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Report for

Native Vegetation Assessment & Desktop Assessment of Biodiversity Values for the Licola Road East Development Plan Site, Heyfield

APPROVED DEVELOPMENT PLAN
PLANNING AND ENVIRONMENT ACT 1987
WELLINGTON PLANNING SCHEME
Clause 43.04 Schedule 1

DP NAME: Licola Road East

DATE: 2 August 2024
SIGNED: Miriam Turner
OFFICER TITLE: Strategic Planner

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September 2023

[redacted]

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Version Control

Status	Date	Revision type	Reviewed by	Amended by
Draft 1.1	24/07/2023	First draft, first review	[redacted]	
Draft 2.1	08/09/2023	Update Development Plan added (27317DP1 v2 August 2023)		
Draft 2.2	11/09/2023	Final Draft released to client		

Contents

1 Introduction

1.1 Project Background

[redacted] has been commissioned by [redacted] to undertake a native vegetation assessment, and desktop assessment of biodiversity values at the site of a proposed subdivision at Heyfield. Described herein as the 'Licola Road East Development Plan' (LRDEP), *Appendix 1* provides a plan of the proposed layout of the subdivision (*Licola Road East Development Plan, 27317DP1 v2, August 2023*).

The project includes assessment of all native vegetation within the 69 Tyson Road, Heyfield property and roadsides adjacent to the development site, and desktop assessment of biodiversity values within the remaining lots.

This report provides native vegetation information for areas able to be accessed that complies with the assessment and reporting standards of the Department of Energy, Environment and Climate Action (DEECA) *Guidelines for the removal, destruction or lopping of native vegetation* (DEECA, 2017).

Descriptions of biodiversity values and recommendations for areas of the development site unable to be accessed, are informed by the results of database searches, interpretation of aerial photography and observations from adjacent land where possible.

This report does not seek to satisfy or address any planning matters outside of native vegetation information requirements under Clause 52.17 of the Wellington Planning Scheme nor any other ecological aspects associated with this site and its proposed development.

1.2 Project Scope

Undertake site assessment of the study area, including:

- Recording a complete flora list;
- Recording a fauna list of incidental observations;
- Taking general photographs of the sites vegetation and any native vegetation patches (with locations recorded);
- Identification, mapping and completion of a habitat hectare assessment for any native vegetation patches; and
- Mapping and recording gps locations and diameter at breast height of all scattered trees, and large trees in patches.

Prepare a report that includes:

- Introduction;
- Description of methods;

- Results of the field survey;
- Information on all native vegetation present consistent with the information requirements under Clause 52.17 of the planning scheme and the DELWP's *Guidelines for the removal, destruction or lopping of native vegetation* (the Guidelines)
- Desktop review of biodiversity values within land parcels adjacent to 69 Tyson Road, to be supplemented by on-ground visual observations were possible.
- Conclusion and preliminary recommendations for the overall development site.

1.3 Site Details

The study area (*Figure 1*) is contained within the Wellington Shire Council and West Gippsland Catchment Management Authority. It includes five properties listed in *Table 1* below.

Table 1– Study Area Land Information

Property Address	Lot and Plan Number / Crown Description	Standard Parcel Identifier (SPI)
69 Tyson Road Heyfield	Lot 1 TP173550	1\TP173550 1\PS910046 2\PS910046
50 Licola Road Heyfield	Allot. 4 Sec. B Township of Heyfield	4~B\PP5379
70 Licola Road Heyfield	Allot. 6 Sec. B Township of Heyfield	6~B\PP5379
Licola Road Heyfield	Lot 2 PS404789 Heyfield	2\PS404789
19 Mustons Lane Heyfield	Lot 1 PS404789	1\PS404789

A planning report for 69 Tyson Road Heyfield, the one property that was able to be accessed, is included as *Appendix 2*.

Planning Zones

General Residential Zone – Schedule 1 (GRZ1)

Planning Overlays

Development Plan Overlay – Schedule 1 (DPO1)

All parcels are within in a Designated Bushfire Prone area.
(DoTP, 2023)

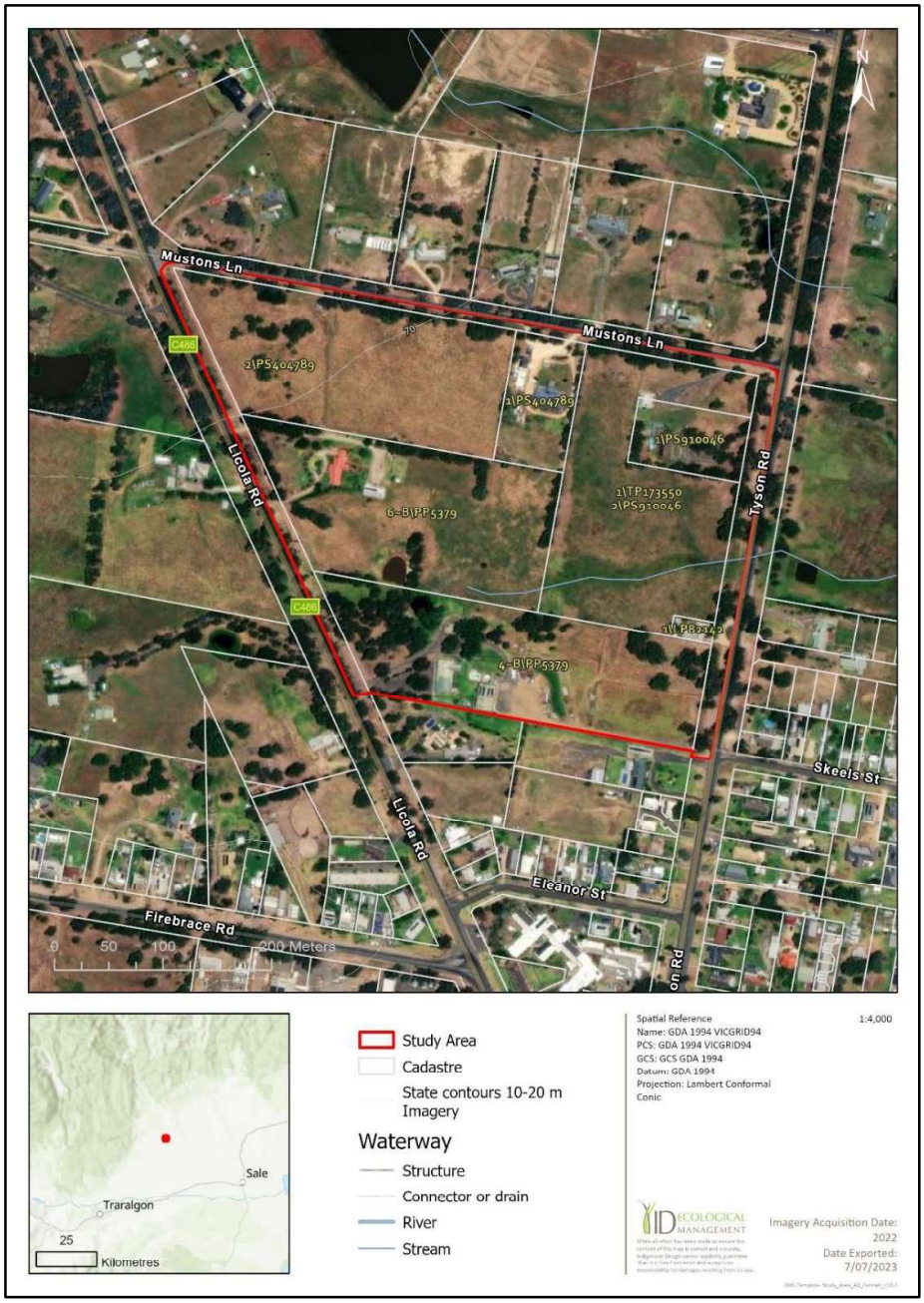

Figure 1: Study area

2 Methodology

2.1 Data and Literature Review

The DEECA's online interactive map, *Naturekit* (DEECA, 2023a) was accessed to gain an insight into the overall distribution of native vegetation on the site and the Ecological Vegetation Class (EVC) to which any remnant vegetation may belong.

The DEECA's *Victorian Biodiversity Atlas* (VBA) (DEECA, 2023b) was accessed to identify if any taxa listed or protected under the Victorian *Flora and Fauna Guarantee Act 2019* (FFG Act), or the Commonwealth *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act) have been, or potentially could be, located at the site.

The DEECA's *Native Vegetation Information Management System* (NVIM) was accessed to identify the presence of any mapped current wetlands and the modelled condition scores of any native vegetation that might be found on site (DEECA, 2023c).

The Commonwealth's Protected Matters Search Tool (PMST) (DCCEEW, 2023) was accessed to identify any ecological communities or taxa listed or protected under the Commonwealth *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act) that could potentially be located at the site

For the VBA the search radius was two kilometres around the site, and for the PMST, the search radius was five kilometres around the site.

2.2 Field Survey

Survey of the site were undertaken on the 26th of June 2023. Access was only available to the 69 Tyson Road property and the adjacent Road Reserves and where possible observations were made from adjacent land into those areas unable to be accessed. Within the accessible areas, all flora present on the site was recorded and vegetation quality assessments were carried out using the methods described below.

The survey was completed by [redacted] (B.A.Sc. Env. Mgt.), a DEECA accredited native vegetation assessor with 15 years' experience in environmental consultancy and flora and fauna assessments and [redacted] (B. Earth Science), DEECA accredited native vegetation assessor, 8 years' experience in environmental consultancy and flora and fauna assessments.

2.3 Vegetation Quality Assessment

Native vegetation is defined in the Victoria Planning Provisions (Definitions – Clause 72) as *'plants that are indigenous to Victoria, including trees, shrubs, herbs and grasses'*. DELWP's *Guidelines for the removal, destruction or lopping of native vegetation* (DEECA, 2017) (the Guidelines) further defines native vegetation into two categories: 'remnant patches' and 'scattered trees' outlined below.

[redacted]

A ‘remnant patch’ of native vegetation 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 of 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.

A ‘scattered tree’ is:

- A native canopy tree that does not form part of a remnant patch.

Following these definitions all native vegetation on site was categorised as either 'remnant patches' or 'scattered trees'.

Remnant patches were further categorised into EVCs and furthermore into habitat zones. These areas were GPS mapped and assessed using the habitat hectare method described by DSE (2004) in the *Vegetation Quality Assessment Manual – Guidelines for applying the habitat hectares scoring method - Version 1.3.*

All large size class trees within and immediately adjacent to the site and all scattered trees on site were identified to species level, GPS mapped and had their Diameter at Breast Height (DBH) and any other relevant data recorded.

2.4 Limitations

The vegetation assessment was undertaken in July of 2023. It is, therefore, possible that some annual, deciduous or dormant taxa may not have been visible. Additionally, some taxa have not been identified to specific or infraspecific rank due to the absence of flowering, or other material typically used for identification.

The fauna survey consisted of recording incidental observations and did not involve a targeted fauna survey. Consequently, further species are likely to be recorded given further time and or the undertaking of more detailed survey.

The property at 69 Tyson Road and the adjacent roadsides were the only areas able to be traversed on foot. Observations were made from adjacent land into those areas unable to be accessed and a more detailed survey is likely to result in additional detail and potentially more biodiversity values than have been identified in this report.

3 Database Results

3.1 Database Review

Appendix 3 provides the search results of the PMST search and *Appendix 4* provides the results of the VBA search.

3.1.1 Threatened Ecological Communities

The PMST search identified the possible presence of two EPBC listed threatened ecological communities at the site, these are:

- The Critically Endangered Gippsland Red Gum (*Eucalyptus tereticornis* subsp. *mediana*) Grassy Woodland and Associated Native Grassland Community (GRGGWANGC); and the
- The Critically Endangered White Box-Yellow Box-Blakely's Red Gum Grassy Woodland and Derived Native Grassland (WBYBRGGWDNG).

(DCCEEW, 2023)

The GRGGWANGC corresponds with the FFG Act listed *Forest Red Gum Grassy Woodland Community* (FRGWC).

3.1.2 Threatened Species

The PMST search identified the potential presence of nine significant flora species that are listed as threatened at the Federal level (DCCEEW, 2023). The VBA search identified records of two FFG Act listed threatened flora species within a 2km radius of the site. *Echinopogon caespitosus* var. *caespitosus* (Bush Hedgehog-grass) and *Grevillea chrysophaea* (Golden Grevillea) have both been recorded in Box Ironbark forest approximately 1.5km north of the site (DEECA, 2023b).

The VBA search identified records of fourteen EPBC Act or FFG Act listed threatened fauna species within a 2km radius of the site. The closest records were for mobile bird species such as *Hirundapus caudacutus* (White-throated Needle-tail), a species that has been recorded approximately 500m south of the site.

Map 1 shows the locations of all threatened species records identified in the VBA search.

3.1.3 Ecological Vegetation Classes

The Department of Energy, Environment and Climate Action (DEECA) models EVC 55: *Plains Grassy Woodland* over most of the site and area south of Heyfield. EVC 61: *Box Ironbark Forest* is modelled over a wide expanse of land north of the site and extends marginally into the northwest corner of the site. The modelling shows the northwest corner of the site sits at the divide between these EVC. EVC 55: *Plains Grassy Woodland* is synonymous with threatened GRGGWANGC and FRGWC ecological communities.

3.1.4 Modelled Current Wetlands

The DELWP's NVIM online map and associated spatial data files show a 'mapped current wetland' in the north west corner of the site. Identified as Wetland Number 89359 the polygon sits over tree cover and Mustons Lane and is an obvious modelling error that can be removed by notifying DEECA and providing appropriate evidence.

4 Field Assessment Results

4.1 Native Vegetation Assessment

Appendix 5 provides a list of all flora species recorded within the 69 Tyson Road property and roadsides adjacent to the development site. Domestic garden areas surrounding the existing dwelling were not assessed and a complete list of planted species was not recorded in this area.

The 69 Tyson Road property includes an existing residence and domestic area approximately 0.6ha in size and an area of grazing land approximately 3.4ha in size. The residential area has planted strips of various canopy trees and large shrubs along its fencelines and driveway edge. These planted species include *Eucalyptus tricarpa* (Red Ironbark), a local species and *Eucalyptus cladocalyx* (Sugar Gum), an Australian native. Interspersed throughout the north east of the grazing land are scattered remnant Gippsland Red Gum trees including some large mature trees and smaller recruits.

The roadsides have a generally consistent coverage of remnant native canopy trees throughout that includes a number of large sized trees. Native understorey is generally lacking across the roadsides and is most represented by patches of native graminoids and shrub regeneration found mainly on Mustons Lane and the northern section of Tyson Road.

Remnant vegetation appeared to be most common within the 50 Licola Road property which included Gippsland Red Gums with some stands containing over 50 trees and possibly having a native species dominated groundlayer. Other properties appeared more heavily grazed and aside from some mature scattered Gippsland Red Gum trees in the north west corner of the study area, there appeared to be little other remnant native vegetation present.

Shelter-belt plantings line the internal fenceline boundaries of the Licola Road properties and appear to hold mostly Victorian species like *Eucalyptus globulus* (Blue Gum) and may also hold the odd remnant canopy tree.

Figure 2 provides an example of the typical presence of native canopy trees along Mustons Lane and *Figure 3* provides an example of remnant canopy trees within grazing land in the north west of the study area.

Figure 2: Eucalypt Canopy Trees on Mustons Lane Roadside

Figure 3: Remnant Canopy Trees in Northwest of Study Area

4.2 Ecological Vegetation Classes

Ecological Vegetation Classes (EVC) are a type of vegetation classification which aims to group plant communities according to common flora species, vegetation structure and common environmental factors such as elevation, soils and average rainfall.

The DEECA's *NatureKit* shows the site is mostly within the Gippsland Plain Bioregion with the Highlands Southern Fall Bioregion extending marginally into the north west corner of the site.

The DEECA models EVC 55: *Plains Grassy Woodland* over most of the site and EVC 61: *Box Ironbark Forest* is modelled over a wide expanse of land north of the site. The modelling shows that the northwest corner of the site sits at the divide between these two EVC. At this location, the landform is flat and only begins to rise slowly to the north of Mustons Land and west of Licola Road. Box Ironbark Forest becomes the clear vegetation type on properties west of Licola Road.

In its extant EVC modelling its shows EVC remaining around most of the perimeter of the site and over a portion of the 50 Licola Road property. The field observations confirm the extant mapping is reasonably accurate and consistent with the remaining cover of remnant vegetation on-ground. The assignment of EVC at the site was generally consistent with the DEECA modelling, as shown in *Figure 4*.

Appendix 6 provides the benchmarks for EVC 55: *Plains Grassy Woodland* (DEECA, 2023d).

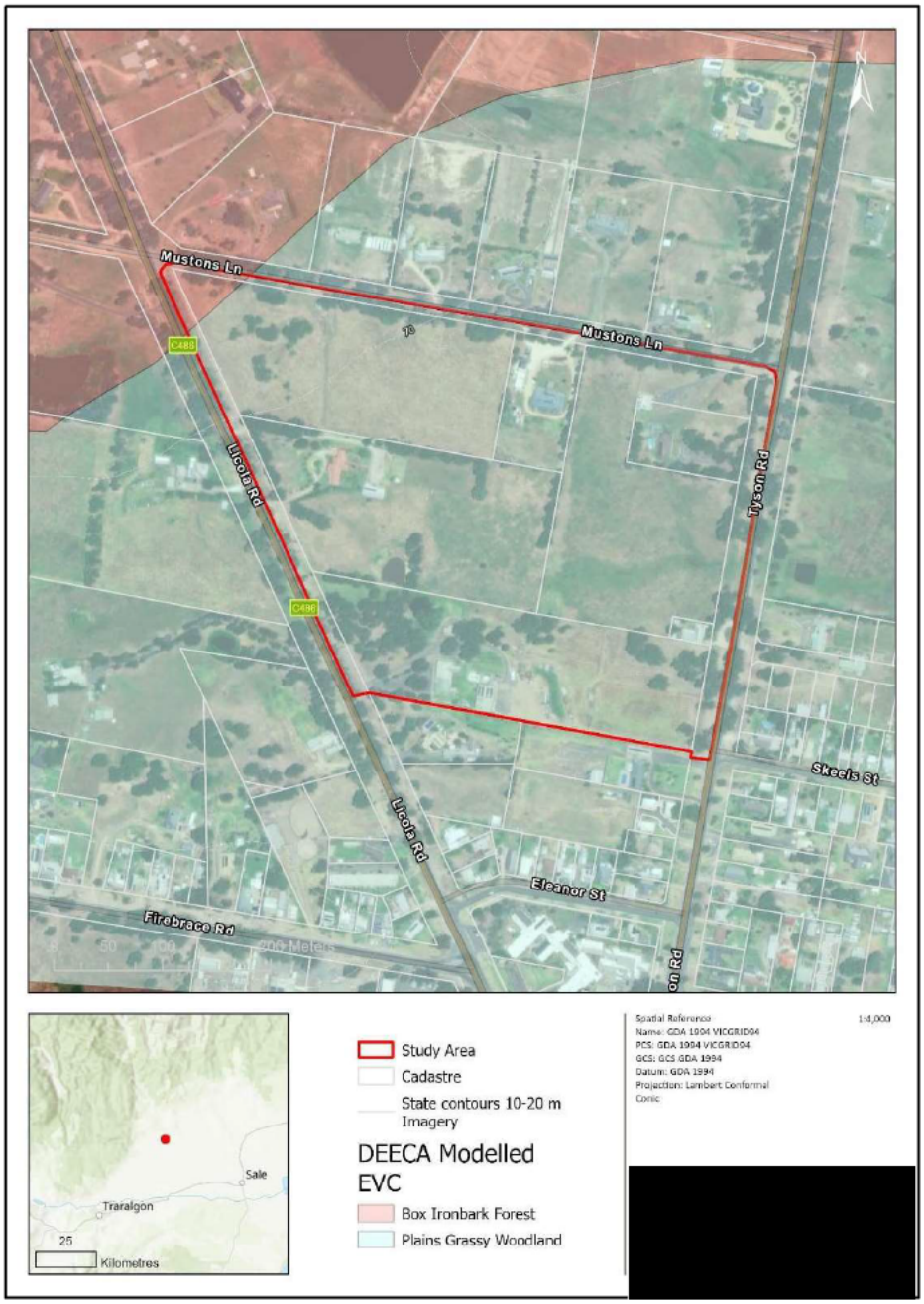

Figure 4: Assigned Ecological Vegetation Classes

4.3 Flora Species Recorded

A total of 68 flora species were recorded within the assessed areas of the site, of these 38 are species that are native to Victoria.

Appendix 5 lists all flora species identified within the native patches on the site and all flora recorded within areas of degraded vegetation (<25% native cover).

[redacted]

4.3.1 Significant Flora Species Recorded

No FFG Act listed or EPBC Act listed flora species were recorded.

It must be noted that the survey was undertaken outside of the preferred Spring seasonal period. Several threatened flora species known to occur in the region are only detectable during Spring.

4.4 Native Patches

A total of twelve separate habitat zones were identified and assessed. All were assigned as EVC 55: *Plains Grassy Woodland*. Two of the patches extend marginally into EVC 61: *Box Ironbark Forest*, but no justification could be made to split the patches and complete a separate assessment for a small section of unchanged vegetation.

Maps 2a, 2b and *2c* show the distribution of each of the habitat zones. Descriptions of each habitat zone are provided below and the results of the habitat hectare assessment for each habitat zone are provided in *Table 2*.

Table 2: Results of Vegetation Quality Assessments for all Native Patches

			Habitat Zone 1	Habitat Zone 2	Habitat Zone 3	Habitat Zone 4	Habitat Zone 5	Habitat Zone 6	Habitat Zone 7	Habitat Zone 8	Habitat Zone 9	Habitat Zone 10	Habitat Zone 11	Habitat Zone 12
Bioregion - Victorian Volcanic Plain			**Plains Grassy Woodland**	**Plains Grassy Woodland**	**Plains Grassy Woodland**	**Plains Grassy Woodland**	**Plains Grassy Woodland**	**Plains Grassy Woodland**	**Plains Grassy Woodland**	**Plains Grassy Woodland**	**Plains Grassy Woodland**	**Plains Grassy Woodland**	**Plains Grassy Woodland**	**Plains Grassy Woodland**
EVC Name (initials)			**PGW**	**PGW**	**PGW**	**PGW**	**PGW**	**PGW**	**PGW**	**PGW**	**PGW**	**PGW**	**PGW**	**PGW**
EVC Number			**55**	**55**	**55**	**55**	**55**	**55**	**55**	**55**	**56**	**57**	**58**	**59**
Bioregional Conservation Status			**Endangered**	**Endangered**	**Endangered**	**Endangered**	**Endangered**	**Endangered**	**Endangered**	**Endangered**	**Endangered**	**Endangered**	**Endangered**	**Endangered**
		Max Score	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**
Site Condition	Large Old Trees	10	0	3	2	2	0	2	0	2	10	9	10	0
	Canopy Cover	5	0	4	2	4	4	4	4	4	2	2	5	0
	Understorey	25	5	5	10	15	5	15	5	5	10	15	5	5
	Lack of Weeds	15	7	4	4	7	4	4	4	4	0	0	2	0
	Recruitment	10	0	5	5	5	3	3	5	5	5	10	6	5
	Organic Matter	5	5	5	3	5	3	3	3	3	5	3	5	0
	Logs	5	0	0	0	0	0	0	0	0	0	2	0	0
	Total Site Score	75	**17**	**26**	**26**	**38**	**19**	**31**	**21**	**23**	**32**	**41**	**33**	**10**
	Site score out of?	eg 55	75	75	75	75	75	75	75	75	75	75	75	75
	Adjusted Site Score		**17**	**26**	**26**	**38**	**19**	**31**	**21**	**23**	**32**	**41**	**33**	**10**
Landscape value	Patch Size	10	1	1	1	1	1	1	1	1	1	1	1	1
	Neighbourhood	10	0	0	0	0	0	0	0	0	0	0	0	0
	Distance to Core	5	1	1	1	1	1	1	1	1	1	1	1	1
Habitat points out of 100		100	**19**	**28**	**28**	**40**	**21**	**33**	**23**	**25**	**34**	**43**	**35**	**12**
Habitat Score (hab points/100)			**0.19**	**0.28**	**0.28**	**0.40**	**0.21**	**0.33**	**0.23**	**0.25**	**0.34**	**0.43**	**0.35**	**0.12**
Total area of the Zone (ha)			0.0030	0.1627	0.0624	0.1619	0.0117	0.1810	0.0058	0.0971	0.2903	0.0584	0.1622	0.0084
Total HHA in the zone			**0.0006**	**0.0456**	**0.0175**	**0.0648**	**0.0025**	**0.0597**	**0.0013**	**0.0243**	**0.0987**	**0.0251**	**0.0568**	**0.0010**
Catchment			**West Gippsland Catchment Management Authority (CMA)**											

[redacted]

Plains Grassy Woodland – Habitat Zone 1 (0.0030 ha)

This zone is a small patch of native understorey within the open pasture section of the 69 Tyson Road property. *Rytidosperma* sp. (Wallaby Grass) is the most common native species present, persisting within the exotic grasses like *Ehrharta erecta* (Panic Veldt-grass) and herbaceous weed species like *Plantago coronopus* (Buckshorn Plantain) and *Acetosella vulgaris* (Sheep Sorrell).

The zone received a low overall habitat score of 19/100 points (0.19), which is reflective of its significantly modified state and also the limited coverage of native vegetation within a 5 kilometre radius of the site, particularly south of Heyfield.

Figure 5 provides an example of *Plains Grassy Woodland* – Habitat Zone 1 and its location is shown in *Maps 2a, 2b* and *2c*.

Figure 5: Plains Grassy Woodland - Habitat Zone 1

Plains Grassy Woodland – Habitat Zone 2 (0.1627 ha), Habitat Zone 3 (0.0624 ha) & Habitat Zone 4 (0.1619 ha)

These three patches are all relatively small patches located on the roadsides of Mustons Lane and Tyson Road. They all have a similar vegetation structure and share many similar native flora species.

The patches have a sparse open overstorey that is provided by Gippsland Red-gum trees and a mostly open understorey with scatterings of the native shrub species *Acacia implexa* (Lightwood).

The ground layer retains a low coverage of native species that includes Wallaby Grass, *Microlaena stipoides* var. *stipoides* (Weeping Grass), *Einadia nutans* (Nodding Saltbush) and *Dichondra repens* (Kidney-weed). Weed coverage is moderate, with the exotic pasture species *Dactylis glomerata*

[redacted]

(Cocksfoot), which is a common weed, and a variety of herbaceous weed species scattered throughout the zone.

The zones received a low-moderate overall habitat score of between 28-40/100 points (0.28-0.40), reflective of their significantly modified overall state and also the limited coverage of native vegetation within a 5 kilometre radius of the site, particularly south of Heyfield.

Figure 6 provides an example of *Plains Grassy Woodland* – Habitat Zone 2 and its location is shown in *Maps 2a, 2b* and *2c*.

Figure 6: Plains Grassy Woodland - Habitat Zone 2

Plains Grassy Woodland – Habitat Zone 5 (0.0117 ha)

This zone is a very small patch of native vegetation located on the roadside of Licola Road. The zone has an open overstorey layer that includes *Eucalyptus melliodora* (Yellow Box) and *Eucalyptus polyanthemos* (Red Box).

The mid-layer includes the native shrub *Acacia mearnsii* (Black Wattle) and the ground layer includes a small component of native grass and herbs species. Exotic grasses dominate the disturbed ground layer with *Cenchrus clandestinus* (kikuyu) and Cocksfoot both common.

The zone received a relatively low overall habitat score of 21/100 points (0.21).

Figure 7 provides an example of *Plains Grassy Woodland* – Habitat Zone 5 and its location is shown in *Maps 2a, 2b* and *2c*.

Figure 7: Plains Grassy Woodland - Habitat Zone 5

Plains Grassy Woodland – Habitat Zone 6 (0.1810ha) & Habitat Zone 7 (0.0058 ha)

These zones are both located on the roadside of Licola Road and are characterised by their Gippsland Red-gum dominated canopy and generally open disturbed understorey.

The zones host some large remnant trees and have an overall sparse canopy layer. The understorey has a limited native species presence which includes a small number of Black Wattle shrubs and scatterings of native grasses and herbs including *Cotula australis* (Common Cotula) and Nodding Saltbush in the ground layer.

Typical to most of the Licola Road roadside, exotic grasses like Kikuyu and *Paspalum dilatatum* (Sweet Paspalum) are prevalent within the ground layer and a range of herbaceous weeds are also present.

The zones received a low-moderate overall habitat score of 23-33/100 points (0.23-0.33), reflective of their significantly modified overall state and also the limited coverage of native vegetation within a 5 kilometre radius of the site, particularly south of Heyfield.

Figure 8 provides an example of *Plains Grassy Woodland* – Habitat Zone 6 and its location is shown in *Maps 2a, 2b* and *2c*.

Figure 8: Plains Grassy Woodland - Habitat Zone 6

Plains Grassy Woodland – Habitat Zone 8 (0.0971)

This zone is located on the roadside of Tyson Road. The overstorey includes the native canopy species Red Box and Gippsland Red-gum and the condition of the understorey is generally degraded with many lifeforms not present.

The disturbed understorey has a very limited presence of native shrubs or native groundlayer species. Exotic grasses including Cocksfoot and various herbaceous weeds contribute to a high overall weed coverage.

The zone received a relatively low overall habitat score of 25/100 points (0.25).

Figure 9 provides an example of *Plains Grassy Woodland* – Habitat Zone 8 and its location is shown in *Maps 2a, 2b* and *2c*.

Figure 9: Plains Grassy Woodland - Habitat Zone 8

Plains Grassy Woodland – Habitat Zone 9 (0.2903) & Habitat Zone 10 (0.0584)

These zones are both located on the roadside of Mustons Lane. Both feature a sparse native canopy layer that includes a range of Eucalypt species and a generally disturbed and open understorey.

The canopy layer is sparse across both zones and the zones hold a high density of large size class trees for their relatively small size. Several canopy species are present including Gippsland Red-gum, Yellow Box, Red Box and *Eucalyptus baxteri* (Brown Stringybark).

The mid-storey is generally open with only sporadic small patches of Lightwood regeneration present. The groundlayer is mixed, exotic grasses dominate the cover overall, but patches of Wallaby Grass persist in some sections and native herbs like Kidney-weed are common in places.

Both zones received a low-moderate overall habitat score of between 34-43/100 points (0.34-0.43), the presence of a high number of large trees and the slightly increased presence of native understorey species compared to other roadside areas increasing the score. The limited coverage of native vegetation within a 5 kilometre radius of the site, particularly south of Heyfield, severely limits the zones overall scoring potential.

Figure 10 provides an example of *Plains Grassy Woodland* – Habitat Zone 9 and its location is shown in *Maps 2a, 2b* and *2c*.

Figure 10: Plains Grassy Woodland - Habitat Zone 9

Plains Grassy Woodland – Habitat Zone 11 (0.1622)

This zone is formed by a row of large Gippsland Red-gum trees located on the roadside of Licola Road. The zone has an intact overstorey that provides a healthy canopy foliage cover throughout.

The understorey is very open and a reasonable coverage of native grasses and herbaceous species persist in the ground layer. Wallaby Grass and Nodding Saltbush are common native species with a variety of exotic grasses and herbaceous weeds scattered throughout that contribute to a modest overall weed coverage.

The zone received a low-moderate overall habitat score of between 35/100 points (0.35), the presence of a high number of large trees and the slightly increased presence of native groundlayer species compared to other roadside areas increasing the score. The limited coverage of native vegetation within a 5 kilometre radius of the site, particularly south of Heyfield, severely limits the zones overall scoring potential.

Figure 11 provides an example of *Plains Grassy Woodland* – Habitat Zone 11 and its location is shown in *Maps 2a, 2b* and *2c*.

Figure 11: Plains Grassy Woodland - Habitat Zone 11

Plains Grassy Woodland – Habitat Zone 12 (0.0084)

This zone is a highly disturbed remnant located on the roadside of Licola Road. The patch is formed solely by a small number of native groundlayer species including Wallaby Grass, Weeping Grass and Common Cotula.

A variety of exotic grasses including Kikuyu and various herbaceous weed species were recorded including Buckshorn Plantain, all contributing to a high overall weed coverage.

The zone received a very low overall habitat score of 12/100 points (0.12).

Figure 12 provides an example of *Plains Grassy Woodland* – Habitat Zone 12 and its location is shown in *Maps 2a, 2b* and *2c*.

Figure 12: Plains Grassy Woodland - Habitat Zone 12

4.5 Threatened Ecological Communities

Interrogation of the EPBC Act Protected Matters Search Tool (DoEE, 2023), provided as *Appendix 3*, identified the possible presence of two EPBC Act listed threatened ecological communities at the site:

- *Gippsland Red Gum (Eucalyptus tereticornis subsp. mediana) Grassy Woodland and Associated Native Grassland* listed as Critically Endangered under the EPBC Act; and
- *White Box-Yellow Box-Blakeley Red Gum Grassy Woodland and Associated Native Grassland* listed as Critically Endangered under the EPBC Act.

Both EPBC Act listed communities have flow-charts that are used to determine if these communities are present, and both have a native flora diversity threshold that can only be assessed during Spring. However, the presence of either community can potentially be ruled out based on other factors that can be assessed year round such as patch size, dominant canopy species or perennial ground layer vegetation cover.

Table 3 provides a summary of the potential presence of any EPBC Act listed communities within the study area and notes any FFG Act listed communities that also may be present within the public land roadside areas based on field observations from adjacent land.

Table 3: Summary of the Possible Presence of EPBC Act or FFG Act Listed Communities within the Study Area

	Notes	
EPBC Act Listed Community	**60 Tyson Road and Assessed Roadsides**	**Properties Not Accessed**
Gippsland Red Gum (Eucalyptus tereticornis subsp. mediana) Grassy Woodland and Associated Native Grassland (GRGGWANG)	- All patches are Plains Grassy Woodland EVC which is synonymous with the community; - Habitat Zones 1-8 and 11-12 can all be ruled out as being the community based on their small patch size or highly degraded exotic flora groundlayer; - Habitat Zone 9 has potential to be the community and Spring survey is recommended to as due diligence to confirm if the patch meets condition thresholds of the community.	- All patches are Plains Grassy Woodland EVC which is synonymous with both communities; - *Maps 2a, 2b* and *2c* shows stands of Gippsland Red-gum that have potential to meet the definitions of the community based on observations from adjacent land; - The presence of the Grassland form of the community is highly unlikely outside of the stands of Gippsland Red-gum identified in *Maps 2a, 2b* and *2c*.
White Box-Yellow Box – Blakely's Red Gum Grassy Woodland and Derived Native Grassland	- Gippsland Red-gum is the dominant canopy species within the region but stands of Yellow Box are found nearby along Tyson Road; - Habitat Zone 5, 9 and 10 all have a component of Yellow Box in the canopy layer but can be ruled out as being the community based on Yellow Box not being the most common species or their very small patch size.	- Observations from adjacent land suggest Gippsland Red-gum is the dominant species and the community is not present within these areas.
FFG Act Listed Community		
Forest Red Gum Grassy Woodland Community	- All patches are Plains Grassy Woodland EVC which is synonymous with the community; - Removal of any native vegetation within the public land roadside areas would constitute removal of the community and require a protected flora permit.	- All native patches are Plains Grassy Woodland EVC which is synonymous with the community; - The presence of this community has no implications within these areas of private land.

[redacted]

Figure 13 shows another example of Habitat Zone 9, located on the Mustons Lane roadside which has potential to be the EPBC Act listed GRGGWANG community. *Figure 14* shows a stand of Gippsland Red-gum trees in the distance within the 50 Licola Road property that also has potential to be the EPBC Act listed GRGGWANG community.

Figure 13: Habitat Zone 9- Possible EPBC Act Listed Community

Figure 14: Stand of Gippsland Red-gum within the 50 Licola Road Property- Possible EPBC Act Listed Community

4.6 Canopy Trees

Appendix 7 provides details of all canopy trees that were recorded, the ID numbers in the tree list correspond with the tree labels in *Maps 2a, 2b* and *2c*.

4.6.1 Victorian Native Trees

Remnant canopy trees were common across all the roadside areas and included a high number of large sized trees. *Table 4* provides a summary of the types of Victorian native canopy trees recorded including VQA definition and size class.

Table 4: Summary of Victorian Native Canopy Tree Recordings

VQA Definition	Size Class	
	Small	Large
Scattered Tree	63	27
Tree in native patch	26	8
TOTAL	89	35

Clusters of native canopy trees that were observed on private properties not accessed are marked on *Maps 2a, 2b* and *2c*. Further description of these tree stands are provided in *Table 3*.

Some Victorian native species were planted within the 69 Tyson Road property, these are noted in *Appendix 7*.

4.6.2 Non-Victorian Native Trees

Some trees not native to Victoria, such as Sugar Gum, were also recorded. Selected non-Victorian native trees were recorded if they had potential fauna habitat values or to assist in the differentiation between native patch mapping.

4.7 Planted Trees and Shelterbelt Trees

The boundaries of many of the properties have been planted with various locally native, Victorian native and Australian native tree species (as well as some exotics), to form a 'shelterbelt'. Some plantings are well established and include large mature Eucalypt trees above 30 metres in height while others are relatively new plantings and appear less than 5 years old.

Maps 2a, 2b and *2c* identifies nine 'Planted Tree Zones' that were identified within the study area. *Table 5* provides a general description and details of the types of tree species planted in each of these 'Planted Tree Zones' where these species could be confirmed.

Table 5– Description of Planted Tree Zones

Planted Tree Zone No. (Maps 2a, 2b & 2c)	Description	Tree Species
1	Established planting. Contains mixed Victorian natives and Australian natives.	Red Ironbark, Sugar Gum. Possibly holds some remnant trees.
2	Recent planting, possibly less than 5 years old. Contains mixed Victorian natives and Australian natives.	Red Box, Lemon-scented Gum, variety of other species
3	Recent planting, possibly less than 5 years old. Contains mixed Victorian natives and Australian natives.	Red Box, Lemon-scented Gum, variety of other species
4	Established planting. Contains mixed Victorian natives and Australian natives.	Red Box, Lemon-scented Gum, variety of other species
5	Established planting. Contains Victorian natives and locally indigenous trees.	Mainly Blue Gum. Possibly holds some remnant trees.
6	Established planting. Contains Victorian natives and locally indigenous trees.	Mainly Blue Gum. Possibly holds some remnant trees.
7	Established planting. Contains Victorian natives and locally indigenous trees.	Gippsland Red Gum, Black Wattle, Spotted Gum. Possibly holds some remnant trees.
8	Established planting. Contains Victorian natives and locally indigenous trees.	Gippsland Red Gum, Black Wattle, Spotted Gum. Possibly holds some remnant trees.
9	Established planting. Contains Victorian natives and locally indigenous trees.	Gippsland Red Gum, Black Wattle, Spotted Gum. Possibly holds some remnant trees.

4.8 Fauna Species Recorded

A total of 12 fauna species were recorded during the site visit, these are listed in *Appendix 8.* The recordings comprised of 11 native birds species and one introduced bird species.

4.8.1 Significant Fauna Species

The opportunistic fauna survey did not record any threatened fauna species on or nearby to the site.

5 Avoid and Minimise Process

5.1 Background

The DEECA's *Guidelines for the removal, destruction or lopping of native vegetation* (DEECA, 2017) (the Guidelines) set out and describe the application of Victoria's statewide policy in relation to assessing and compensating for the removal of native vegetation.

The Guidelines also detail the three step approach of Avoid, Minimise and Offset as a key component of the policy. This approach aims to ensure that the removal of native vegetation is restricted to only what is reasonably necessary, and that biodiversity is appropriately compensated for any removal approved.

The principles of avoidance and minimisation can be achieved in a Project by avoiding the removal of native vegetation via locating or designing the project works so that native vegetation is not removed. Minimising losses to native vegetation can be achieved via minimising the design construction footprint, restricting project works to areas of native vegetation that have the least biodiversity or other values or managing the works to minimise impacts on surrounding vegetation (DEECA, 2017).

An avoid and minimise statement is required to be provided with an application. The statement should describe any site level planning over the site, what site level planning has been done and that no feasible opportunities exist to further avoid and minimise impacts on native vegetation without undermining the key objectives of the proposal (DEECA, 2017).

5.2 Project Design

Digital files of the mapped native vegetation on the site were provided to [redacted] in July 2023 along with a map providing avoidance and minimisation recommendations. These recommendations included:

- Protecting as many clusters of remnant trees as possible and prioritising the protection of larger habitat trees over smaller trees;
- Linking existing remnant tree clusters within extended Reserve areas to protect larger areas of connected native bushland/ habitat; and
- Increasing the biodiversity values of Reserves through revegetation/restoration actions.

[redacted] took on board these suggestions and revised and updated the subdivision layout. *Appendix 1* provides a plan of the proposed layout of the subdivision (*Licola Road East Development Plan, 27317DP1 v2, August 2023*). The plan shows the retention of 5 existing house lots and the proposed layout of 78 new residential lots, entry road points, internal roads, and reserve areas.

The below section provides comment on the updated design from a native vegetation impact perspective.

Entry Roads

There are three road entry points, two on Mustons Lane and one on Tyson Road:

- The location of the Tyson Road entry/exit point avoids any native vegetation impacts entirely;
- Mustons Lane contains several continuous native patches along its roadsides. The two entry/exit points unavoidably impact on native patches, but appropriately minimise these impacts by limiting large tree impacts;
- The location of the Mustons Lane entry/exit points limits the direct removal of large trees to one large tree. Given the very high density of large trees along the Mustons Lane roadside complete avoidance of all large trees is difficult to achieve. Road verge and drainage upgrades associated with the entry roads may result in TPZ impacts to up to 3 adjacent large trees that would require them to be assumed lost.

Internal Roads, New Lots and Reserve Areas

- Most of the planted windrow vegetation, outside of the retained lots with existing residences, are located within newly proposed lots or roads and will be lost. As planted vegetation there are no direct implications under the Guidelines. However, closer inspection may identify some remnant trees that would require offsetting within these 'Planted Tree Zones';
- Approximately 10% of the 'Remnant Tree Stand' areas are retained within Reserves and approximately 50% will remain within exiting residential lots or are located within a lot size greater than 0.4 ha;
- The smaller more fragmented 'Remnant Tree Stand' areas with a more degraded ground layer are located within smaller lots less than 0.4 ha where they will be 'assumed lost' and be required to be offset.

5.3 Further Survey or Assessment Recommendations

Recommendations to further address the requirement to avoid and minimise impacts to native vegetation and biodiversity values are described below.

Adjacent Roadsides and Future Infrastructure

Future road and drainage upgrades must appropriately consider impacts to adjacent trees within the Road reserves and minimise these impacts to the greatest degree possible. The Road reserves adjacent to the development site contain over 120 remnant canopy trees and 34 large trees. These canopy trees are generally very healthy and provide an important function as habitat corridors, particularly for local birdlife. Any future plans to create footpaths or trails must ensure the design and construction methodology appropriately avoids and minimises impacts to the trees and ensures the viability of the tree canopy corridor long-term.

A Spring survey is recommended for the Mustons Lane roadside to confirm or discount the presence of the EPBC Act listed GRGGWANG threatened ecological community and confirm the presence or non-presence of any threatened flora species such as *Dianella amoena* (Matted Flax-lily) within the impacted sections.

69 Tyson Road Property

The 69 Tyson Road property contains an existing residential lot that is retained and grazing land that is to be developed. Some remnant trees, some planted native trees and a small area of degraded native patch will be impacted. No further surveys are considered necessary to measure the biodiversity impacts within this property.

Properties Not Accessed

An overall ecological assessment, including native vegetation assessment and likelihood assessment for threatened species, that covers the entire DP site is recommended to satisfy DEECA information requirements as part of the overall application.

A Spring survey is recommended for the 'Remnant Tree Stands' identified in *Maps 2a, 2b* and *2c* to confirm the presence or non-presence of the EPBC Act listed GRGGWANG threatened ecological community and any threatened flora species such as *Dianella amoena* (Matted Flax-lily).

[redacted]

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DEECA. (2023d). *Ecological Vegetation Classes by Bioregion.* Retrieved January 2023, from Department of Energy, Environment & Climate Action: http://www.dse.vic.gov.au/__data/assets/pdf_file/0017/241910/GipP_EVCs_combined.pdf

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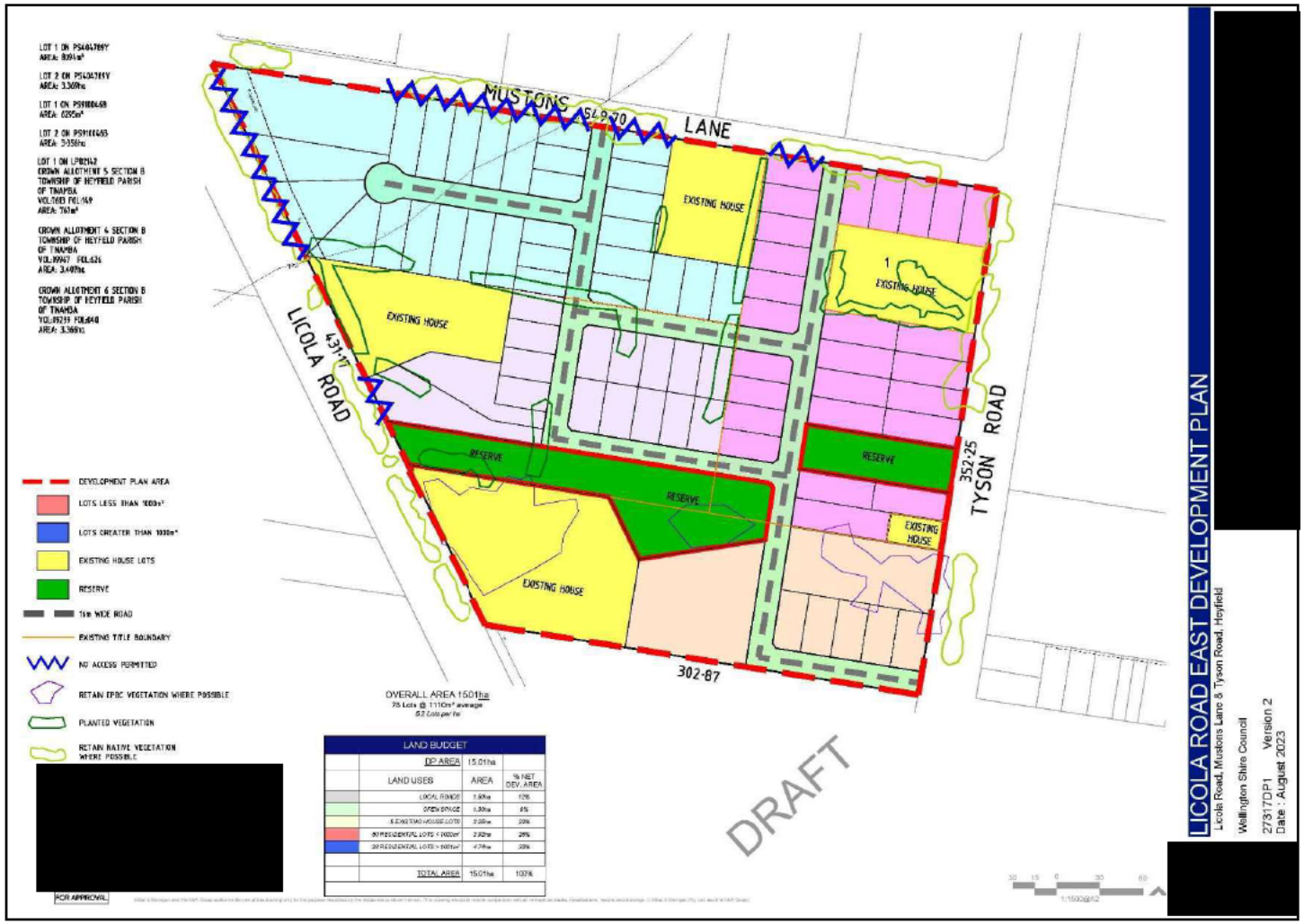
DSE. (2004). *Vegetation Quality Assessment Manual – Guidelines for applying the habitat hectares scoring method - Version 1.3. October 2004.* Melbourne: Victorian Government Department of Sustainability and Environment.

Appendices

Appendices commence on the next page.

[redacted]

Appendix 1: Proposed Subdivision Plan



Appendix 2: Planning Property Reports

29 Tyson Road, Heyfield

PLANNING PROPERTY REPORT

From www.planning.vic.gov.au at 17 May 2023 07:43 AM

PROPERTY DETAILS

Address:	**69 TYSON ROAD HEYFIELD 3858**
Lot and Plan Number:	**Lot 1 TP173550**
Standard Parcel Identifier (SPI):	**1\TP173550**
Local Government Area (Council):	**WELLINGTON** www.wellington.vic.gov.au
Council Property Number:	**323378**
Planning Scheme:	**Wellington** Planning Scheme - Wellington
Directory Reference:	**Vicroads 695 P8**

UTILITIES

Rural Water Corporation:	**Southern Rural Water**
Urban Water Corporation:	**Gippsland Water**
Melbourne Water:	**Outside drainage boundary**
Power Distributor:	**AUSNET**

STATE ELECTORATES

Legislative Council:	**EASTERN VICTORIA**
Legislative Assembly:	**GIPPSLAND EAST**

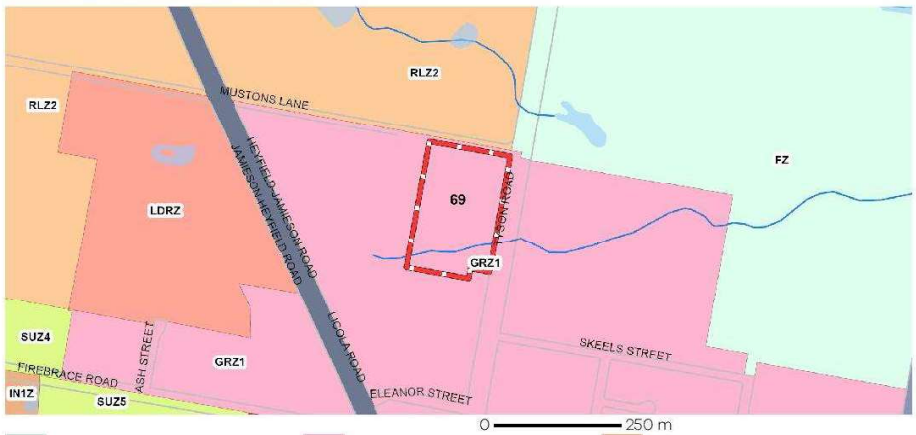
OTHER

Registered Aboriginal Party:	**Gunaikurnai Land and Waters Aboriginal Corporation**

View location in VicPlan

Planning Zones

GENERAL RESIDENTIAL ZONE (GRZ)
GENERAL RESIDENTIAL ZONE - SCHEDULE 1 (GRZ1)



FZ - Farming
GRZ - General Residential
IN1Z - Industrial 1
IN3Z - Industrial 3
LDRZ - Low Density Residential
PPRZ - Public Park and Recreation
RLZ - Rural Living
SUZ - Special Use
TRZ2 - Principal Road Network
TRZ3 - Significant Municipal Road
Water area
Water course

Note: labels for zones may appear outside the actual zone - please compare the labels with the legend.

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[redacted]

PLANNING PROPERTY REPORT

VICTORIA State Government | Environment, Land, Water and Planning

Planning Overlays

DEVELOPMENT PLAN OVERLAY (DPO)

DEVELOPMENT PLAN OVERLAY - SCHEDULE 1 (DPO1)

DPO - Development Plan Overlay | Water area | Water course

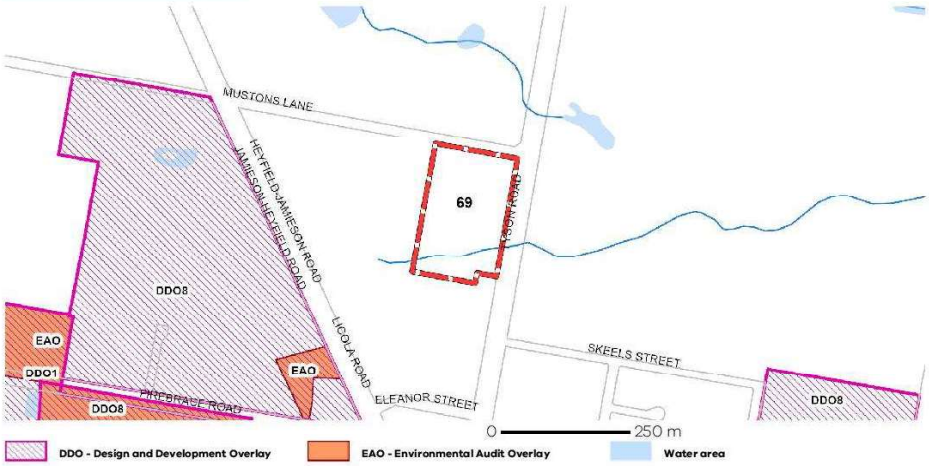
Note: due to overlaps, some overlays may not be visible, and some colours may not match those in the legend

OTHER OVERLAYS

Other overlays in the vicinity not directly affecting this land

DESIGN AND DEVELOPMENT OVERLAY (DDO)

ENVIRONMENTAL AUDIT OVERLAY (EAO)



DDO - Design and Development Overlay | EAO - Environmental Audit Overlay | Water area | Water course

Note: due to overlaps, some overlays may not be visible, and some colours may not match those in the legend

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PLANNING PROPERTY REPORT

VICTORIA State Government | Environment, Land, Water and Planning

Further Planning Information

Planning scheme data last updated on 3 May 2023.

A **planning scheme** sets out policies and requirements for the use, development and protection of land.
This report provides information about the zone and overlay provisions that apply to the selected land.
Information about the State and local policy, particular, general and operational provisions of the local planning scheme that may affect the use of this land can be obtained by contacting the local council or by visiting https://www.planning.vic.gov.au

This report is NOT a **Planning Certificate** issued pursuant to Section 199 of the ***Planning and Environment Act 1987.***
It does not include information about exhibited planning scheme amendments, or zonings that may abut the land.
To obtain a Planning Certificate go to Titles and Property Certificates at Landata - https://www.landata.vic.gov.au

For details of surrounding properties, use this service to get the Reports for properties of interest.

To view planning zones, overlay and heritage information in an interactive format visit https://mapshare.maps.vic.gov.au/vicplan

For other information about planning in Victoria visit https://www.planning.vic.gov.au

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[redacted]

PLANNING PROPERTY REPORT

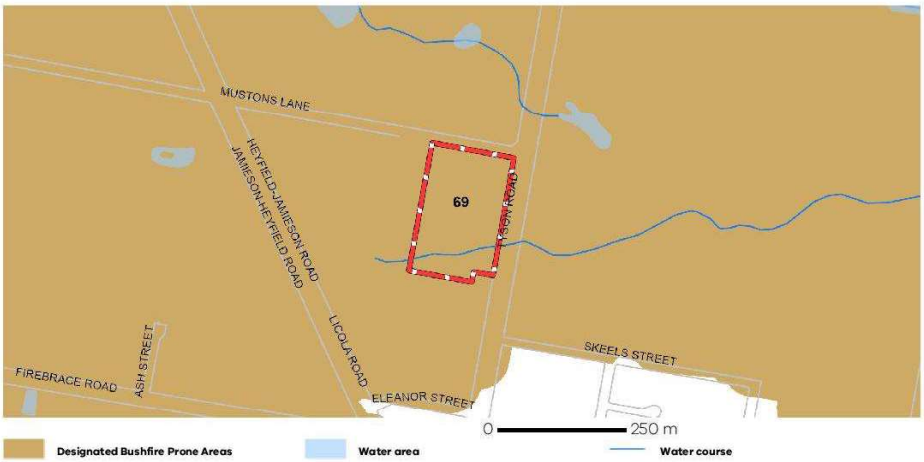
VICTORIA State Government | Environment, Land, Water and Planning

Designated Bushfire Prone Areas

This property is in a designated bushfire prone area. Special bushfire construction requirements apply to the part of the property mapped as a designated bushfire prone area (BPA). Planning provisions may apply.

Where part of the property is mapped as BPA, if no part of the building envelope or footprint falls within the BPA area, the BPA construction requirements do not apply.

Note: the relevant building surveyor determines the need for compliance with the bushfire construction requirements.



Designated BPA are determined by the Minister for Planning following a detailed review process. The Building Regulations 2018, through adoption of the Building Code of Australia, apply bushfire protection standards for building works in designated BPA.

Designated BPA maps can be viewed on VicPlan at https://mapshare.vic.gov.au/vicplan/ or at the relevant local council.

Create a BPA definition plan in VicPlan to measure the BPA.

Information for lot owners building in the BPA is available at https://www.planning.vic.gov.au

Further information about the building control system and building in bushfire prone areas can be found on the Victorian Building Authority website https://www.vba.vic.gov.au. Copies of the Building Act and Building Regulations are available from http://www.legislation.vic.gov.au. For Planning Scheme Provisions in bushfire areas visit https://www.planning.vic.gov.au

Native Vegetation

Native plants that are indigenous to the region and important for biodiversity might be present on this property. This could include trees, shrubs, herbs, grasses or aquatic plants. There are a range of regulations that may apply including need to obtain a planning permit under Clause 52.17 of the local planning scheme. For more information see Native Vegetation (Clause 52.17) with local variations in Native Vegetation (Clause 52.17) Schedule.

To help identify native vegetation on this property and the application of Clause 52.17 please visit the Native Vegetation Information Management system https://nvim.delwp.vic.gov.au/ and Native vegetation (environment.vic.gov.au) or please contact your relevant council.

You can find out more about the natural values on your property through NatureKit NatureKit (environment.vic.gov.au)

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Appendix 3: Results of EPBC Act Protected Matters 5 kilometre radius search

Australian Government
Department of Climate Change, Energy, the Environment and Water

EPBC Act Protected Matters Report

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

Report created: 20-Jun-2023

Summary

Matters of National Environment Significance

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

World Heritage Properties:	None
National Heritage Places:	None
Wetlands of International Importance (Ramsar	1
Great Barrier Reef Marine Park:	None
Commonwealth Marine Area:	None
Listed Threatened Ecological Communities:	2
Listed Threatened Species:	36
Listed Migratory Species:	14

Other Matters Protected by the EPBC Act

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

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

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

Commonwealth Lands:	None
Commonwealth Heritage Places:	None
Listed Marine Species:	20
Whales and Other Cetaceans:	None
Critical Habitats:	None
Commonwealth Reserves Terrestrial:	None
Australian Marine Parks:	None
Habitat Critical to the Survival of Marine Turtles:	None

Extra Information

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

State and Territory Reserves:	2
Regional Forest Agreements:	1
Nationally Important Wetlands:	None
EPBC Act Referrals:	5
Key Ecological Features (Marine):	None
Biologically Important Areas:	None
Bioregional Assessments:	1
Geological and Bioregional Assessments:	None

Details

Matters of National Environmental Significance

Wetlands of International Importance (Ramsar Wetlands) [Resource Information]

Ramsar Site Name	Proximity	Buffer Status
Gippsland lakes	20 - 30km upstream from Ramsar site	In feature area

Listed Threatened Ecological Communities [Resource Information]

For threatened ecological communities where the distribution is well known, maps are derived from recovery plans, State vegetation maps, remote sensing imagery and other sources. Where threatened ecological community distributions are less well known, existing vegetation maps and point location data are used to produce indicative distribution maps.
Status of Vulnerable, Disallowed and Ineligible are not MNES under the EPBC Act.

Community Name	Threatened Category	Presence Text	Buffer Status
Gippsland Red Gum (Eucalyptus tereticornis subsp. mediana) Grassy Woodland and Associated Native Grassland	Critically Endangered	Community likely to occur within area	In feature area
White Box-Yellow Box-Blakely's Red Gum Grassy Woodland and Derived Native Grassland	Critically Endangered	Community may occur within area	In buffer area only

Listed Threatened Species [Resource Information]

Status of Conservation Dependent and Extinct are not MNES under the EPBC Act.
Number is the current name ID.

Scientific Name	Threatened Category	Presence Text	Buffer Status
BIRD			
Anthochaera phrygia Regent Honeyeater [82338]	Critically Endangered	Foraging, feeding or related behaviour likely to occur within area	In feature area
Botaurus poiciloptilus Australasian Bittern [1001]	Endangered	Species or species habitat likely to occur within area	In feature area
Calidris ferruginea Curlew Sandpiper [856]	Critically Endangered	Species or species habitat may occur within area	In feature area

[redacted]

Scientific Name	Threatened Category	Presence Text	Buffer Status
Callocephalon fimbriatum Gang-gang Cockatoo [768]	Endangered	Species or species habitat likely to occur within area	In feature area
Calyptorhynchus lathami lathami South-eastern Glossy Black-Cockatoo [67036]	Vulnerable	Species or species habitat may occur within area	In feature area
Climacteris picumnus victoriae Brown Treecreeper (south-eastern) [67062]	Vulnerable	Species or species habitat likely to occur within area	In feature area
Falco hypoleucos Grey Falcon [929]	Vulnerable	Species or species habitat likely to occur within area	In feature area
Grantiella picta Painted Honeyeater [470]	Vulnerable	Species or species habitat likely to occur within area	In feature area
Hirundapus caudacutus White-throated Needletail [682]	Vulnerable	Species or species habitat known to occur within area	In feature area
Lathamus discolor Swift Parrot [744]	Critically Endangered	Species or species habitat likely to occur within area	In feature area
Melanodryas cucullata cucullata South-eastern Hooded Robin, Hooded Robin (south-eastern) [67093]	Endangered	Species or species habitat may occur within area	In feature area
Neophema chrysostoma Blue-winged Parrot [726]	Vulnerable	Species or species habitat likely to occur within area	In feature area
Numenius madagascariensis Eastern Curlew, Far Eastern Curlew [847]	Critically Endangered	Species or species habitat may occur within area	In feature area
Pycnoptilus floccosus Pilotbird [525]	Vulnerable	Species or species habitat may occur within area	In feature area

Scientific Name	Threatened Category	Presence Text	Buffer Status
Rostratula australis			
Australian Painted Snipe [77037]	Endangered	Species or species habitat likely to occur within area	In feature area
Stagonopleura guttata			
Diamond Firetail [59398]	Vulnerable	Species or species habitat known to occur within area	In feature area
FISH			
Galaxiella pusilla			
Eastern Dwarf Galaxias, Dwarf Galaxias [56790]	Vulnerable	Species or species habitat likely to occur within area	In buffer area only
Prototroctes maraena			
Australian Grayling [26179]	Vulnerable	Species or species habitat known to occur within area	In feature area
FROG			
Heleioporus australiacus			
Giant Burrowing Frog [1973]	Vulnerable	Species or species habitat likely to occur within area	In feature area
Litoria aurea			
Green and Golden Bell Frog [1870]	Vulnerable	Species or species habitat may occur within area	In feature area
Litoria raniformis			
Growling Grass Frog, Southern Bell Frog, Green and Golden Frog, Warty Swamp Frog, Golden Bell Frog [1828]	Vulnerable	Species or species habitat likely to occur within area	In feature area
MAMMAL			
Dasyurus maculatus maculatus (SE mainland population)			
Spot-tailed Quoll, Spotted-tail Quoll, Tiger Quoll (southeastern mainland population) [75184]	Endangered	Species or species habitat likely to occur within area	In feature area
Petaurus australis australis			
Yellow-bellied Glider (south-eastern) [87600]	Vulnerable	Species or species habitat likely to occur within area	In feature area
Pseudomys novaehollandiae			
New Holland Mouse, Pookila [96]	Vulnerable	Species or species habitat may occur within area	In feature area

[redacted]

Scientific Name	Threatened Category	Presence Text	Buffer Status
Pteropus poliocephalus Grey-headed Flying-fox [186]	Vulnerable	Foraging, feeding or related behaviour may occur within area	In feature area
PLANT			
Amphibromus fluitans River Swamp Wallaby-grass, Floating Swamp Wallaby-grass [19215]	Vulnerable	Species or species habitat likely to occur within area	In feature area
Caladenia tessellata Thick-lipped Spider-orchid, Daddy Long-legs [2119]	Vulnerable	Species or species habitat likely to occur within area	In feature area
Commersonia prostrata Dwarf Kerrawang [87152]	Endangered	Species or species habitat may occur within area	In feature area
Dianella amoena Matted Flax-lily [64886]	Endangered	Species or species habitat likely to occur within area	In feature area
Dodonaea procumbens Trailing Hop-bush [12149]	Vulnerable	Species or species habitat may occur within area	In buffer area only
Glycine latrobeana Clover Glycine, Purple Clover [13910]	Vulnerable	Species or species habitat likely to occur within area	In feature area
Pterostylis chlorogramma Green-striped Greenhood [56510]	Vulnerable	Species or species habitat may occur within area	In buffer area only
Thesium australe Austral Toadflax, Toadflax [15202]	Vulnerable	Species or species habitat may occur within area	In feature area
Xerochrysum palustre Swamp Everlasting, Swamp Paper Daisy [76215]	Vulnerable	Species or species habitat likely to occur within area	In feature area
REPTILE			
Delma impar Striped Legless Lizard, Striped Snake-lizard [1649]	Vulnerable	Species or species habitat may occur within area	In feature area

Scientific Name	Threatened Category	Presence Text	Buffer Status
Lissolepis coventryi			
Swamp Skink, Eastern Mourning Skink [84053]	Endangered	Species or species habitat may occur within area	In feature area

Listed Migratory Species		[Resource Information]	
Scientific Name	Threatened Category	Presence Text	Buffer Status
Migratory Marine Birds			
Apus pacificus			
Fork-tailed Swift [678]		Species or species habitat likely to occur within area	In feature area
Migratory Terrestrial Species			
Hirundapus caudacutus			
White-throated Needletail [682]	Vulnerable	Species or species habitat known to occur within area	In feature area
Monarcha melanopsis			
Black-faced Monarch [609]		Species or species habitat may occur within area	In buffer area only
Motacilla flava			
Yellow Wagtail [644]		Species or species habitat may occur within area	In feature area
Myiagra cyanoleuca			
Satin Flycatcher [612]		Species or species habitat likely to occur within area	In feature area
Rhipidura rufifrons			
Rufous Fantail [592]		Species or species habitat known to occur within area	In feature area
Migratory Wetlands Species			
Actitis hypoleucos			
Common Sandpiper [59309]		Species or species habitat may occur within area	In feature area
Calidris acuminata			
Sharp-tailed Sandpiper [874]		Species or species habitat may occur within area	In feature area
Calidris ferruginea			
Curlew Sandpiper [856]	Critically Endangered	Species or species habitat may occur within area	In feature area

Scientific Name	Threatened Category	Presence Text	Buffer Status
Calidris melanotos Pectoral Sandpiper [858]		Species or species habitat may occur within area	In feature area
Gallinago hardwickii Latham's Snipe, Japanese Snipe [863]		Species or species habitat known to occur within area	In feature area
Numenius madagascariensis Eastern Curlew, Far Eastern Curlew [847]	Critically Endangered	Species or species habitat may occur within area	In feature area
Pandion haliaetus Osprey [952]		Species or species habitat likely to occur within area	In buffer area only
Tringa nebularia Common Greenshank, Greenshank [832]		Species or species habitat may occur within area	In feature area

Other Matters Protected by the EPBC Act

Listed Marine Species			[Resource Information]
Scientific Name	Threatened Category	Presence Text	Buffer Status
Bird			
Actitis hypoleucos Common Sandpiper [59309]		Species or species habitat may occur within area	In feature area
Apus pacificus Fork-tailed Swift [678]		Species or species habitat likely to occur within area overfly marine area	In feature area
Bubulcus ibis as Ardea ibis Cattle Egret [66521]		Species or species habitat may occur within area overfly marine area	In feature area
Calidris acuminata Sharp-tailed Sandpiper [874]		Species or species habitat may occur within area	In feature area

Scientific Name	Threatened Category	Presence Text	Buffer Status
Calidris ferruginea Curlew Sandpiper [856]	Critically Endangered	Species or species habitat may occur within area overfly marine area	In feature area
Calidris melanotos Pectoral Sandpiper [858]		Species or species habitat may occur within area overfly marine area	In feature area
Gallinago hardwickii Latham's Snipe, Japanese Snipe [863]		Species or species habitat known to occur within area overfly marine area	In feature area
Haliaeetus leucogaster White-bellied Sea-Eagle [943]		Species or species habitat known to occur within area	In feature area
Hirundapus caudacutus White-throated Needletail [682]	Vulnerable	Species or species habitat known to occur within area overfly marine area	In feature area
Lathamus discolor Swift Parrot [744]	Critically Endangered	Species or species habitat likely to occur within area overfly marine area	In feature area
Merops ornatus Rainbow Bee-eater [670]		Species or species habitat may occur within area overfly marine area	In feature area
Monarcha melanopsis Black-faced Monarch [609]		Species or species habitat may occur within area overfly marine area	In buffer area only
Motacilla flava Yellow Wagtail [644]		Species or species habitat may occur within area overfly marine area	In feature area

Scientific Name	Threatened Category	Presence Text	Buffer Status
Myiagra cyanoleuca Satin Flycatcher [612]		Species or species habitat likely to occur within area overfly marine area	In feature area
Neophema chrysostoma Blue-winged Parrot [726]	Vulnerable	Species or species habitat likely to occur within area overfly marine area	In feature area
Numenius madagascariensis Eastern Curlew, Far Eastern Curlew [847]	Critically Endangered	Species or species habitat may occur within area	In feature area
Pandion haliaetus Osprey [952]		Species or species habitat likely to occur within area	In buffer area only
Rhipidura rufifrons Rufous Fantail [592]		Species or species habitat known to occur within area overfly marine area	In feature area
Rostratula australis as Rostratula benghalensis (sensu lato) Australian Painted Snipe [77037]	Endangered	Species or species habitat likely to occur within area overfly marine area	In feature area
Tringa nebularia Common Greenshank, Greenshank [832]		Species or species habitat may occur within area overfly marine area	In feature area

Extra Information

State and Territory Reserves			[Resource Information]
Protected Area Name	Reserve Type	State	Buffer Status
Glenmaggie I4 B.R.	Natural Features Reserve	VIC	In buffer area only
Glenmaggie N.C.R.	Natural Features Reserve	VIC	In buffer area only

Regional Forest Agreements		[Resource Information]
Note that all areas with completed RFAs have been included.		
RFA Name	State	Buffer Status

RFA Name	State	Buffer Status
Gippsland RFA	Victoria	In feature area

EPBC Act Referrals				[Resource Information]
Title of referral	Reference	Referral Outcome	Assessment Status	Buffer Status
Controlled action				
Thomson River Mercury Recovery Project	2010/5734	Controlled Action	Completed	In feature area
Not controlled action				
Biodiversity Impacts Audit	2011/6191	Not Controlled Action	Completed	In feature area
Improving rabbit biocontrol: releasing another strain of RHDV, sthrn two thirds of Australia	2015/7522	Not Controlled Action	Completed	In feature area
INDIGO Central Submarine Telecommunications Cable	2017/8127	Not Controlled Action	Completed	In feature area
Not controlled action (particular manner)				
INDIGO Marine Cable Route Survey (INDIGO)	2017/7996	Not Controlled Action (Particular Manner)	Post-Approval	In feature area

Bioregional Assessments			
SubRegion	BioRegion	Website	Buffer Status
Gippsland	Gippsland Basin	BA website	In feature area

Caveat

1 PURPOSE

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

The report contains the mapped locations of:

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

2 DISCLAIMER

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

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

3 DATA SOURCES

Threatened ecological communities

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

Threatened, migratory and marine species

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

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

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

4 LIMITATIONS

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

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

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

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

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

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

Acknowledgements

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

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

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

[redacted]

Please feel free to provide feedback via the Contact us page.

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Appendix 4: Results of VBA 2 kilometre radius search

	Scientific Name	Common Name	Conservation Status	Total Count	Last Record
Flora	*Echinopogon caespitosus* var. *caespitosus*	Bushy Hedgehog-grass	en	1	18/10/1984
	Grevillea chrysophaea	Golden Grevillea	vu	1	11/10/1970
Fauna	*Anthochaera phrygia*	Regent Honeyeater	CR cr	2	1/01/1965
	Ardea alba modesta	Eastern Great Egret	vu	2	11/03/2017
	Aythya australis	Hardhead	vu	8	27/03/1992
	Biziura lobata	Musk Duck	vu	3	23/02/1993
	Callocephalon fimbriatum	Gang-gang Cockatoo	EN en	4	13/08/2021
	Haliaeetus leucogaster	White-bellied Sea-Eagle	en	1	12/02/1992
	Hirundapus caudacutus	White-throated Needletail	VU vu	256	11/03/2021
	Lophoictinia isura	Square-tailed Kite	vu	13	13/02/2007
	Nannoperca sp. 1	Flinders Pygmy Perch	vu	3	15/03/2005
	Neophema pulchella	Turquoise Parrot	vu	1	31/01/2007
	Ornithorhynchus anatinus	Platypus	vu	2	24/11/2021
	Oxyura australis	Blue-billed Duck	vu	17	23/02/1993
	Phascogale tapoatafa	Brush-tailed Phascogale	vu	1	1/11/1948
	Spatula rhynchotis	Australasian Shoveler	vu	12	23/02/1993

Conservation Status Key

Origin	
*	Exotic species
#	Native but some stands may be alien
Commonwealth Environment Protection and Biodiversity Conservation (EPBC) Act 1999	
VU	Listed as Nationally Vulnerable
EN	Listed as Nationally Endangered
EX	Listed as Nationally Extinct
CR	Listed as Nationally Critically Endangered
Victorian FFG Act 1988 Listing (DELWP 2022)	
x	Presumed Extinct in Victoria
cr	Listed as Critically Endangered in Victoria
en	Listed as Endangered in Victoria
vu	Listed as Vulnerable in Victoria
cd	Conservation Dependant in Victoria

Appendix 5: Flora species recorded

Scientific Name	Common Name	Origin	FFG Act Status	EPBC Act Status	Native Patches	Degraded Areas
Acacia implexa	Lightwood	Victorian native			+	+
Acacia mearnsii	Black Wattle	Victorian native			+	+
Acacia pycnantha	Golden Wattle	Victorian native			+	+
Acetosella vulgaris	Sheep Sorrel	Introduced			+	+
Agapanthus praecox subsp. *orientalis*	Agapanthus	Introduced			+	+
Arctotheca calendula	Cape Weed	Introduced			+	+
Asparagus asparagoides	Bridal Creeper	Introduced			+	+
Atriplex semibaccata	Berry Saltbush	Victorian native			+	+
Austrostipa sp.	Spear Grass	Victorian native			+	+
Cenchrus clandestinus	Kikuyu	Introduced			+	+
Cerastium glomeratum	Common Mouse-ear Chickweed	Introduced			+	+
Chenopodium album	Fat Hen	Introduced				+
Chloris truncata	Windmill Grass	Victorian native			+	+
Cirsium vulgare	Spear Thistle	Introduced			+	+
Coprosma repens	Mirror Bush	Introduced			+	+
Corymbia citriodora subsp. *citriodora*	Lemon-scented Gum	Introduced				+
Cotula australis	Common Cotula	Native but some stands may be alien				+
Cynodon dactylon var. *dactylon*	Couch	Introduced			+	+
Cyperus eragrostis	Drain Flat-sedge	Introduced			+	+
Dactylis glomerata	Cocksfoot	Introduced			+	+
Dianella revoluta	Black-anther Flax-lily	Victorian native			+	+
Dichondra repens	Kidney-weed	Victorian native			+	+
Ehrharta erecta	Panic Veldt-grass	Introduced			+	+
Ehrharta longiflora	Annual Veldt-grass	Introduced			+	+

[redacted]

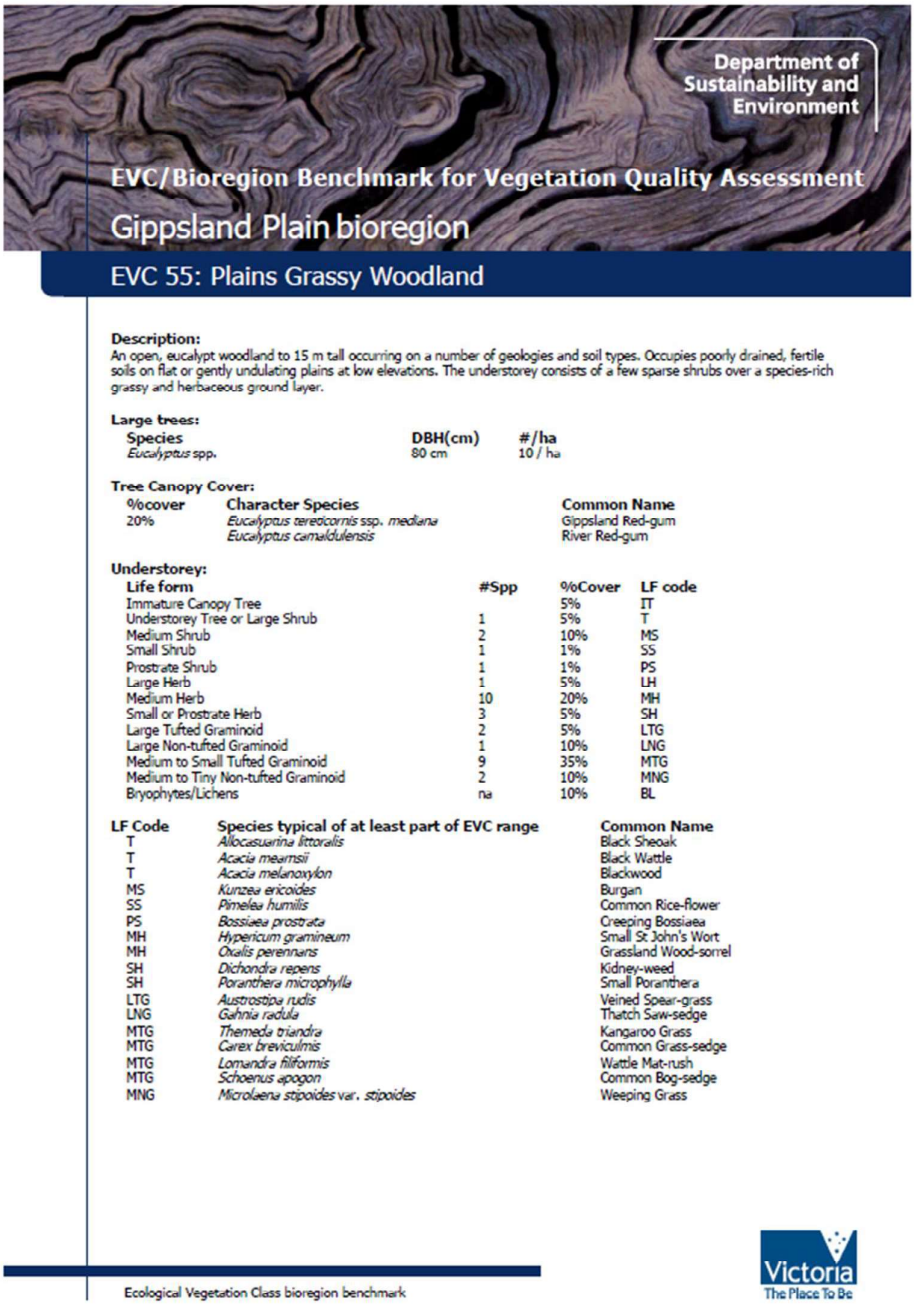
Scientific Name	Common Name	Origin	FFG Act Status	EPBC Act Status	Native Patches	Degraded Areas
Einadia hastata	Saloop	Victorian native			+	+
Einadia nutans	Nodding Saltbush	Victorian native			+	+
Eragrostis curvula	African Love-grass	Introduced			+	+
Erigeron sumatrensis	Tall Fleabane	Introduced			+	+
Eucalyptus angophoroides	Apple Box	Victorian native			+	+
Eucalyptus baxteri	Brown Stringybark	Victorian native			+	+
Eucalyptus cladocalyx	Sugar Gum	Introduced			+	+
Eucalyptus melliodora	Yellow Box	Victorian native			+	+
Eucalyptus polyanthemos	Red Box	Victorian native			+	+
Eucalyptus tereticornis subsp. *mediana*	Gippsland Red-gum	Victorian native			+	+
Eucalyptus tricarpa	Red Ironbark	Victorian native			+	+
Fumaria bastardii	Bastards Fumitory	Introduced				+
Gazania sp.	Gazania	Introduced			+	+
Hypochaeris spp.	Cat's Ear	Introduced			+	+
Isolepis sp.	Club Sedge	Victorian native			+	+
Juncus australis	Austral Rush	Victorian native			+	+
Laphangium luteoalbum	Jersey Cudweed	Victorian native			+	+
Lepidium africanum	Common Peppercress	Introduced			+	+
Lolium perenne	Perennial Rye-grass	Introduced			+	+
Lomandra filiformis	Wattle Mat-rush	Victorian native			+	+
Lycium ferocissimum	African Box-thorn	Introduced				+
Melaleuca styphelioides	Prickly Paperbark	Introduced			+	+
Mesembryanthemum cordifolium	Heart-leaf Ice-plant	Introduced			+	+
Microlaena stipoides var. *stipoides*	Weeping Grass	Victorian native Victorian native			+	+
Modiola caroliniana	Red-flower Mallow	Introduced				+
Nassella neesiana	Chilean Needle-grass	Introduced			+	+

[redacted]

Scientific Name	Common Name	Origin	FFG Act Status	EPBC Act Status	Native Patches	Degraded Areas
Oxalis perennans	Grassland Wood-sorrel	Victorian native			+	+
Oxalis pes-caprae	Soursob	Introduced				+
Paspalum dilatatum	Paspalum	Introduced			+	+
Plantago coronopus	Buck's-horn Plantain	Introduced			+	+
Plantago lanceolata	Ribwort	Introduced			+	+
Poa labillardierei	Common Tussock-grass	Victorian native				+
Rhytidosporum procumbens	White Marianth	Victorian native			+	
Romulea rosea	Onion Grass	Introduced			+	+
Rytidosperma sp.	Wallaby Grass	Victorian native			+	+
Solanum nigrum .	Black Nightshade	Introduced				+
Sonchus oleraceus	Common Sow-thistle	Introduced			+	+
Sporobolus africanus	Rat-tail Grass	Introduced			+	+
Taraxacum sp.	Dandelion	Victorian native			+	+
Themeda triandra	Kangaroo Grass	Victorian native			+	+
Trifolium repens var. *repens*	White Clover	Introduced			+	+
Vicia sativa	Common Vetch	Introduced				+

[redacted]

Appendix 6: EVC 55: Plains Grassy Woodland benchmarks



Department of Sustainability and Environment

EVC/Bioregion Benchmark for Vegetation Quality Assessment

Gippsland Plain bioregion

EVC 55: Plains Grassy Woodland

Description:
An open, eucalypt woodland to 15 m tall occurring on a number of geologies and soil types. Occupies poorly drained, fertile soils on flat or gently undulating plains at low elevations. The understorey consists of a few sparse shrubs over a species-rich grassy and herbaceous ground layer.

Large trees:

Species	DBH(cm)	#/ha
Eucalyptus spp.	80 cm	10 / ha

Tree Canopy Cover:

%cover	Character Species	Common Name
20%	*Eucalyptus tereticornis* ssp. *mediana*	Gippsland Red-gum
	Eucalyptus camaldulensis	River Red-gum

Understorey:

Life form	#Spp	%Cover	LF code
Immature Canopy Tree		5%	IT
Understorey Tree or Large Shrub	1	5%	T
Medium Shrub	2	10%	MS
Small Shrub	1	1%	SS
Prostrate Shrub	1	1%	PS
Large Herb	1	5%	LH
Medium Herb	10	20%	MH
Small or Prostrate Herb	3	5%	SH
Large Tufted Graminoid	2	5%	LTG
Large Non-tufted Graminoid	1	10%	LNG
Medium to Small Tufted Graminoid	9	35%	MTG
Medium to Tiny Non-tufted Graminoid	2	10%	MNG
Bryophytes/Lichens	na	10%	BL

LF Code	Species typical of at least part of EVC range	Common Name
T	*Allocasuarina littoralis*	Black Sheoak
T	*Acacia mearnsii*	Black Wattle
T	*Acacia melanoxylon*	Blackwood
MS	*Kunzea ericoides*	Burgan
SS	*Pimelea humilis*	Common Rice-flower
PS	*Bossiaea prostrata*	Creeping Bossiaea
MH	*Hypericum gramineum*	Small St John's Wort
MH	*Oxalis perennans*	Grassland Wood-sorrel
SH	*Dichondra repens*	Kidney-weed
SH	*Poranthera microphylla*	Small Poranthera
LTG	*Austrostipa rudis*	Veined Spear-grass
LNG	*Gahnia radula*	Thatch Saw-sedge
MTG	*Themeda triandra*	Kangaroo Grass
MTG	*Carex breviculmis*	Common Grass-sedge
MTG	*Lomandra filiformis*	Wattle Mat-rush
MTG	*Schoenus apogon*	Common Bog-sedge
MNG	*Microlaena stipoides* var. *stipoides*	Weeping Grass

Ecological Vegetation Class bioregion benchmark

Victoria
The Place To Be

EVC 55: Plains Grassy Woodland - Gippsland Plain bioregion

Recruitment:
Continuous

Organic Litter:
10 % cover

Logs:
10 m/0.1 ha.

Weediness:

LF Code	Typical Weed Species	Common Name	Invasive	Impact
LH	*Plantago lanceolata*	Ribwort	high	low
MH	*Hypochoeris radicata*	Cat's Ear	high	low
MH	*Centaurium erythraea*	Common Centaury	high	low
LNG	*Holcus lanatus*	Yorkshire Fog	high	high
MTG	*Anthoxanthum odoratum*	Sweet Vernal-grass	high	high
MNG	*Romulea rosea*	Onion Grass	high	low
MNG	*Briza maxima*	Large Quaking-grass	high	low
MNG	*Briza minor*	Lesser Quaking-grass	high	low

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Appendix 7: Canopy trees recorded onsite

ID No.	Botanical Name	Common Name	Diameter at Breast Height	Origin	Size Category	Type	Tree Protection Zone distance	Comments
1	*Eucalyptus tereticornis* subsp. *mediana*	Gippsland Red-gum	41	Locally Indigenous	Small	Scattered Tree	4.9	
2	*Eucalyptus tereticornis* subsp. *mediana*	Gippsland Red-gum	44	Locally Indigenous	Small	Scattered Tree	5.3	
3	*Eucalyptus tereticornis* subsp. *mediana*	Gippsland Red-gum	31	Locally Indigenous	Small	Scattered Tree	3.7	
4	*Eucalyptus tereticornis* subsp. *mediana*	Gippsland Red-gum	20	Locally Indigenous	Small	Scattered Tree	2.4	
5	*Eucalyptus tereticornis* subsp. *mediana*	Gippsland Red-gum	35	Locally Indigenous	Small	Scattered Tree	4.2	
6	*Eucalyptus tereticornis* subsp. *mediana*	Gippsland Red-gum	22	Locally Indigenous	Small	Scattered Tree	2.6	
7	*Eucalyptus species*	Gum	50	Non Victorian Native	NA	Non Vic Native	6.0	Planted
8	*Eucalyptus species*	Gum	43	Non Victorian Native	NA	Non Vic Native	5.2	Planted
9	*Eucalyptus tereticornis* subsp. *mediana*	Gippsland Red-gum	51	Locally Indigenous	Small	Scattered Tree	6.1	
10	*Eucalyptus tricarpa*	Red Ironbark	35	Locally Indigenous	Small	Scattered Tree	4.2	
11	*Dead Eucalypt*	Unknown	75	Victorian Native	Small	Scattered Tree	9.0	Planted
12	*Eucalyptus tricarpa*	Red Ironbark	36	Locally Indigenous	Small	Scattered Tree	4.3	
13	*Eucalyptus tricarpa*	Red Ironbark	33	Locally Indigenous	Small	Scattered Tree	4.0	
14	*Eucalyptus tricarpa*	Red Ironbark	46	Locally Indigenous	Small	Scattered Tree	5.5	
15	*Eucalyptus tricarpa*	Red Ironbark	75	Locally Indigenous	Small	Scattered Tree	9.0	
16	*Eucalyptus species*	Gum	25	Non Victorian Native	NA	Non Vic Native	3.0	Planted
17	*Eucalyptus cladocalyx*	Sugar Gum	50	Locally Indigenous	Small	Scattered Tree	6.0	
18	*Eucalyptus tricarpa*	Red Ironbark	70	Locally Indigenous	Small	Scattered Tree	8.4	
19	*Eucalyptus tereticornis* subsp. *mediana*	Gippsland Red-gum	45	Locally Indigenous	Small	Scattered Tree	5.4	
20	*Eucalyptus species*	Gum	50	Non Victorian Native	NA	Non Vic Native	6.0	Planted
21	*Dead Eucalypt*	Unknown	106	Locally Indigenous	Large	Scattered Tree	12.7	Hollows x 3
22	*Eucalyptus polyanthemos*	Red Box	66	Locally Indigenous	Small	Scattered Tree	7.9	Two stems 64/66
23	*Eucalyptus tereticornis* subsp. *mediana*	Gippsland Red-gum	63	Locally Indigenous	Small	ST in Patch	7.6	

ID No.	Botanical Name	Common Name	Diameter at Breast Height	Origin	Size Category	Type	Tree Protection Zone distance	Comments
24	*Eucalyptus polyanthemos*	Red Box	81	Locally Indigenous	Large	LT in Patch	9.7	
25	*Eucalyptus tereticornis* subsp. *mediana*	Gippsland Red-gum	74	Locally Indigenous	Small	ST in Patch	8.9	
26	*Eucalyptus tereticornis* subsp. *mediana*	Gippsland Red-gum	96	Locally Indigenous	Large	LT in Patch	11.5	
27	*Eucalyptus tereticornis* subsp. *mediana*	Gippsland Red-gum	49	Locally Indigenous	Small	ST in Patch	5.9	
28	*Eucalyptus tereticornis* subsp. *mediana*	Gippsland Red-gum	68	Locally Indigenous	Small	ST in Patch	8.2	
29	*Eucalyptus angophoroides*	Apple Box	108	Locally Indigenous	Large	LT in Patch	13.0	
30	*Eucalyptus angophoroides*	Apple Box	51	Locally Indigenous	Small	ST in Patch	6.1	
31	*Eucalyptus angophoroides*	Apple Box	85	Locally Indigenous	Large	LT in Patch	10.2	Two stems 85/65
32	*Eucalyptus polyanthemos*	Red Box	103	Locally Indigenous	Large	LT in Patch	12.4	
33	*Eucalyptus angophoroides*	Apple Box	51	Locally Indigenous	Small	ST in Patch	6.1	
34	*Eucalyptus polyanthemos*	Red Box	60	Locally Indigenous	Small	ST in Patch	7.2	
35	*Eucalyptus polyanthemos*	Red Box	96	Locally Indigenous	Large	LT in Patch	11.5	
36	*Eucalyptus tereticornis* subsp. *mediana*	Gippsland Red-gum	68	Locally Indigenous	Small	Scattered Tree	8.2	
37	*Eucalyptus polyanthemos*	Red Box	58	Locally Indigenous	Small	ST in Patch	7.0	
38	*Eucalyptus tereticornis* subsp. *mediana*	Gippsland Red-gum	25	Locally Indigenous	Small	Scattered Tree	3.0	
39	*Eucalyptus tereticornis* subsp. *mediana*	Gippsland Red-gum	55	Locally Indigenous	Small	ST in Patch	6.6	
40	*Eucalyptus tereticornis* subsp. *mediana*	Gippsland Red-gum	62	Locally Indigenous	Small	ST in Patch	7.4	
41	*Eucalyptus tereticornis* subsp. *mediana*	Gippsland Red-gum	36	Locally Indigenous	Small	Scattered Tree	4.3	
42	*Eucalyptus melliodora*	Yellow Box	62	Locally Indigenous	Small	ST in Patch	7.4	
43	*Eucalyptus tereticornis* subsp. *mediana*	Gippsland Red-gum	50	Locally Indigenous	Small	ST in Patch	6.0	
44	*Eucalyptus tereticornis* subsp. *mediana*	Gippsland Red-gum	55	Locally Indigenous	Small	ST in Patch	6.6	
45	*Eucalyptus angophoroides*	Apple Box	55	Locally Indigenous	Small	ST in Patch	6.6	
46	*Eucalyptus angophoroides*	Apple Box	75	Locally Indigenous	Small	ST in Patch	9.0	
47	*Eucalyptus polyanthemos*	Red Box	103	Locally Indigenous	Large	LT in Patch	12.4	
48	*Eucalyptus tereticornis* subsp. *mediana*	Gippsland Red-gum	92	Locally Indigenous	Large	Scattered Tree	11.0	

ID No.	Botanical Name	Common Name	Diameter at Breast Height	Origin	Size Category	Type	Tree Protection Zone distance	Comments
49	*Eucalyptus polyanthemos*	Red Box	62	Locally Indigenous	Small	Scattered Tree	7.4	
50	*Eucalyptus polyanthemos*	Red Box	57	Locally Indigenous	Small	Scattered Tree	6.8	
51	*Eucalyptus polyanthemos*	Red Box	70	Locally Indigenous	Small	Scattered Tree	8.4	
52	*Eucalyptus baxteri*	Brown Stringybark	40	Locally Indigenous	Small	Scattered Tree	4.8	
53	*Eucalyptus baxteri*	Brown Stringybark	35	Locally Indigenous	Small	Scattered Tree	4.2	
54	*Dead Eucalypt*	Unknown	74	Locally Indigenous	Small	ST in Patch	8.9	1 x large hollow in main trunk
55	*Eucalyptus melliodora*	Yellow Box	97	Locally Indigenous	Large	LT in Patch	11.6	
56	*Eucalyptus tereticornis* subsp. *mediana*	Gippsland Red-gum	48	Locally Indigenous	Small	ST in Patch	5.8	
57	*Eucalyptus tereticornis* subsp. *mediana*	Gippsland Red-gum	21	Locally Indigenous	Small	ST in Patch	2.5	
58	*Eucalyptus cladocalyx*	Sugar Gum	102	Non Victorian Native	NA	Non Vic Native	12.2	Planted
59	*Eucalyptus tereticornis* subsp. *mediana*	Gippsland Red-gum	18	Locally Indigenous	Small	ST in Patch	2.2	
60	*Eucalyptus polyanthemos*	Red Box	90	Locally Indigenous	Large	LT in Patch	10.8	
61	*Eucalyptus tereticornis* subsp. *mediana*	Gippsland Red-gum	38	Locally Indigenous	Small	ST in Patch	4.6	
62	*Eucalyptus tereticornis* subsp. *mediana*	Gippsland Red-gum	66	Locally Indigenous	Small	ST in Patch	7.9	
63	*Eucalyptus tereticornis* subsp. *mediana*	Gippsland Red-gum	66	Locally Indigenous	Small	ST in Patch	7.9	
64	*Eucalyptus tereticornis* subsp. *mediana*	Gippsland Red-gum	55	Locally Indigenous	Small	ST in Patch	6.6	
65	*Eucalyptus tereticornis* subsp. *mediana*	Gippsland Red-gum	142	Locally Indigenous	Large	LT in Patch	15.0	
66	*Eucalyptus polyanthemos*	Red Box	68	Locally Indigenous	Small	ST in Patch	8.2	
67	*Eucalyptus melliodora*	Yellow Box	115	Locally Indigenous	Large	LT in Patch	13.8	
68	*Eucalyptus tereticornis* subsp. *mediana*	Gippsland Red-gum	53	Locally Indigenous	Small	ST in Patch	6.4	
69	*Eucalyptus tereticornis* subsp. *mediana*	Gippsland Red-gum	83	Locally Indigenous	Large	LT in Patch	10.0	
70	*Eucalyptus tereticornis* subsp. *mediana*	Gippsland Red-gum	75	Locally Indigenous	Small	ST in Patch	9.0	
71	*Eucalyptus tereticornis* subsp. *mediana*	Gippsland Red-gum	95	Locally Indigenous	Large	LT in Patch	11.4	
72	*Eucalyptus tereticornis* subsp. *mediana*	Gippsland Red-gum	90	Locally Indigenous	Large	LT in Patch	10.8	
73	*Eucalyptus cladocalyx*	Sugar Gum	100	Non Victorian Native	NA	Non Vic Native	12.0	Planted- Estimated DBH

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ID No.	Botanical Name	Common Name	Diameter at Breast Height	Origin	Size Category	Type	Tree Protection Zone distance	Comments
74	*Corymbia citriodora* subsp. *citriodora*	Lemon-scented Gum	25	Non Victorian Native	NA	Non Vic Native	3.0	Planted
75	*Corymbia citriodora* subsp. *citriodora*	Lemon-scented Gum	25	Non Victorian Native	NA	Non Vic Native	3.0	Planted
76	*Eucalyptus cladocalyx*	Sugar Gum	125	Locally Indigenous	Large	Scattered Tree	15.0	
77	*Eucalyptus tricarpa*	Red Ironbark	20	Locally Indigenous	Small	Scattered Tree	2.4	
78	*Eucalyptus tereticornis* subsp. *mediana*	Gippsland Red-gum	73	Locally Indigenous	Small	ST in Patch	8.8	
79	*Eucalyptus tereticornis* subsp. *mediana*	Gippsland Red-gum	113	Locally Indigenous	Large	LT in Patch	13.6	
80	*Eucalyptus angophoroides*	Apple Box	35	Locally Indigenous	Small	ST in Patch	4.2	
81	*Dead Eucalypt*	Unknown	100	Locally Indigenous	Large	Scattered Tree	12.0	Located on private property
82	*Eucalyptus tereticornis* subsp. *mediana*	Gippsland Red-gum	63	Locally Indigenous	Small	ST in Patch	7.6	
83	*Eucalyptus tereticornis* subsp. *mediana*	Gippsland Red-gum	38	Locally Indigenous	Small	ST in Patch	4.6	
84	*Eucalyptus tereticornis* subsp. *mediana*	Gippsland Red-gum	33	Locally Indigenous	Small	ST in Patch	4.0	
85	*Dead Eucalypt*	Unknown	84	Locally Indigenous	Large	LT in Patch	10.1	
86	*Eucalyptus tereticornis* subsp. *mediana*	Gippsland Red-gum	45	Locally Indigenous	Small	ST in Patch	5.4	
87	*Eucalyptus tereticornis* subsp. *mediana*	Gippsland Red-gum	80	Locally Indigenous	Large	LT in Patch	9.6	
88	*Eucalyptus tereticornis* subsp. *mediana*	Gippsland Red-gum	33	Locally Indigenous	Small	ST in Patch	4.0	
89	*Eucalyptus tereticornis* subsp. *mediana*	Gippsland Red-gum	35	Locally Indigenous	Small	ST in Patch	4.2	
90	*Eucalyptus tereticornis* subsp. *mediana*	Gippsland Red-gum	45	Locally Indigenous	Small	ST in Patch	5.4	
91	*Eucalyptus tereticornis* subsp. *mediana*	Gippsland Red-gum	90	Locally Indigenous	Large	Scattered Tree	10.8	
92	*Eucalyptus tereticornis* subsp. *mediana*	Gippsland Red-gum	75	Locally Indigenous	Small	ST in Patch	9.0	
93	*Eucalyptus tereticornis* subsp. *mediana*	Gippsland Red-gum	65	Locally Indigenous	Small	ST in Patch	7.8	
94	*Eucalyptus tereticornis* subsp. *mediana*	Gippsland Red-gum	35	Locally Indigenous	Small	ST in Patch	4.2	
95	*Eucalyptus tereticornis* subsp. *mediana*	Gippsland Red-gum	40	Locally Indigenous	Small	ST in Patch	4.8	
96	*Eucalyptus tereticornis* subsp. *mediana*	Gippsland Red-gum	75	Locally Indigenous	Small	ST in Patch	9.0	
97	*Eucalyptus tereticornis* subsp. *mediana*	Gippsland Red-gum	27	Locally Indigenous	Small	ST in Patch	3.2	
98	*Eucalyptus tereticornis* subsp. *mediana*	Gippsland Red-gum	40	Locally Indigenous	Small	ST in Patch	4.8	

ID No.	Botanical Name	Common Name	Diameter at Breast Height	Origin	Size Category	Type	Tree Protection Zone distance	Comments
99	*Eucalyptus tereticornis* subsp. *mediana*	Gippsland Red-gum	80	Locally Indigenous	Large	LT in Patch	9.6	
100	*Eucalyptus tereticornis* subsp. *mediana*	Gippsland Red-gum	75	Locally Indigenous	Small	ST in Patch	9.0	
101	*Eucalyptus tereticornis* subsp. *mediana*	Gippsland Red-gum	105	Locally Indigenous	Large	Scattered Tree	12.6	
102	*Eucalyptus tereticornis* subsp. *mediana*	Gippsland Red-gum	105	Locally Indigenous	Large	Scattered Tree	12.6	
103	*Eucalyptus tereticornis* subsp. *mediana*	Gippsland Red-gum	90	Locally Indigenous	Large	Scattered Tree	10.8	
104	*Eucalyptus tereticornis* subsp. *mediana*	Gippsland Red-gum	80	Locally Indigenous	Large	LT in Patch	9.6	
105	*Eucalyptus tereticornis* subsp. *mediana*	Gippsland Red-gum	75	Locally Indigenous	Small	ST in Patch	9.0	
106	*Eucalyptus angophoroides*	Apple Box	65	Locally Indigenous	Small	ST in Patch	7.8	
107	*Eucalyptus cladocalyx*	Sugar Gum	120	Non Victorian Native	NA	Non Vic Native	14.4	Planted- Estimated DBH
108	*Eucalyptus cladocalyx*	Sugar Gum	140	Non Victorian Native	NA	Non Vic Native	15.0	Planted
109	*Eucalyptus tereticornis* subsp. *mediana*	Gippsland Red-gum	105	Locally Indigenous	Large	LT in Patch	12.6	
110	*Eucalyptus tereticornis* subsp. *mediana*	Gippsland Red-gum	95	Locally Indigenous	Large	LT in Patch	11.4	
111	*Eucalyptus polyanthemos*	Red Box	111	Locally Indigenous	Large	LT in Patch	13.3	
112	*Eucalyptus tereticornis* subsp. *mediana*	Gippsland Red-gum	78	Locally Indigenous	Small	ST in Patch	9.4	
113	*Eucalyptus tereticornis* subsp. *mediana*	Gippsland Red-gum	57	Locally Indigenous	Small	ST in Patch	6.8	
114	*Eucalyptus tereticornis* subsp. *mediana*	Gippsland Red-gum	92	Locally Indigenous	Large	LT in Patch	11.0	
115	*Eucalyptus tereticornis* subsp. *mediana*	Gippsland Red-gum	51	Locally Indigenous	Small	ST in Patch	6.1	
116	*Eucalyptus tereticornis* subsp. *mediana*	Gippsland Red-gum	81	Locally Indigenous	Large	LT in Patch	9.7	
117	*Eucalyptus tereticornis* subsp. *mediana*	Gippsland Red-gum	102	Locally Indigenous	Large	LT in Patch	12.2	Hollows x 8
118	*Eucalyptus tereticornis* subsp. *mediana*	Gippsland Red-gum	62	Locally Indigenous	Small	ST in Patch	7.4	
119	*Eucalyptus tereticornis* subsp. *mediana*	Gippsland Red-gum	61	Locally Indigenous	Small	ST in Patch	7.3	
120	*Eucalyptus tereticornis* subsp. *mediana*	Gippsland Red-gum	72	Locally Indigenous	Small	ST in Patch	8.6	Hollow x 1
121	*Eucalyptus tereticornis* subsp. *mediana*	Gippsland Red-gum	15	Locally Indigenous	Small	ST in Patch	1.8	
122	*Eucalyptus tereticornis* subsp. *mediana*	Gippsland Red-gum	96	Locally Indigenous	Large	LT in Patch	11.5	
123	*Eucalyptus tereticornis* subsp. *mediana*	Gippsland Red-gum	52	Locally Indigenous	Small	ST in Patch	6.2	

ID No.	Botanical Name	Common Name	Diameter at Breast Height	Origin	Size Category	Type	Tree Protection Zone distance	Comments
124	*Eucalyptus tereticornis* subsp. *mediana*	Gippsland Red-gum	36	Locally Indigenous	Small	ST in Patch	4.3	
125	*Eucalyptus tereticornis* subsp. *mediana*	Gippsland Red-gum	46	Locally Indigenous	Small	ST in Patch	5.5	
126	*Eucalyptus tereticornis* subsp. *mediana*	Gippsland Red-gum	35	Locally Indigenous	Small	ST in Patch	4.2	
127	*Eucalyptus polyanthemos*	Red Box	55	Locally Indigenous	Small	ST in Patch	6.6	
128	*Eucalyptus tereticornis* subsp. *mediana*	Gippsland Red-gum	25	Locally Indigenous	Small	ST in Patch	3.0	
129	*Eucalyptus tereticornis* subsp. *mediana*	Gippsland Red-gum	25	Locally Indigenous	Small	ST in Patch	3.0	
130	*Eucalyptus tereticornis* subsp. *mediana*	Gippsland Red-gum	48	Locally Indigenous	Small	ST in Patch	5.8	
131	*Eucalyptus tereticornis* subsp. *mediana*	Gippsland Red-gum	49	Locally Indigenous	Small	ST in Patch	5.9	
132	*Eucalyptus polyanthemos*	Red Box	46	Locally Indigenous	Small	ST in Patch	5.5	
133	*Eucalyptus tereticornis* subsp. *mediana*	Gippsland Red-gum	92	Locally Indigenous	Large	LT in Patch	11.0	
134	*Eucalyptus tereticornis* subsp. *mediana*	Gippsland Red-gum	76	Locally Indigenous	Small	ST in Patch	9.1	

Appendix 8: Fauna species recorded

Scientific Name	Common Name	Origin	Treaties	FFG Act Status	EPBC Act Status
Anthochaera carunculata	Red Wattlebird	Introduced			
Cacatua galerita	Sulphur-crested Cockatoo				
Colluricincla harmonica	Grey Shrike-thrush				
Cracticus torquatus	Grey Butcherbird				
Eolophus roseicapilla	Galah				
Gymnorhina tibicen	Australian Magpie				
Manorina melanocephala	Noisy Miner				
Platycercus elegans	Crimson Rosella				
Platycercus eximius	Eastern Rosella				
Strepera graculina	Pied Currawong				
Sturnus vulgaris	Common Starling	Introduced			
Trichoglossus molucannus	Rainbow Lorikeet				

Maps

Maps commence on the next page.

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Map 1 – Victorian Biodiversity Atlas- results of 2km search for threatened species records

[redacted]

Map 2a – Native vegetation and planted vegetation distribution

[redacted]

Map 2b – Native vegetation and planted vegetation distribution

[redacted]

Map 2c – Native vegetation and planted vegetation distribution

[redacted]