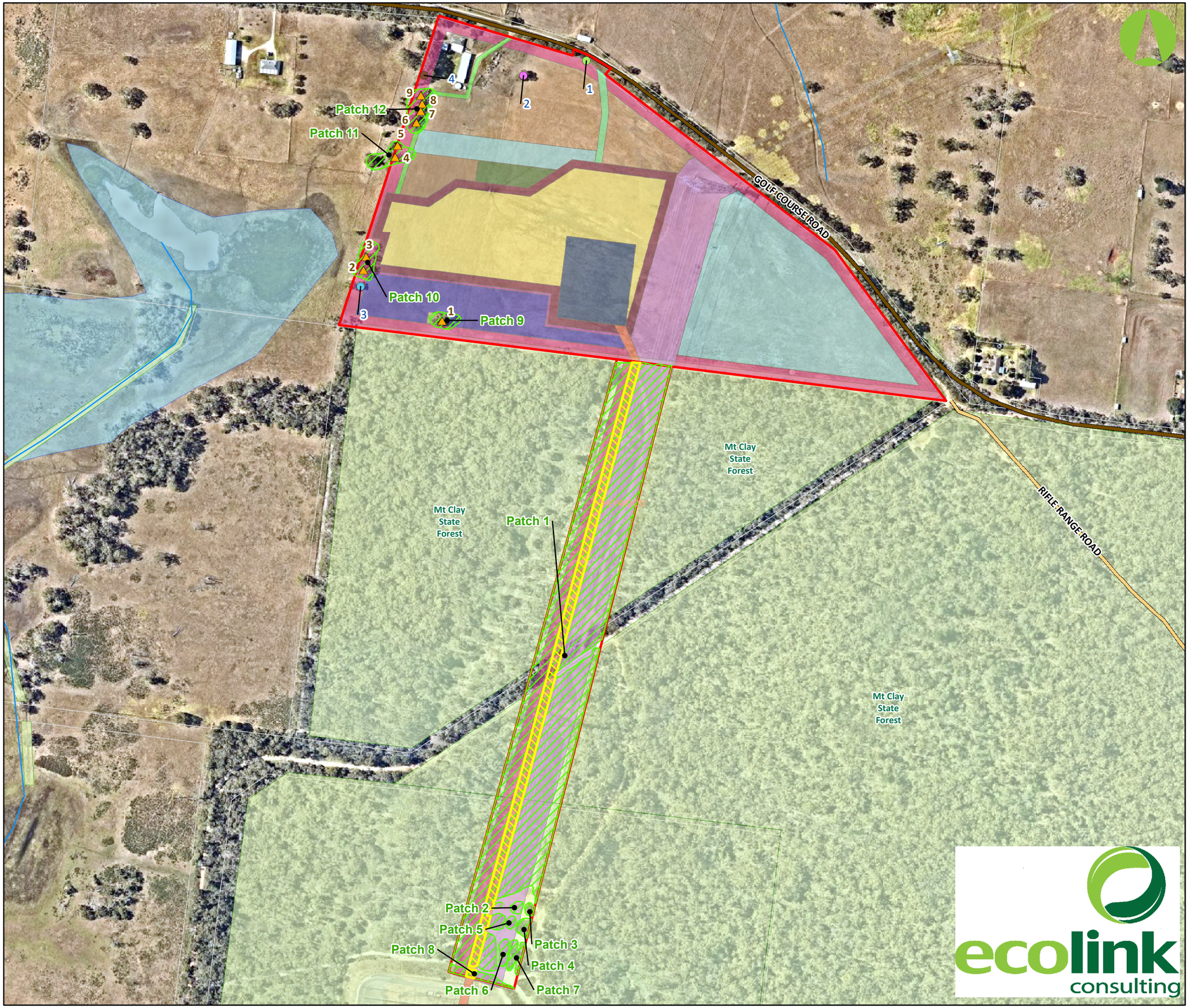
- Access Road
- Asset Protection Zone
- AusNet Transmission Easement
- Batteries and Inverters
- Boundary Setback (Exclusion Zone)
- Emergency Access Track
- Laydown Area
- O&M Facility
- Radiant Heat Barrier
- Stormwater Retention
- Substation
- Temporary Laydown Areas (as required)
- Underground Transmission Cable Corridor
- Patches of Native Vegetation
- Large Trees in Patches

Scattered Trees

- Dead
- Manna Gum
- Western Peppermint
- Swamp Gum
- Impacted Vegetation
- DEECA Modelled Wetland
- Public Land

0 75 150 225 300 Meters





P/N 2592 Figure 1. January 2025. Aerial Photography: Nearmap 11 Febraury 2024

Note: some threatened species points have been shifted for display purposes

CATONS FLAT ROAD
DOHLES ROAD
SMITH STREET
MT CLAY ROAD
FITZROY RIVER
CAVE HILL ROAD
FLACKS ROAD
GOLF COURSE ROAD
PORTLAND LINE
COFFEYS LANE
MEAGHERS ROAD
SURRY RIVER
SURRY RIVER-GORAE ROAD
HEYWOOD
HEATHMERE
Mt Clay State Forest
Narrawong Flora Reserve
Narrawong Flora Reserve

0 250 500 750 1,000 Meters

ecolink consulting

Figure 2: Threatened flora and fauna within 3kms of the study area.

Heywood Battery Energy Storage System

Legend

- Study Area
- 3km Study Area Buffer

Common Name

- Australasian Bittern
- Blue-winged Parrot
- Brolga
- Gang-gang Cockatoo
- Grey-crowned Babbler
- Latham's Snipe
- Little Eagle
- Powerful Owl
- Red-tailed Black-Cockatoo (south-eastern)
- Shy Albatross
- White-throated Needletail
- Heath Mouse
- Long-nosed Potoroo
- Southern Bent-winged Bat
- Southern Brown Bandicoot
- Swamp Antechinus
- Bearded Dragon
- Hairy Boronia
- Otway Bush-pea
- Parsley Xanthosia
- Tiny Violet
- Western Peppermint
- Public Land

Appendices

Appendix 1. Flora and Fauna Tables

Table A1. Flora species recorded within the study area

Origin	Common Name	Scientific Name	Weeds of National Significance	Noxious Weeds Classification
	Annual Fireweed	*Senecio glomeratus*	-	-
*	Annual Meadow-grass	*Poa annua*	-	-
	Austral Bracken	*Pteridium esculentum* subsp. *esculentum*	-	-
	Australian Carrot	*Daucus glochidiatus*	-	-
*	Black Nightshade	*Solanum nigrum*	-	-
	Black Wattle	*Acacia mearnsii*	-	-
	Black-anther Flax-lily	*Dianella revoluta*	-	-
*	Blackberry	*Rubus fruticosus* spp. agg.	Yes	Controlled
	Blackwood	*Acacia melanoxylon*	-	-
	Bristly Wallaby-grass	*Rytidosperma setaceum*	-	-
	Broom Spurge	*Amperea xiphoclada* var. *xiphoclada*	-	-
	Brown Stringybark	*Eucalyptus baxteri*	-	-
*	Brown-top Bent	*Agrostis capillaris*	-	-
*	Buck's-horn Plantain	*Plantago coronopus*	-	-
	Bundled Guinea-flower	*Hibbertia fasciculata* var. *prostrata*	-	-
*	Cape Wattle	*Paraserianthes lophantha* subsp. *lophantha*	-	-
*	Cape Weed	*Arctotheca calendula*	-	-
	Cherry Ballart	*Exocarpos cupressiformis*	-	-
*	Chickweed	*Stellaria media*	-	-
	Clustered/Creeping Cudweed	*Euchiton japonicus*	-	-
	Common Beard-heath	*Leucopogon virgatus*	-	-
	Common Blown-grass	*Lachnagrostis filiformis*	-	-
	Common Bog-sedge	*Schoenus apogon*	-	-
*	Common Centaury	*Centaurium erythraea*	-	-
	Common Flat-pea	*Platylobium obtusangulum*	-	-
	Common Heath	*Epacris impressa*	-	-
#	Common Maidenhair	*Adiantum aethiopicum*	-	-
	Common Raspwort	*Gonocarpus tetragynus*	-	-
	Common Scale-rush	*Lepyrodia muelleri*	-	-
*	Common Sow-thistle	*Sonchus oleraceus*	-	-

Origin	Common Name	Scientific Name	Weeds of National Significance	Noxious Weeds Classification
	Common Wheat-grass	*Anthosachne scabra*	-	-
	Cotton Fireweed	*Senecio quadridentatus*	-	-
	Cranberry Heath	*Styphelia humifusa*	-	-
	Creeping Bossiaea	*Bossiaea prostrata*	-	-
	Drooping Mistletoe	*Amyema pendula*	-	-
*	Flatweed	*Hypochaeris radicata*	-	-
*	Flaxleaf Fleabane	*Erigeron bonariensis*	-	-
	Fringed Brachyloma	*Brachyloma ciliatum*	-	-
*	Gorse	*Ulex europaeus*	Yes	Controlled
*	Great Brome	*Bromus diandrus*	-	-
	Grey Tussock-grass	*Poa sieberiana*	-	-
	Hairy Centrolepis	*Centrolepis strigosa* subsp. *strigosa*	-	-
*	Hairy Hawkbit	*Leontodon saxatilis* subsp. *saxatilis*	-	-
	Heath Tea-tree	*Gaudium myrsinoides*	-	-
	Hedge Wattle	*Acacia paradoxa*	-	-
	Honey-pots	*Acrotriche serrulata*	-	-
	Horny Cone-bush	*Isopogon ceratophyllus*	-	-
	Ivy-leaf Violet	*Viola hederacea*	-	-
	Jersey Cudweed	*Laphangium luteoalbum*	-	-
	Kneed Wallaby-grass	*Rytidosperma geniculatum*	-	-
	Manna Gum	*Eucalyptus viminalis*	-	-
	Many-flowered Mat-rush	*Lomandra multiflora* subsp. *multiflora*	-	-
	Messmate Stringybark	*Eucalyptus obliqua*	-	-
	Mitchell's Wattle	*Acacia mitchellii*	-	-
	Myrtle Wattle	*Acacia myrtifolia*	-	-
*	Paterson's Curse	*Echium plantagineum*	-	Controlled
*	Perennial Rye-grass	*Lolium perenne*	-	-
*	Pimpernel	*Lysimachia arvensis*	-	-
	Pointed Centrolepis	*Centrolepis aristata*	-	-
	Prickly Broom-heath	*Monotoca scoparia*	-	-
	Prickly Geebung	*Persoonia juniperina*	-	-
	Prickly Moses	*Acacia verticillata*	-	-
	Prickly Tea-tree	*Leptospermum continentale*	-	-
	Red-fruit Saw-sedge	*Gahnia sieberiana*	-	-
*	Ribwort	*Plantago lanceolata*	-	-
*	Rough Dog's-tail	*Cynosurus echinatus*	-	-
*	Rough Sow-thistle	*Sonchus asper*	-	-

Origin	Common Name	Scientific Name	Weeds of National Significance	Noxious Weeds Classification
	Running Postman	*Kennedia prostrata*	-	-
*	Saffron Thistle	*Carthamus lanatus*	-	Restricted
	Scrub Sheoak	*Allocasuarina paludosa*	-	-
	Short Purple-flag	*Patersonia fragilis*	-	-
	Showy Parrot-pea	*Dillwynia sericea*	-	-
	Silver Banksia	*Banksia marginata*	-	-
*	Silvery Hair-grass	*Aira caryophyllea* subsp. *caryophyllea*	-	-
*	Slender Centaury	*Centaurium tenuiflorum*	-	-
	Slender Dodder-laurel	*Cassytha glabella*	-	-
	Slender Platysace	*Platysace heterophylla* var. *heterophylla*	-	-
	Sun-orchid	*Thelymitra* sp.	-	-
	Small Grass-tree	*Xanthorrhoea minor* subsp. *lutea*	-	-
	Small Loosestrife	*Lythrum hyssopifolia*	-	-
	Small Poranthera	*Poranthera microphylla*	-	-
*	Smooth Cat's-ear	*Hypochaeris glabra*	-	-
	Smooth Parrot-pea	*Dillwynia glaberrima*	-	-
*	South African Orchid	*Disa bracteata*	-	-
*	Spear Thistle	*Cirsium vulgare*	-	Restricted
	Spike Wattle	*Acacia oxycedrus*	-	-
	Spreading Crassula	*Crassula decumbens var. decumbens*	-	-
	Spreading Rope-rush	*Empodisma minus*	-	-
*	Squirrel-tail Fescue	*Vulpia bromoides*	-	-
	Supple Spear-grass	*Austrostipa mollis*	-	-
	Swamp Gum	*Eucalyptus ovata*	-	-
	Sweet Bursaria	*Bursaria spinosa subsp. spinosa*	-	-
*	Sweet Vernal-grass	*Anthoxanthum odoratum*	-	-
	Tall Rush	*Juncus procerus*	-	-
	Tall Sedge	*Carex appressa*	-	-
	Tall Spear-grass	*Austrostipa pubinodis*	-	-
	Tassel Rope-rush	*Hypolaena fastigiata*	-	-
	Thatch Saw-sedge	*Gahnia radula*	-	-
	Kangaroo Grass	*Themeda triandra*	-	-
#	Toad Rush	*Juncus bufonius*	-	-
	Variable Stinkweed	*Opercularia varia*	-	-
	Variable Sword-sedge	*Lepidosperma laterale*	-	-
	Wattle Mat-rush	*Lomandra filiformis*	-	-

Origin	Common Name	Scientific Name	Weeds of National Significance	Noxious Weeds Classification
	Weeping Grass	*Microlaena stipoides var. stipoides*	-	-
vu	Western Peppermint	*Eucalyptus falciformis*	-	-
	Wiry Spear-grass	*Austrostipa muelleri*	-	-
*	Yorkshire Fog	*Holcus lanatus*	-	-

Table Notes:

* – Exotic # – naturalised

This table does not include ornamental plants, trees or shrubs that were not spreading or reproducing beyond where they were planted.

Table A2. Fauna species recorded within the study area

Origin	Common Name	Species Name
Birds		
	Australian Magpie	*Cracticus tibicen*
	Australian Raven	*Corvus coronoides*
	Brown Falcon	*Falco berigora*
	Galah	*Eolophus roseicapilla*
	Grey Shrike-thrush	*Colluricincla harmonica*
	Magpie lark	*Grallina cyanoleuca*
	Pied Currawong	*Strepera graculina*
	Red Wattlebird	*Anthochaera carunculata*
	Silvereye	*Zosterops lateralis*
	Spotted Pardalote	*Pardalotus punctatus*
	Straw-necked Ibis	*Threskiornis spinicollis*
	Sulphur-crested Cockatoo	*Cacatua galerita*
	Superb Fairy-wren	*Malurus cyaneus*
	Wedge-tailed Eagle	*Aquilla audax*
	Welcome Swallow	*Hirundo neoxena*
	White-plumed Honeyeater	*Lichenostomus penicillatus*
	Willy Wagtail	*Rhipidura leucophrys*
*	Common Blackbird	*Turdus merula*
Mammals		
	Black Wallaby	*Wallabia bicolor*
	Common Wombat	*Vombatus ursinus*
	Eastern Grey Kangaroo	*Macropus giganteus*
*	European Rabbit	*Oryctolagus cuniculus*
*	Red Fox	*Vulpes vulpes*

Definitions

* - Introduced species

Table A3. Threatened flora species that have previously been recorded within, or within three kilometres of the study area (Department of Energy Environment and Climate Action 2025d), or that has habitat that may occur within the vicinity of the study area (Department of Climate Change Energy the Environment and Water 2025a).

Common Name	Species Name	National Status	FFG Act Status	Habitat Preferences	Most Recent Record	Habitat Present on Site	Likelihood of Presence*
Clover Glycine	*Glycine latrobeana*	Vulnerable	Vulnerable	Grassy woodland; plains grassland; box woodland; dry sclerophyll forest.	NPR	No	Unlikely
Dense Leek-orchid	*Prasophyllum spicatum*	Vulnerable	Critically Endangered	Coastal and hinterland heath and heathy woodland	NPR	No	Unlikely
Fragrant Leek-orchid	*Prasophyllum suaveolens*	Endangered	Critically Endangered	Endemic to the basalt plains of south-western Victoria where it grows in grassland and grassy woodland on brown water-retentive clay loams.	NPR	No	Unlikely
Green-striped Greenhood	*Pterostylis chlorogramma*	Vulnerable	Endangered	Open forest and woodland	NPR	Yes	Moderate
Hairy Boronia	*Boronia pilosa subsp. torquata*	-	Endangered	Occurs in heathlands and heathy woodlands of the far south-west (e.g. Casterton and Portland areas), usually on sandy soils.	2017 (1)	No	Unlikely
Large-headed Fireweed	*Senecio macrocarpus*	Vulnerable	Critically Endangered	Largely confined to remnant Themeda grasslands on loamy clay soils derived from basalt from near Melbourne west to Skipton. Also known from auriferous ground near Stawell.	NPR	No	Unlikely
Leafy Greenhood	*Pterostylis cucullata*	Vulnerable	-	Tea-tree heath	NPR	No	Unlikely

Common Name	Species Name	National Status	FFG Act Status	Habitat Preferences	Most Recent Record	Habitat Present on Site	Likelihood of Presence*
Metallic Sun-orchid	*Thelymitra epipactoides*	Endangered	Endangered	Mainly coastal areas, although occurs inland on fertile loams, scrubby heaths or near swampy depressions.	NPR	No	Unlikely
Otway Bush-pea	*Pultenaea prolifera*	-	Endangered	Heathy understorey of Eucalyptus baxteri or E. obliqua open-forest	1980 (1)	No	Unlikely
Parsley Xanthosia	*Xanthosia leiophylla*	-	Endangered	Uncommon in Victoria, where known from sandy heathland and heathy woodland, mostly in the south-west, but also recorded from Wilsons Promontory	2019 (3)	Yes	Likely
River Swamp Wallaby-grass	*Amphibromus fluitans*	Vulnerable	-	Beside swamps in grassy low open forest, riparian scrub. Required moist soils, tolerates inundation.	NPR	No	Unlikely
Slender Plum-orchid	*Thelymitra orientalis*	-	Critically Endangered	Grows in damp heathy flats and seepage areas usually in peaty white sands	NPR	No	Unlikely
Spiny Peppercress	*Lepidium aschersonii*	Vulnerable	Endangered	Heavy clay soil near salt lakes on volcanic plain, but with outlying records from near Lake Omeo and the Grampians	NPR	No	Unlikely
Spiral Sun-orchid	*Thelymitra matthewsii*	Vulnerable	Endangered	Open forests and woodlands in well-drained sand and clay loams	NPR	No	Unlikely
Swamp Everlasting	*Xerochrysum palustre*	Vulnerable	Critically Endangered	Seasonal or permanent wetlands	NPR	No	Unlikely

Common Name	Species Name	National Status	FFG Act Status	Habitat Preferences	Most Recent Record	Habitat Present on Site	Likelihood of Presence*
Swamp Fireweed	*Senecio psilocarpus*	Vulnerable	-	High-quality herb-rich wetlands on plains	NPR	No	Unlikely
Tiny Violet	*Viola sieberiana s.s.*	Endangered	-	Heath and heathy woodland, usually on sandy soils south and west from the Grampians	1980 (1)	Yes	Likely
Western Peppermint	*Eucalyptus falciformis*	-	Vulnerable	Occurs on sandy soils in near-coastal heathy woodland from Anglesea area west to the SA border, sometimes adjacent to wetter vegetation	2023 (16)	Yes	Present

Table Notes:

NPR – Not previously recorded

*** Likelihood of Presence Definitions**:

Unlikely – Site does not contain habitat and/or it is outside the species' known, current distribution.

Low –Site contains some marginal habitat, but the species was not observed and has not been recently recorded in previous surveys in the area.

Moderate – Site contains preferred habitat that may support a population of the species. However, other factors, such as fragmentation, disturbance or predators may be impacting any local population.

High - Site contains the preferred habitat which is likely to support the species.

Present – Preferred habitat is present on the site, and the species was observed on the site, or recently recorded at the site.

Table A4. Threatened fauna species that have previously been recorded within, or within three kilometres of the study site (Department of Energy Environment and Climate Action 2025d), or that has habitat that may occur within the vicinity of the site (Department of Climate Change Energy the Environment and Water 2025a).

Common Name	Species Name	EPBC Act Status	FFG Act Status	Habitat Preferences	Most Recent Record	Habitat Present on Site	Likelihood of Presence*
Birds							
White-throated Needletail	*Hirundapus caudacutus*	Vulnerable	Vulnerable	Aerial insectivore that rarely lands to perch, often sleeping on the wing	1999 (1)	No	Unlikely
Brolga	*Antigone rubicunda*	-	Endangered	From northern Australia, southwards through north-east and east central areas, as well as central New South Wales to western Victoria. Inhabits large open wetlands, grassy plains, coastal mudflats and irrigated croplands and, less frequently, mangrove-studded creeks and estuaries. It is less common in arid and semi-arid regions, but will occur close to water	2023 (53)	Yes	Low
Australian Painted-snipe	*Rostratula australis*	Endangered	Critically Endangered	Uncommon summer migrant to Victoria. Lowlands on shallow freshwater swamps with emergent vegetation, and flooded salt marshes.	NPR	No	Unlikely
Eastern Curlew	*Numenius madagascariensis*	Critically Endangered	Critically Endangered	Estuaries, tidal mudflats, mangroves, shallow river margins, coastal or inland	NPR	No	Unlikely
Curlew Sandpiper	*Calidris ferruginea*	Critically Endangered	Critically Endangered	Estuaries, tidal mudflats, mangroves, shallow river margins, coastal or inland	NPR	No	Unlikely

Common Name	Species Name	EPBC Act Status	FFG Act Status	Habitat Preferences	Most Recent Record	Habitat Present on Site	Likelihood of Presence*
Red Knot	*Calidris canutus*	Vulnerable	Endangered	Estuaries, tidal mudflats, mangroves, shallow river margins, coastal or inland	NPR	No	Unlikely
Sharp-tailed Sandpiper	*Calidris acuminata*	Vulnerable	-	Not threatened	NPR	No	Unlikely
Latham's Snipe	*Gallinago hardwickii*	Vulnerable	-	Wet grasslands, open and wooded swamps.	2023 (2)	No	Unlikely
Common Greenshank	*Tringa nebularia*	Endangered	Endangered	Estuaries, tidal mudflats, mangroves, shallow river margins, coastal or inland	NPR	No	Unlikely
Fairy Tern	*Sternula nereis*	Vulnerable	Critically Endangered	Along Coast Lines of Southern Australia	NPR	No	Unlikely
Shy Albatross	*Thalassarche cauta*	Vulnerable	Endangered	Coastal waters off southern Australia	1954 (1)	No	Unlikely
Australasian Bittern	*Botaurus poiciloptilus*	Endangered	Critically Endangered	Reed beds, dense vegetation of freshwater swamps and creeks.	2006 (2)	No	Unlikely
Little Eagle	*Hieraaetus morphnoides*	-	Vulnerable	Woodlands, Forests	1999 (1)	No	Unlikely
Powerful Owl	*Ninox strenua*	-	Vulnerable	Tall open forest and woodland.	2000 (1)	Yes	Moderate
Grey Falcon	*Falco hypoleucos*	-	Vulnerable	Shrubland, grassland and wooded watercourses of arid and semi-arid regions, although it is occasionally found in open woodlands near the coast	NPR	No	Unlikely
Red-tailed Black-Cockatoo (south-eastern)	*Calyptorhynchus banksii graptogyne*	Endangered	Endangered	Open woodland dominated by Buloke and Brown Stringybark	1999 (5)	Yes	Moderate

Common Name	Species Name	EPBC Act Status	FFG Act Status	Habitat Preferences	Most Recent Record	Habitat Present on Site	Likelihood of Presence*
Gang-gang Cockatoo	*Callocephalon fimbriatum*	Endangered	Endangered	They inhabit cool, wet forests, particularly alpine bushland, but may visit urban parks and gardens to feed	2001 (26)	Yes	Likely
Swift Parrot	*Lathamus discolor*	Critically Endangered	Critically Endangered	Winter migrant from Tasmania. Generally prefers Box-Ironbark forests and woodlands inland of the Great Dividing Range during winter.	NPR	No	Unlikely
Blue-winged Parrot	*Neophema chrysostoma*	Vulnerable	-	A range of habitats from coastal, sub-coastal and inland areas, right through to semi-arid zones	2023 (15)	Yes	Likely
Painted Honeyeater	*Grantiella picta*	Vulnerable	Vulnerable	Open box-ironbark forests and woodlands, particularly where trees are infested with mistletoe.	NPR	No	Unlikely
Grey-crowned Babbler	*Pomatostomus temporalis*	-	Vulnerable	Open forest, woodlands, scrublands.	1914 (1)	No	Unlikely
Hooded Robin	*Melanodryas cucullata*	Endangered	Vulnerable	Lightly timbered woodland, mainly dominated by acacia and/or eucalypts.	NPR	No	Unlikely
Diamond Firetail	*Stagonopleura guttata*	Vulnerable	Vulnerable	Open grassy woodland, heath and farmland or grassland with scattered trees.	NPR	No	Unlikely
Mammals							
Spot-tailed Quoll	*Dasyurus maculatus maculatus*	Endangered	Endangered	Forests including large intact areas of vegetation for foraging.	NPR	No	Unlikely

Common Name	Species Name	EPBC Act Status	FFG Act Status	Habitat Preferences	Most Recent Record	Habitat Present on Site	Likelihood of Presence*
Swamp Antechinus	*Antechinus minimus maritimus*	Vulnerable	Vulnerable	Heathy forest, wetlands, heathland and coastal scrub.	2022 (38)	Yes	Likely
Southern Brown Bandicoot	*Isoodon obesulus obesulus*	Endangered	Endangered	Heathy forest, heathland and coastal scrub.	2019 (37)	Yes	Likely
Yellow-bellied Glider	*Petaurus australis*	Vulnerable	Vulnerable	Occur in tall mature eucalypt forest generally in areas with high rainfall and nutrient rich soils	NPR	No	Unlikely
Long-nosed Potoroo	*Potorous tridactylus trisulcatus*	Vulnerable	Critically Endangered	Heathy woodland	2023 (118)	Yes	Likely
Heath Mouse	*Pseudomys shortridgei*	Endangered	Endangered	Lowland heath and heathy sclerophyll forest	2006 (10)	Yes	Likely
Grey-headed Flying-fox	*Pteropus poliocephalus*	Vulnerable	Vulnerable	Roost sites commonly occur in gullies, in vegetation with dense canopy cover and close to water.	NPR	No	Unlikely
Southern Bent-winged Bat (southern ssp.)	*Miniopterus orianae bassanii*	Critically Endangered	Critically Endangered	Habitat preference is associated with the availability of foraging areas and proximity to suitable roosting caves, in south-east South Australia and western Victoria	2000 (1)	Yes	Likely
Frogs							
Growling Grass Frog	*Litoria raniformis*	Vulnerable	Vulnerable	Permanent lakes, swamps, dams and lagoons.	NPR	No	Unlikely
Reptiles							

Common Name	Species Name	EPBC Act Status	FFG Act Status	Habitat Preferences	Most Recent Record	Habitat Present on Site	Likelihood of Presence*
Striped Legless Lizard	*Delma impar*	Vulnerable	Endangered	Lowland native grasslands, typically dominated by native tussock forming grasses. Typically occurs on deep cracking clay soils.	NPR	No	Unlikely
Swamp Skink	*Lissolepis coventryi*	-	Endangered	Low lying wetlands including swamp margins, tea tree thickets.	NPR	No	Unlikely
Bearded Dragon	*Pogona barbata*	-	Vulnerable	Woodlands and dry sclerophyll forests	2023 (1)	No	Unlikely
Fish							
Australian Grayling	*Prototroctes maraena*	Vulnerable	Endangered	Clear gravelly streams; deep slow flowing pools.	NPR	No	Unlikely
Yarra Pygmy Perch	*Nannoperca obscura*	Endangered	Vulnerable	Slow flowing creeks or still lakes with abundant aquatic vegetation and log snags	NPR	No	Unlikely
Invertebrates							
Glenelg Spiny Crayfish	*Euastacus bispinosus*	Endangered	Endangered	Permanently-flowing, cool (and shaded) and well-oxygenated water	NPR	No	Unlikely

Table Notes:

This table excludes species listed exclusively as 'migratory' or 'marine' under the EPBC Protected Matters Search results.

NPR – Not previously recorded

*** Likelihood of Presence Definitions:**

Unlikely – Site does not contain habitat and/or it is outside the species' known, current distribution. Birds and bats may fly over.

Low –Site contains some marginal habitat, but the species was not observed and has not been recorded in previous recent surveys in the area. Birds and bats may fly over.

Moderate – Site contains preferred habitat that may support a population of the species. Birds and bats may opportunistically or seasonally forage at the site.

High – Site contains preferred habitat which is likely to support the species. Birds and bats are likely to regularly (at least seasonally) forage or roost at the site.

Present – Preferred habitat is present on the site, and the species was observed on the site, or recently recorded on the site.

Appendix 2. Legislation

Commonwealth Legislation

***Environment Protection and Biodiversity Conservation Act 1999* (Cth)**

The *Environment Protection and Biodiversity Conservation Act 1999* (Cth) (EPBC Act) is to provide for the conservation of 'Matters of National Environmental Significance'. The Act defines eight Matters of National Environmental Significance:

- World Heritage properties;
- National Heritage Places;
- Ramsar wetlands of international significance;
- Nationally listed threatened species and ecological communities;
- Listed migratory species;
- Commonwealth marine areas;
- The Great Barrier Reef Marine Park; and,
- Nuclear actions.

Under the Act, actions that are likely to have a significant impact upon Matters of National Environmental Significance require approval from the Federal Environment Minister. This approval is sought through a referral process for a particular action. An action includes any project, development, undertaking, activity or series of activities. Consideration of the requirement for an 'EPBC Referral' to the Minister has been made within this report.

State Legislation

Environmental Effects Act

The *Environment Effects Act 1978* (Vic) provides for assessment of proposed projects (works) that are capable of having a significant effect on the environment. The Act does this by enabling the Minister administering the Environment Effects Act to decide that an Environment Effects Statement (EES) should be prepared.

The Minister might typically require a proponent to prepare an EES when:

- There is a likelihood of regionally or State significant adverse effects on the environment;
- There is a need for integrated assessment of potential environmental effects (including economic and social effects) of a project and relevant alternatives; and,
- Normal statutory processes would not provide a sufficiently comprehensive, integrated and transparent assessment (Department of Sustainability and Environment 2007).

Referral criteria: individual potential environmental effects

- Individual types of potential effects on the environment that might be of regional or State significance, and therefore warrant referral of a project, are:
- Potential clearing of 10 ha or more of native vegetation from an area that:
    - is of an Ecological Vegetation Class identified endangered by the Department of Sustainability and Environment (in accordance with Appendix 2 of Victoria's Native Vegetation Management Framework); or

    - is, or is likely to be, of very high conservation significance (as defined in accordance with Appendix 3 of Victoria's Native Vegetation Management Framework); and
    - is not authorised under an approved Forest Management Plan or Fire Protection Plan
- Potential long-term loss of a significant proportion (e.g. 1 to 5 percent depending on the conservation status of the species) of known remaining habitat or population of a threatened species within Victoria;
- Potential long-term change to the ecological character of a wetland listed under the Ramsar Convention or in 'A Directory of Important Wetlands in Australia';
- Potential extensive or major effects on the health or biodiversity of aquatic, estuarine or marine ecosystems, over the long term;
- Potential extensive or major effects on the health, safety or well-being of a human community, due to emissions to air or water or chemical hazards or displacement of residences; and,
- Potential greenhouse gas emissions exceeding 200,000 tonnes of carbon dioxide equivalent per annum, directly attributable to the operation of the facility (Department of Sustainability and Environment 2007).

***Flora and Fauna Guarantee Act 1988* (Vic)**

The *Flora and Fauna Guarantee Act 1998* (Vic) (FFG Act) provides a legal framework for enabling and promoting the conservation of all Victoria's native flora and fauna, and to enable management of potentially threatening processes on public land. The Act lists native species, communities, and processes that threaten native flora and fauna, under Schedules of the Act. This enables the assessor and regulators to establish management measures to mitigate impacts on listed values within Victoria.

The FFG Act was amended in 2021 and now contains an obligation or duty on public authorities and ministers to consider potential biodiversity impacts when exercising their functions. The FFG Act requires ministers and public authorities (including Councils) reasonably consider the objectives of the Act where projects may impact upon biodiversity, so far as is consistent with the proper exercising of their functions.

The types of potential impacts on biodiversity that should be considered include:

- Long and short term impacts;
- Detrimental and beneficial impacts;
- Direct and indirect impacts;
- Cumulative impacts; and,
- Potentially threatening processes (Department of Environment Land Water and Planning 2021).

It is therefore anticipated that regulators will give due consideration to the FFG Act when considering the approval for the project.

In additional, a 'Permit to Take Protected Flora' is required to 'take' listed flora species that are members of listed communities or protected flora from public land. 'Taking' flora is defined as any action which results in the removal or death of a native plant. A permit is not required under the FFG

Act for private land, unless listed species are present and the land is declared 'critical habitat' for the species. On public land the permit is issued by DELWP.

An evaluation of the likelihood of the presence of significant flora and fauna species on the subject site, including those listed under the FFG Act that have previously been recorded in the vicinity of the site, has been undertaken.

***Planning and Environment Act 1987* (Vic)**

The *Planning and Environment Act 1987* (Vic) (P&E Act), later amended by the *Planning and Environment (Planning Schemes) Act 1996* (Vic) provides the foundation of planning schemes in Victoria. Planning schemes set out policies and provisions for the development and protection of land within each municipality in Victoria.

The *Planning and Environment (Planning Schemes) Act 1996* provides for the Minister for Planning to prepare a set of standard provisions for planning schemes called the Victoria Planning Provisions (VPP). The VPP is a state-wide reference document or template from which planning schemes are sourced and constructed. Incorporation of references such as the *Guidelines for the Removal Destruction or Lopping of Native Vegetation* into Section 12 of the VPP ensures that all municipalities must consider this policy. Local zones and overlays, such as Environmental Significance Overlays, may be incorporated into Section 30 and 40 of the planning provisions by each Council, but only remain relevant within that municipality.

The objectives of the P&E Act are to integrate local land use, development planning and development policy with environmental, social, economic, conservation and resource management policies at State, regional and municipal levels through a set of planning schemes. The Act also establishes a clear procedure for public participation in decision making in amending planning schemes.

Some important sections of the planning scheme, in relation to the ecological values of a site, include:

- Section 12 of the State Planning Policy Framework, which identifies, and aims to protect, key biodiversity assets from inappropriate development;
- Clause 52.17 which identifies where native vegetation removal is exempt from requiring a planning permit; and
- Clause 66 which identifies all of the mandatory referral authorities. In particular, the Victorian Department of Energy, Environment and Climate Action is identified as the recommending referral authority if a proponent proposes:
    - *'To remove, destroy or lop native vegetation in the Detailed Assessment Pathway as defined in the Guidelines for the removal, destruction or lopping of native vegetation;*
    - *To remove, destroy or lop native vegetation if a property vegetation plan applies to the site; and*
    - *To remove, destroy or lop native vegetation on Crown land which is occupied or managed by the responsible authority' (Department of Transport and Planning 2025).*

***Catchment and Land Protection Act 1994* (Vic)**

The *Catchment and Land Protection Act 1994* (Vic) (CALP Act) is the principle legislation relating to the management of pest plants and animals in Victoria. Under this Act, landowners have a responsibility to avoid causing or contributing to land degradation. Where possible, landowners are required to conserve soil, protect water resources, eradicate 'regionally prohibited' weeds, prevent the growth and spread of 'regionally controlled' weeds and control pest animals. The CALP Act lists the species that are considered weeds and pest animals.

***Wildlife Act 1975* (Vic)**

Victoria's *Wildlife Act 1975* (Vic) and the *Wildlife Regulations 2002* (Vic) protect all indigenous vertebrate fauna, some non-indigenous vertebrate fauna, and some invertebrate fauna listed as 'threatened' under the FFG Act. The *Wildlife Act 1975* (Vic) prevents intentional injury to wildlife and stipulates that a licence should be granted where there is a possibility that wildlife are injured, or where wildlife is to be kept, relocated or traded.

In most cases, where the proponent is planning to develop a site, a planning permit approval provides this licencing approval, however, this report advises if an additional permit is required. Circumstances where this legislation may not be relevant is where fish are involved, on public land where additional regulatory approval is required, or where other permits are required (such as where fauna are required to undergo invasive procedures or installation of telemetry systems).

***Fisheries Act 1995 (*Vic)**

The *Fisheries Act 1995* (Vic) provides the legislative framework for the regulation, management conservation of Victorian fish species and their habitats. As with the Victorian *Wildlife Act 1975* described above, the key method to ensure compliance is through licencing. Where fish, or their habitats, are likely to be impacted, this report will identify additional requirements.

Other relevant policy

***Guidelines for the Removal, Destruction or Lopping of Native Vegetation* (Department of Environment Land Water and Planning 2017c)**

The *Guidelines for the Removal, Destruction or Lopping of Native Vegetation* (Department of Environment Land Water and Planning 2017) were released by DELWP in December 2017. A permit to remove native vegetation under clause 52.16 and 52.17 of the Victoria Planning Provisions is required unless:

- The table of exemptions to this clause specifically states that a permit is not required;
- It is native vegetation or an area specified in the schedule to the clause;
- A Native Vegetation Precinct Plan corresponding to the land is incorporated into the relevant planning scheme; or
- Bushfire exemptions apply in bushfire prone areas (Department of Environment Land Water and Planning 2017).

The Guidelines describe the permitting process for applications to remove native vegetation on private and public property within Victoria. A key strategy of the State Planning Policy Framework,

relating to biodiversity, is to ensure that there is no net loss to biodiversity as a result of the removal, destruction or lopping of native vegetation. This is achieved through iteratively applying the three-step approach:

1. Avoiding the removal, destruction or lopping of native vegetation.
2. Minimising impacts from the removal, destruction or lopping of native vegetation that cannot be avoided.
3. Providing an offset to compensate for the biodiversity impact from the removal, destruction or lopping of native vegetation (Department of Environment Land Water and Planning 2017; p. 4).

Native vegetation is defined in the Victoria Planning Provisions as 'plants that are indigenous to Victoria, including trees, shrubs, herbs and grasses' (Department of Environment Land Water and Planning 2017).

Native vegetation is further classified into two categories (Department of Environment Land Water and Planning 2017):

- A remnant patch of native vegetation (measured in hectares) is either:
    - 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 DELWP systems and tools.

OR

- A scattered tree (measured in number of trees), is a native canopy tree that does not form a patch (Department of Environment Land Water and Planning 2017).

In addition, a canopy tree with a Diameter at Breast Height (DBH) greater than or equal to the large tree benchmark for the relevant bioregional EVC is defined as a large tree. Large trees can be either a large scattered tree or a large tree within a patch.

The contribution that is made by native vegetation to the biodiversity values of Victoria is determined through an assessment of both site-based information and landscape scale information.

At a site-based level, the contribution is determined through an assessment of:

- The extent of native vegetation;
- The number of large trees (either within a patch or scattered trees), relative to the appropriate EVC benchmark;
- The native vegetation condition, which is determined through a Habitat Hectare assessment
- The conservation status of the Ecological Vegetation Class (EVC) to which the vegetation can be classified; and,
- The presence of sensitive wetlands and coastal areas.

At a landscape scale, the value of the vegetation is determined with reference to its strategic context in the Victorian landscape. This is determined by the vegetation's 'Strategic Biodiversity Score' (SBS) and its 'Habitat Importance Score' (HIS) for its value to rare and threatened species (Department of Environment Land Water and Planning 2017).

All native vegetation within Victoria has a SBS that has been determined through spatial modelling, based on its rarity, level of depletion, species habitats, and condition and connectivity (Department of Environment Land Water and Planning 2017). SBS scores are between 0 and 1 and are used to determine the offset required for the loss of that vegetation. Native vegetation only has a HIS score if it is habitat for a particular rare or threatened species (Department of Environment Land Water and Planning 2017). There are two types of rare or threatened species habitats that may be provided by native vegetation:

- **Highly localised habitats for rare or threatened species** – where impact to this particular patch of native vegetation could result in a significant biodiversity impact, such as a breeding colony or species with a limited geographic extent.

- **Dispersed rare or threatened species habitats** – where habitat for the threatened species has become depleted or fragmented over time (Department of Environment Land Water and Planning 2017).

The HIS is used to apply the decision guidelines in relation to the removal of a patch of native vegetation and to determine offset requirements (Department of Environment Land Water and Planning 2017).

Applications to remove native vegetation are categorised against one of three assessment pathways. These pathways are categorised as:

- Basic – limited impacts on biodiversity.
- Intermediate – could impact on large trees, endangered EVCs, and sensitive wetlands and coastal areas.
- Detailed – could impact on large trees, endangered EVCs, sensitive wetlands and coastal areas, and could significantly impact on habitat for rare or threatened species (Department of Environment Land Water and Planning 2017).

This is initially determined in two ways, based on the 'location map' and the extent risk of the vegetation proposed to be removed. The location risk is determined with reference to the *Native Vegetation Location Risk* map available on DEECA's website. This map shows whether native vegetation is classified as Location 1, 2 or 3.

The extent risk is determined based on the amount of native vegetation that is proposed for removal and includes the area (in hectares) of impact to native vegetation, the number of scattered trees, and the number of large trees (Table A5).

Table A5. Assessment pathways for removal of remnant patches of native vegetation (Department of Environment Land Water and Planning 2017).

Extent	Location		
	Location 1	Location 2	Location 3
Less than 0.5 hectares and not including any large trees	Basic	Intermediate	Detailed
Less than 0.5 hectares and including one or more large trees	Intermediate	Intermediate	Detailed
0.5 hectares or more	Detailed	Detailed	Detailed

All applications to remove native vegetation must include the following information:

1. Information about the native vegetation to be removed, including:
    a. The assessment pathway and reason for the assessment pathway;
    b. A description of the native vegetation to be removed;
    c. Maps showing the native vegetation and property in context;
    d. The offset requirement, determined in accordance with section 5 of the Guidelines that will apply if the native vegetation is approved to be removed.
2. Topographic and land information relating to the native vegetation to be removed;
3. Recent, dated photographs of the native vegetation to be removed;
4. Details of any other native vegetation approved to be removed, or that was removed without the required approvals, 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;
5. An 'Avoid and Minimise' statement;
6. A copy of any Property Vegetation Plan contained within an agreement made pursuant to section 69 of the *Conservation, Forests and Lands Act 1987* (Vic) that applies to the native vegetation to be removed;
7. Where the removal of native vegetation is to create defendable space, a written statement explaining why the removal of native vegetation is necessary;
8. 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, and
9. 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 (Department of Environment Land Water and Planning 2017; p. 20-21).

If the application will be assessed under the Detailed Assessment Methodology, the following additional requirements apply:

10. A site assessment report of the native vegetation to be removed, including:
    a. A habitat hectare assessment of any patches of native vegetation, including the condition, extent (in hectares), Ecological Vegetation Class and bioregional conservation status.
    b. The location, number, circumference (in centimetres measured at 1.3 metres above ground level) and species of any large trees within patches.

c. The location, number, circumference (in centimetres measured at 1.3 metres above ground level) and species of any scattered trees, and whether each tree is small or large.

11. Information about impacts on rare or threatened species habitat, including:
    a. The relevant section of the Habitat importance map for each rare or threatened species requiring a species offset.
    b. 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 - 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 (Department of Environment Land Water and Planning 2017; p. 22).

Ten decisions guidelines are identified within the Guidelines that the responsible or referral authority must consider when deciding on an application to remove native vegetation. These are summarised as follows:

1. The degree to which the application avoids and minimises impacts to native vegetation, and where vegetation is proposed to be removed, the highest quality vegetation is avoided;
2. The role that the vegetation to be removed has in relation to landscape services such as erosion control, ground-water quality, waterway quality;
3. The role of the vegetation in the preservation of landscape features;
4. Whether any part of the native vegetation to be removed, destroyed or lopped is protected under the *Aboriginal Heritage Act 2006* (Vic);
5. The need to remove, destroy or lop native vegetation to create defendable space to reduce the risk of bushfire to life and property, having regard to other available bushfire risk mitigation measures;
6. Whether the native vegetation to be removed is in accordance with any Property Vegetation Plan that applies to the site;
7. Whether 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;
8. Whether the application is consistent with a Native Vegetation Precinct Plan (where relevant);
9. For applications in both the Intermediate and Detailed Assessment Pathway only, the impacts on biodiversity values that would occur as a result of vegetation removal; and,
10. For applications in the Detailed Assessment Pathway only, the impacts on habitat for rare or threatened species (Department of Environment Land Water and Planning 2017).

Offset requirements

In all cases where native vegetation is approved for removal, the proponent is liable for the security of an offset site that meets the requirements under the Guidelines. An offset can be either a:

- First party offset – on the same property as the proposed removal of native vegetation, or on another property owned or managed (in the case of Crown land) by the party requiring the offset, or
- Third party offset – on another party's property. Third party offsets are traded as native vegetation credits.

In most cases a third party offset is the simplest and most cost effective means of securing the required offset.

There are three components to offset requirements:

1. Offset type (general or species).
2. Offset amount (measured in general or species habitat units).
3. Offset attributes.

Two types of offset are identified: General Offsets and Specifies Offsets. Specific Offsets may only be required if the native vegetation to be removed is habitat for rare or threatened species that are identified in an Intermediate or Detailed Assessment Pathway application (Department of Environment Land Water and Planning 2017). To determine this, a 'Specific Biodiversity Equivalence Score' is calculated by multiplying the habitat hectares with the HIS for each species that may be impacted. For each of the species, this figure is divided by the sum of all the Specific Biodiversity Value Scores calculated for the remaining vegetation under investigation to give a specific offset threshold for each species. If the amount of vegetation removed exceeds this threshold, then a Specific Offset is required. If it does not exceed the threshold, then only a General Habitat Offset is required (Table A6)(Department of Environment Land Water and Planning 2017).

Table A6 summarises the offset requirements for each of the Assessment Pathways and offset types.

Table A6. Offset requirements for the removal of native vegetation

Assessment Pathway	Offset Type	Offset amount		Offset attributes	
		Risk Adjusted Biodiversity Equivalence	Species Habitat Requirement	Vicinity	Strategic Biodiversity Score
Basic Assessment Pathway	General offset	1.5 times the general biodiversity equivalence score[1] of the native vegetation to be removed.	No restrictions.	In the same Catchment Management Authority boundary as the native vegetation to be removed.	At least 80 per cent of the SBS of the native vegetation to be removed.
Intermediate or Detailed Assessment Pathway	General offset	1.5 times the general biodiversity equivalence score of the native vegetation to be removed.	No restrictions.	In the same Catchment Management Authority boundary as the native vegetation to be removed.	At least 80 per cent of the SBS of the native vegetation to be removed.
	Specific offset	For each species impacted, 2 times the specific biodiversity equivalence score of the native vegetation to be removed.	Likely habitat for each rare or threatened species that a specific offset is required for, according to the specific-general offset test.	No restrictions.	No restrictions.

[1] The general biodiversity equivalence score is determined by multiplying the vegetation's habitat hectare score by its SBS.

Appendix 3. Native Vegetation Removal Report

Native Vegetation Removal Report

NVRR ID: 323_20250729_0VD

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: 29/07/2025

Local Government Area: GLENELG SHIRE

Shapefile name:
NVRMap_Removal_Template_Patches29072025.shp

Site assessor name: Liam McCormack

Registered Aboriginal Party: Gunditj Mirring

Coordinates: 141.64085, -38.17624

Address:
RIFLE RANGE ROAD HEYWOOD 3304
350 GOLF COURSE ROAD HEYWOOD 3304
79 RIFLE RANGE ROAD HEYWOOD 3304

Regulator Notes

Removal polygons are located:

- On Crown Land

Summary of native vegetation to be removed

Assessment pathway	**Detailed Assessment Pathway**		
Location category	Location 1 The native vegetation extent map indicates that this area is not typically characterised as supporting native vegetation. It does not meet the criteria to be classified as Location Category 2 or 3. The removal of less than 0.5 hectares of native vegetation in this area will not require a Species Offset.		
Total extent including past and proposed removal (ha) *Includes endangered EVCs (ha): 0*	**0.775**	*Extent of past removal (ha)*	*0*
		Extent of proposed removal - Patches (ha)	*0.775*
		Extent of proposed removal - Scattered Trees (ha)	*0.000*
No. Large Trees proposed to be removed	**0**	*No. Large Patch Trees*	*0*
		No. Large Scattered Trees	*0*
No. Small Scattered Trees	0		

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]	**0.6310 General Habitat Units**
Vicinity	Glenelg Hopkins CMA or GLENELG SHIRE LGA
Minimum strategic biodiversity value score [2]	0.6785
Large Trees*	0
***The total number of Large Trees that the offset must protect**	**0** 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

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 defendable 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.

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**
1-a	Patch	-	VVP_0016	Least Concern	no	0.590	-	0.759	0.759	0.857	-	0.624	General
1-b	Patch	-	VVP_0016	Least Concern	no	0.420	-	0.016	0.016	0.430	-	0.007	General

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 (%)
Lime Fern	Pneumatopteris pennigera	502578	Endangered	Dispersed	Habitat importance map	0.0013
Oval-leaf Logania	Logania ovata	502032	Rare	Dispersed	Habitat importance map	0.0010
Coast Ground-berry	Acrotriche cordata	500119	Rare	Dispersed	Habitat importance map	0.0007
Coast Helmet-orchid	Corybas despectans	500836	Vulnerable	Dispersed	Habitat importance map	0.0007
Lax Twig-sedge	Baumea laxa	500378	Rare	Dispersed	Habitat importance map	0.0005
Robust Spider-orchid	Caladenia valida	501022	Endangered	Dispersed	Habitat importance map	0.0004
Mellblom's Spider-orchid	Caladenia hastata	504348	Endangered	Dispersed	Habitat importance map	0.0004
Leafy Greenhood	Pterostylis cucullata subsp. cucullata	505911	Endangered	Dispersed	Habitat importance map	0.0004
Southern Bent-wing Bat	Miniopterus schreibersii bassanii	61343	Critically endangered	Dispersed	Habitat importance map	0.0004
Swamp Diuris	Diuris palustris	501082	Vulnerable	Dispersed	Habitat importance map	0.0003
Wiry Bog-sedge	Schoenus carsei	503043	Rare	Dispersed	Habitat importance map	0.0003
Scented Spider-orchid	Caladenia fragrantissima	504351	Endangered	Dispersed	Habitat importance map	0.0003
Dense Leek-orchid	Prasophyllum spicatum	504506	Endangered	Dispersed	Habitat importance map	0.0003
Hoary Rapier-sedge	Lepidosperma canescens	501915	Rare	Dispersed	Habitat importance map	0.0002
Slender Stylewort	Levenhookia sonderi	501998	Rare	Dispersed	Habitat importance map	0.0002

Species common name	Species scientific name	Taxon ID	Conservation status	Group	Habitat impacted	Proportional impact (%)
Forked Rice-flower	Pimelea hewardiana	502522	Rare	Dispersed	Habitat importance map	0.0002
Showy Lobelia	Lobelia beaugleholei	502733	Rare	Dispersed	Habitat importance map	0.0002
Southern Xanthosia	Xanthosia tasmanica	504088	Rare	Dispersed	Habitat importance map	0.0002
Small Sickle Greenhood	Pterostylis lustra	504876	Endangered	Dispersed	Habitat importance map	0.0002
Winter Sun-orchid	Thelymitra hiemalis	505006	Endangered	Dispersed	Habitat importance map	0.0002
Red-tailed Black-Cockatoo	Calyptorhynchus banksii graptogyne	10264	Endangered	Dispersed	Habitat importance map	0.0001
Swamp Skink	Lissolepis coventryi	12407	Vulnerable	Dispersed	Habitat importance map	0.0001
Southern Toadlet	Pseudophryne semimarmorata	13125	Vulnerable	Dispersed	Habitat importance map	0.0001
Rough Blown-grass	Lachnagrostis rudis subsp. rudis	500159	Endangered	Dispersed	Habitat importance map	0.0001
Spotted Hyacinth-orchid	Dipodium pardalinum	500324	Rare	Dispersed	Habitat importance map	0.0001
Leafy Twig-sedge	Cladium procerum	500786	Rare	Dispersed	Habitat importance map	0.0001
Bog Gum	Eucalyptus kitsoniana	501290	Rare	Dispersed	Habitat importance map	0.0001
Rough Daisy-bush	Olearia asterotricha	502300	Rare	Dispersed	Habitat importance map	0.0001
Neat Spear-grass	Austrostipa mundula	503281	Rare	Dispersed	Habitat importance map	0.0001
Blotched Sun-orchid	Thelymitra benthamiana	503369	Vulnerable	Dispersed	Habitat importance map	0.0001
Mauve-tuft Sun-orchid	Thelymitra malvina	503374	Vulnerable	Dispersed	Habitat importance map	0.0001
One-flower Early Nancy	Wurmbea uniflora	503583	Rare	Dispersed	Habitat importance map	0.0001
Wavy Swamp Wallaby-grass	Amphibromus sinuatus	503625	Vulnerable	Dispersed	Habitat importance map	0.0001

Species common name	Species scientific name	Taxon ID	Conservation status	Group	Habitat impacted	Proportional impact (%)
Purple Blown-grass	Lachnagrostis punicea subsp. filifolia	504222	Rare	Dispersed	Habitat importance map	0.0001
Slender Pink-fingers	Caladenia vulgaris	504449	Rare	Dispersed	Habitat importance map	0.0001
Parsley Xanthosia	Xanthosia leiophylla	504562	Rare	Dispersed	Habitat importance map	0.0001
Plains Yam-daisy	Microseris scapigera s.s.	504657	Vulnerable	Dispersed	Habitat importance map	0.0001
Green-striped Greenhood	Pterostylis chlorogramma	504728	Vulnerable	Dispersed	Habitat importance map	0.0001
Swamp Flax-lily	Dianella callicarpa	505086	Rare	Dispersed	Habitat importance map	0.0001
Delicate Crane's-bill	Geranium sp. 6	505347	Vulnerable	Dispersed	Habitat importance map	0.0001
Western Peppermint	Eucalyptus falciformis	505358	Rare	Dispersed	Habitat importance map	0.0001
Lewin's Rail	Lewinia pectoralis pectoralis	10045	Vulnerable	Dispersed	Habitat importance map	0.0000
Grey Goshawk	Accipiter novaehollandiae novaehollandiae	10220	Vulnerable	Dispersed	Habitat importance map	0.0000
Powerful Owl	Ninox strenua	10248	Vulnerable	Dispersed	Habitat importance map	0.0000
Masked Owl	Tyto novaehollandiae novaehollandiae	10250	Endangered	Dispersed	Habitat importance map	0.0000
White-throated Needletail	Hirundapus caudacutus	10334	Vulnerable	Dispersed	Habitat importance map	0.0000
Chestnut-rumped Heathwren	Calamanthus pyrrhopygius	10498	vulnerable	Dispersed	Habitat importance map	0.0000
Clover Glycine	Glycine latrobeana	501456	Vulnerable	Dispersed	Habitat importance map	0.0000
Dwarf Brooklime	Gratiola pumilo	503753	Rare	Dispersed	Habitat importance map	0.0000
Pale Swamp Everlasting	Coronidium gunnianum	504655	Vulnerable	Dispersed	Habitat importance map	0.0000
Small-flower Mat-rush	Lomandra micrantha subsp. tuberculata	504711	Rare	Dispersed	Habitat importance map	0.0000

Species common name	Species scientific name	Taxon ID	Conservation status	Group	Habitat impacted	Proportional impact (%)
Tufted Grass-tree	Xanthorrhoea caespitosa	505088	Rare	Dispersed	Habitat importance map	0.0000
Silky Kidney-weed	Dichondra sp. 1	505786	Rare	Dispersed	Habitat importance map	0.0000

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.

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.

Appendix 3: Images of mapped native vegetation

1. Property in context

2. Aerial photograph showing mapped native vegetation

Proposed Removal
Past Removal
Partial Removal

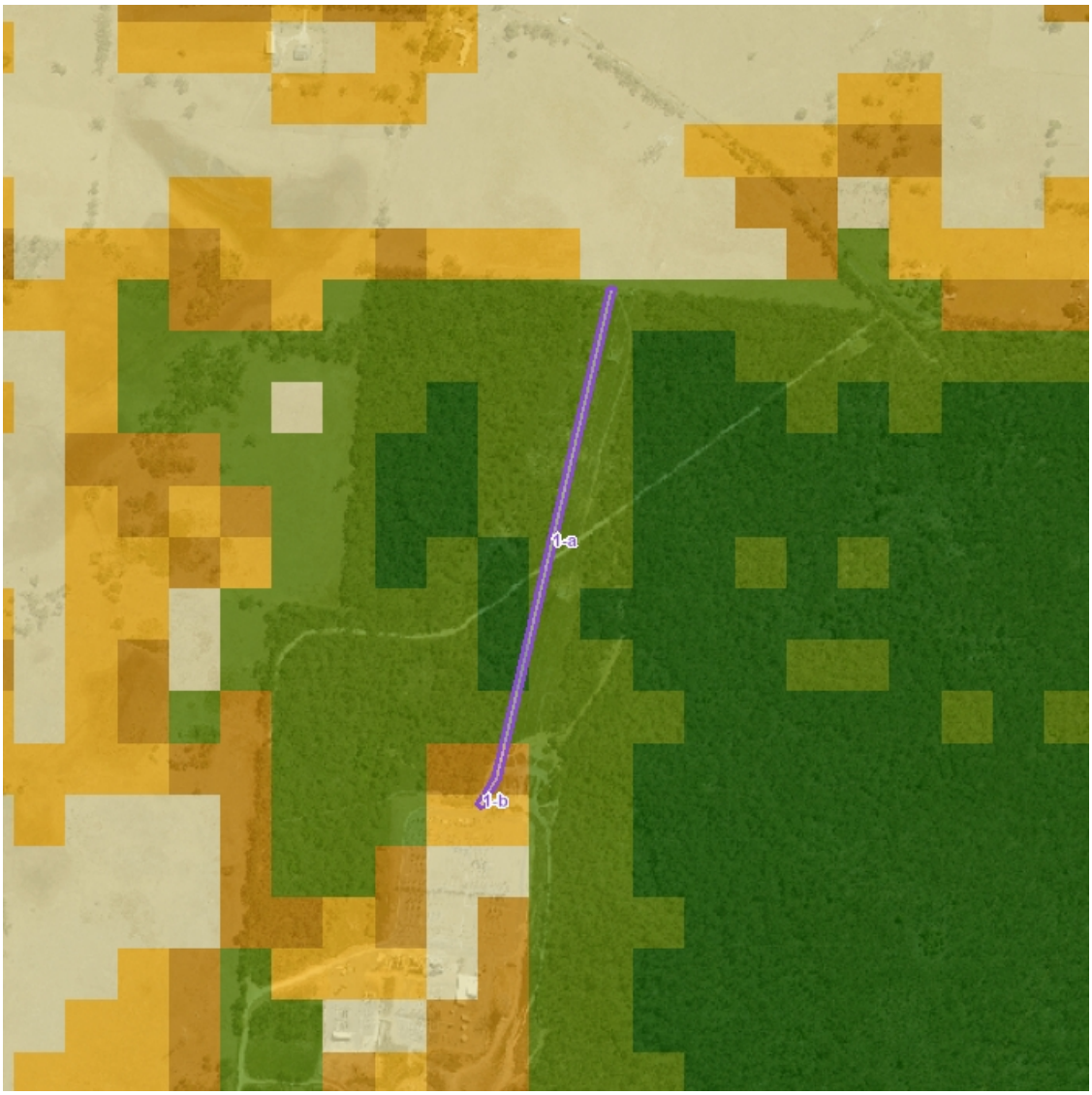
N

150 m

3. Location Risk Map

4. Strategic Biodiversity Value Score Map

5. Modelled Condition Score Map



6. Modelled Endangered EVCs

Not Applicable

7. Habitat Importance maps

Not Applicable

Appendix 4. Native Vegetation Credit Register Results

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: 07/08/2025 11:21 **Report ID: 31194**

What was searched for?

General offset

General habitat units	Strategic biodiversity value	Large trees	Vicinity (Catchment Management Authority or Municipal district)	
0.631	0.6785	0	CMA	Glenelg Hopkins
			or LGA	Glenelg Shire

Details of available native vegetation credits on 07 August 2025 11:21

These sites meet your requirements for general offsets.

Credit Site ID	GHU	LT	CMA	LGA	Land owner	Trader	Fixed price	Broker(s)
BBA-0639	4.554	0	Glenelg Hopkins	Moyne Shire	Yes	Yes	No	Bio Offsets
TFN-C0228	4.631	0	Glenelg Hopkins	Glenelg Shire	No	Yes	No	Bio Offsets
VC_CFL-3727_01	4.533	24	Glenelg Hopkins	Ararat Rural City	Yes	Yes	No	VegLink
VC_CFL-3756_01	23.331	0	Glenelg Hopkins	Ararat Rural City	Yes	Yes	No	VegLink
VC_CFL-3763_01	3.246	266	Glenelg Hopkins	Glenelg Shire	Yes	Yes	No	VegLink
VC_CFL-3814_01	12.622	522	Glenelg Hopkins	Southern Grampians Shire	Yes	Yes	No	VegLink
VC_CFL-3814_01	0.958	0	Glenelg Hopkins	Southern Grampians Shire	Yes	Yes	Yes	VegLink
VC_TFN-C2046_01	7.438	1446	Glenelg Hopkins	Southern Grampians Shire	Yes	Yes	No	Ecocentric, Ethos, 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)
BBA-1139_05	1.123	0	Glenelg Hopkins	Moyne Shire	No	Yes	No	VegLink

BBA-3027	1.172	147	Glenelg Hopkins	Pyrenees Shire	Yes	Yes	No	VegLink
VC_CFL-3693_01	0.963	276	Glenelg Hopkins	Ararat Rural City	Yes	Yes	No	VegLink

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 161 013	info@offsetsvictoria.com.au	www.offsetsvictoria.com.au
Contact NVOR	Native Vegetation Offset Register	136 186	nativevegetation.offsetregister@deeca.vic.gov.au	www.environment.vic.gov.au/native-vegetation
Ecocentric	Ecocentric Environmental Consulting	0410 564 139	ecocentric@me.com	Not avaliable
Ethos	Ethos NRM Pty Ltd	(03) 5153 0037	offsets@ethosnrm.com.au	www.ethosnrm.com.au
IDES	Indigenous Design Environmental Services Pty Ltd	(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

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