

## Appendix B

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Final Report

# Biodiversity Assessment: Terminal Station Options for the Proposed Delburn Wind Farm, Gippsland, Victoria

Prepared for

**Delburn Wind Farm Pty Ltd**

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**Ecology and Heritage Partners Pty Ltd**

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## EXECUTIVE SUMMARY

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### Introduction

Ecology and Heritage Partners Pty Ltd was commissioned by Delburn Wind Farm Pty Ltd (part of the OSMI Australia group) to undertake a Biodiversity Assessment of the Delburn Wind Farm Terminal Station options, Gippsland, Victoria. Two potential terminal station options (Terminal Station Option A and Terminal Station Option B) are currently being investigated (Terminal Station Option A is the preferred option). The purpose of this assessment was to identify the extent and type of native vegetation present within the study area and to determine the likely presence of significant flora and fauna species and/or ecological communities. This report presents the results of the assessment and discusses the potential ecological and legislative implications associated with the proposed action.

### Methods

Several ecological investigations have been undertaken within the study area as part of proposed Delburn Wind Farm investigations between 2018 and 2020. On 16 September 2020, areas within the study area (footprint of the two proposed Terminal Station options, located on either side of Varys Track) that were outside of the proposed Delburn Wind Farm footprint were assessed by a qualified ecologist. Where native vegetation was identified a habitat hectare assessment was undertaken following methodology described in the Vegetation Quality Assessment Manual.

### Results

#### *Flora*

Several common State 'protected' flora species (not State significant species) were recorded during the site assessment, including Slender Greenhood *Pterostylis foliata* Common Cassinia *Cassinia aculeata* and Snowy Daisy-bush *Olearia lirata*. Based on the modified nature of the study area, landscape context, the proximity of previous records and the results of targeted species surveys undertaken as part of the Delburn Wind Farm ecological investigations, State-listed and nationally significant flora species are considered unlikely to occur within the study area due to the high levels of disturbance and absence of suitable habitat.

#### *Fauna*

Based on the modified nature of the study area, landscape context, the proximity of previous records and results of the targeted species surveys undertaken as part of the Delburn Wind Farm ecological investigations (Ecology and Heritage Partners 2020), significant fauna species are considered unlikely to rely on habitat within the study area for foraging or breeding purposes due to the lack of suitable and/or important habitat features.

#### *Communities*

Vegetation within the study area did not meet the condition thresholds that define any significant ecological communities.

### *Native Vegetation Removal (Guidelines)*

The study area is within Location 1, with 1.053 hectares of native vegetation proposed to be removed to facilitate Terminal Station Option A and 1.657 hectares of native vegetation proposed to be removed to facilitate Terminal Station Option B.

The offset requirement for native vegetation removal associated with Terminal Station Option A is 0.351 General Habitat Units and 2 Large Trees. The offset requirement for native vegetation removal associated with Terminal Station Option A is 0.683 General Habitat Units and 4 Large Trees.

### **Legislative and Policy Implications**

#### *Environment Protection and Biodiversity Conservation Act 1999 (EPBC Act) - Commonwealth*

The terminal station formed part of the action referred to the Commonwealth under the EPBC Act for the Delburn Wind Farm (2020/8688). The proposed action was deemed 'not a controlled action' by the Minister on 17 July 2020.

#### *Flora and Fauna Guarantee Act 1988 (FFG Act) - Victoria*

There is suitable habitat within the study area for several species listed and protected under the FFG Act. Any native vegetation on private land does not require a permit under the FFG Act. However, the proposed development will impact native vegetation within publicly owned road reserves, in which case, an FFG Act permit is required.

#### *Planning and Environment Act 1987*

A planning permit from the Latrobe City Council is required to remove, destroy or lop any native vegetation under Clause 52.17 of the Planning Scheme. In this instance, the application may be referred to DELWP as it falls under the Detailed Assessment Pathway.

#### *Other Legislation and Policy*

Implications relating to other local and State policy (*Wildlife Act 1975*, *Catchment and Land Protection Act 1994*, local government authorities) as well as additional studies or reporting that may be required (targeted surveys, Conservation Management Plan, Weed Management Plan, Construction Environment Managements Plan) are provided in Section 4.

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## SUMMARY OF CLAUSE 52.17 APPLICATION REQUIREMENTS

**Table S1.** Application requirements for a permit to remove native vegetation (Victoria Planning Provisions Clause 52.17; DELWP 2017)

No.	Application Requirement	Response
Application requirements under the Detailed Assessment Pathway		
1	Information about the native vegetation to be removed, including: The assessment pathway and reason for the assessment pathway; A description of the native vegetation to be removed; Maps showing the native vegetation and property in context; and The offset requirement that will apply if the native vegetation is approved to be removed.	Refer to Section 3.1 and Appendix 3 (NVR Report)
2	Topographic and land information relating to the native vegetation to be removed, showing ridges, crests and hilltops, wetlands and waterways, slopes of more than 20 percent, drainage lines, low lying areas, saline discharge areas, and areas of existing erosion, as appropriate.	Refer to Section 1.2 and Figure 1
3	Recent dated photographs of the native vegetation to be removed.	Refer to Section 3.1
4	Details of any other native vegetation that was permitted to be removed on the same property with the same ownership as the native vegetation to be removed, where the removal occurred in the five year period before the application to remove native vegetation is lodged.	No removal of native vegetation has been removed by the proponent within the property within the past five years
5	An avoid and minimise statement. The statement describes any efforts to avoid the removal of, and minimise the impacts on the biodiversity and other values of native vegetation, and how these efforts focussed on areas of native vegetation that have the most value.	Refer to Section 5.1
6	A copy of any Property Vegetation Plan contained within an agreement made pursuant to section 69 of the <i>Conservation, Forests and Lands Act 1987</i> that applies to the native vegetation to be removed.	Not applicable
7	Where the removal of native vegetation is to create defensible space, a written statement explaining why the removal of native vegetation is necessary. This statement must have regard to other available bushfire risk mitigation measures. This statement is not required when the creation of defensible space is in conjunction with an application under the Bushfire Management Overlay.	Not applicable as the vegetation clearance is not for defensible space
8	If the application is under Clause 52.16, a statement that explains how the proposal responds to the Native Vegetation Precinct Plan considerations at decision guideline 8.	Not applicable as the application responds to Clause 52.17
9	An offset statement providing evidence that an offset that meets the offset requirements for the native vegetation to be removed has been identified and can be secured in accordance with the Guidelines.	Refer to Section 5.3



No.	Application Requirement	Response
10	<p>A site assessment report of the native vegetation to be removed, including:</p> <ul style="list-style-type: none"> <li>• A habitat hectare assessment of any patches of native vegetation, including the condition, extent (in hectares), Ecological Vegetation Class and bioregional conservation status.</li> <li>• The location, number, circumference (in centimetres measured at 1.3 metres above ground level) and species of any large trees within patches.</li> <li>• The location, number, circumference (in centimetres measured at 1.3 metres above ground level) and species of any scattered trees, and whether each tree is small or large.</li> </ul>	<p>Refer to Figure 2A and Figure 2B, Appendix 1.2 (habitat hectares assessment) and Appendix 1.3 (tree information)</p>
11	<p>Information about impacts on rare or threatened species habitat, including the relevant section of the Habitat importance map for each rare or threatened species requiring a species offset.</p>	<p>Refer to Appendix 3 (NVR Report)</p>

## 1 INTRODUCTION

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### 1.1 Background

Ecology and Heritage Partners Pty Ltd was commissioned by Delburn Wind Farm Pty Ltd (part of the OSMI Australia group) to undertake a Biodiversity Assessment of the Delburn Wind Farm Terminal Station options, Gippsland, Victoria.

We understand that Delburn Wind Farm Pty Ltd is investigating two location options for a terminal station facility for the proposed Delburn Wind Farm (the study area). The proposed Terminal Station Options are to be located adjacent to an existing transmission line, immediately north of the study area.

The purpose of this assessment was to identify the extent and type of native vegetation present within the study area and to determine the likely presence of significant flora and fauna species and/or ecological communities. This report presents the results of the assessment and discusses the potential ecological and legislative implications associated with the proposed action.

### 1.2 Study Area

The study area is located in the Strzelecki Ranges, Central Gippsland region, approximately 127 kilometres east of Melbourne's CBD (Figure 1). The study area covers approximately 15 hectares and is bound by the Strzelecki Highway to the east and plantation and agricultural land to the north, south and west. Terminal Station Option A is located on the eastern side of Varys Track, with Terminal Station Option B located on the western side.

The study area is within an undulating landscape, predominately covered by pine and Blue Gum plantations, with native vegetation present within the road reserves and along drainage lines within the plantations.

According to the Department of Environment, Land, Water and Planning (DELWP) NatureKit Map (DELWP 2020a), the study area is located within the Strzelecki Ranges and Gippsland Plain bioregion, West Gippsland Catchment Management Authority (CMA) and Latrobe City Council.

## 2 METHODS

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### 2.1 Desktop Assessment

Relevant literature, online-resources and databases were reviewed to provide an assessment of flora and fauna values associated with the study area. The following information sources were reviewed:

- The DELWP NatureKit Map (DELWP 2020a) and Native Vegetation Information Management (NVIM) Tool (DELWP 2020b) for:
  - Modelled data for location risk, native vegetation patches, scattered trees and habitat for rare or threatened species; and,
  - The extent of historic and current Ecological Vegetation Classes (EVCs).
- EVC benchmarks (DELWP 2020c) for descriptions of EVCs within the relevant bioregion;
- The Victorian Biodiversity Atlas (VBA) for previously documented flora and fauna records within the project locality (DELWP 2020f);
- The Illustrated Flora Information System of Victoria (IFLISV) (Gullan 2017) and Atlas of Living Australia (ALA) (ALA 2020) for assistance with the distribution and identification of flora species;
- Birdlife Australia (2020) for detailed descriptions and distributions of birds (both native and exotic);
- The Commonwealth Department of Agriculture, Water and the Environment (DAWE) Protected Matters Search Tool (PMST) for matters of National Environmental Significance (NES) protected under the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act) (DAWE 2020);
- Relevant listings under the Victorian *Flora and Fauna Guarantee Act 1988* (FFG Act), including the latest Threatened (DELWP 2019a) and Protected (DELWP 2019b) Lists;
- The online VicPlan Map (DELWP 2020d) to ascertain current zoning and environmental overlays in the study area;
- Aerial photography of the study area; and
- Previous ecological assessments relevant to the study area; including;
  - Biodiversity Assessment for the proposed Delburn Wind Farm, Gippsland, Victoria. Ecology and Heritage Partners 2020.
  - Delburn Wind Farm, Gippsland, Victoria: Desktop Assessment of Potential Geotechnical, Contaminated Land and Hydrogeological Impacts at Proposed Terminal Stations. Golder Associates 2020.
  - Construction Impact Assessment for Ecology and Heritage Partners. Assessment of trees and vegetation patches at Delburn Wind farm. Homewood Consulting 2020.

## 2.2 Field Assessment

Several ecological assessments have been undertaken within the study area as part of proposed Delburn Wind Farm (Ecology and Heritage Partners 2020) investigations between 2018 and 2020 (refer to Ecology and Heritage Partners 2020 for details on ecological assessments). On 16 September 2020, areas within the study area (footprint of the two proposed Terminal Station options, located on either side of Varys Track) that were outside of the proposed Delburn Wind Farm footprint were assessed by a qualified ecologist. The purpose of these investigations was to determine the ecological values, including the extent and quality of native vegetation, and the known or potential presence of significant flora and fauna species, and/or ecological communities within the study area.

The study area was walked, with all commonly observed vascular flora and fauna species recorded, significant records mapped and the overall condition of vegetation and habitats noted. Ecological Vegetation Classes (EVCs) were determined with reference to DELWP pre-1750 and extant EVC mapping (DELWP 2020a) and their published descriptions (DELWP 2020c).

Where native vegetation was identified a habitat hectare assessment was undertaken following methodology described in the Vegetation Quality Assessment Manual (Department of Sustainability and Environment (DSE) 2004).

## 2.3 Removal, Destruction or Lopping of Native Vegetation (the Guidelines)

Under the *Planning and Environment Act 1987*, Clause 52.17 of the Latrobe Planning Scheme requires a planning permit to remove, destroy or lop native vegetation. The assessment process for the clearing of vegetation follows the '*Guidelines for the removal, destruction or lopping of native vegetation*' (the Guidelines) (DELWP 2017). The '*Assessor's handbook: Applications to remove, destroy or lop native vegetation*' (Assessor's handbook) (DELWP 2018) provides clarification regarding the application of the Guidelines (DELWP 2017).

### 2.3.1 Assessment Pathway

The Guidelines manage the impacts on biodiversity from native vegetation removal using an assessment-based approach. Two factors – extent risk and location category – are used to determine the risk associated with an application for a permit to remove native vegetation. The location category (1, 2 or 3) has been determined for all areas in Victoria and is available on DELWP's NVIM Tool (DELWP 2020b). Determination of assessment pathway is summarised in Table 1.

**Table 1.** Assessment pathways for applications to remove, destroy or lop native vegetation (DELWP 2017).

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

**Notes:** For the purpose of determining the assessment pathway of an application to remove native vegetation the extent includes any other native vegetation that was permitted to be removed on the same contiguous parcel of land

with the same ownership as the native vegetation to be removed, where the removal occurred in the five year period before an application to remove native vegetation is lodged.

### 2.3.2 Vegetation Assessment

Native vegetation (as defined in Table 2) is assessed using two key parameters: extent (in hectares) and condition. For the purposes of this assessment, both condition and extent were determined as part of the habitat hectare assessment.

**Table 2.** Determination of a patch of native vegetation (DELWP 2017).

Category	Definition	Extent	Condition
<b>Patch of native vegetation</b>	An area of vegetation where at least 25 per cent of the total perennial understorey plant cover is native; OR An area with three or more native canopy trees where the drip line of each tree touches the drip line of at least one other tree, forming a continuous canopy; OR any mapped wetland included in the <i>Current Wetlands map</i> , available in DELWP systems and tools.	Measured in hectares. Based on hectare area of the native patch.	Vegetation Quality Assessment Manual (DSE 2004).  Modelled condition for <i>Current Wetlands</i> .
<b>Scattered tree</b>	A native canopy tree that does not form part of a native patch.	Measured in hectares. Each Large scattered tree is assigned an extent of 0.071 hectares (30m diameter). Each Small scattered tree is assigned a default extent of 0.31 hectares (10 metre diameter)	Scattered trees are assigned a default condition score of 0.2 (outside a patch).

**Notes:** Native vegetation is defined in the Victoria Planning Provisions as 'plants that are indigenous to Victoria, including trees, shrubs, herbs and grasses'.

### 2.3.3 Mapped Wetlands (DELWP)

Wetlands can be difficult to map and assess accurately as they respond quite quickly to changes in environmental condition, especially rainfall. After a period of no or low rainfall they can disappear or appear very degraded. They do, however, recover rapidly after periods of increased rainfall. As a result, under the Guidelines (DELWP 2017) all mapped wetlands (based on 'Current Wetlands' layer in the DELWP NatureKit Map) that are to be impacted must be included as native vegetation, with the modelled condition score assigned to them (DELWP 2020b).

Note that mapped wetlands do not apply if they are covered by a hardened, man-made surface, for example, a roadway. If covered by any vegetation including crops, bare soil, a mapped wetland must be treated as a native patch.

#### **2.3.4 *Impact Avoidance and Minimisation***

All applications to remove native vegetation must demonstrate the three-step approach of avoid, minimise and offset. This is a precautionary approach that aims to ensure that the removal of native vegetation is restricted to what is reasonably necessary, and that biodiversity is appropriately compensated for any native vegetation removal that is approved.

#### **2.3.5 *Offsets***

Biodiversity offsets are required to compensate for the permitted removal of native vegetation. Offset obligations and offset site criteria are determined in accordance with the Guidelines (DELWP 2017) and are divided into two categories, being General Habitat Units and Species Habitat Units.

The offset requirements for native vegetation removal are calculated by DELWP and presented in a Native Vegetation Removal (NVR) Report, which are based on the vegetation condition scores determined during the biodiversity assessment.

### **2.4 Assessment Qualifications and Limitations**

This report has been written based on the quality and extent of the ecological values and habitat considered to be present or absent at the time of the desktop and/or field assessments being undertaken.

The nature of a standard biodiversity assessment, meant that migratory, transitory or uncommon fauna species may have been absent from typically occupied habitats at the time of the field assessment. In addition, annual or cryptic flora species such as those that persist via underground tubers may also be absent.

A comprehensive list of all terrestrial flora and fauna present within the study area was not undertaken as this was not the objective of the assessment. Rather a list of commonly observed species was recorded to inform the habitat hectare assessment and assist in determining the broader biodiversity values present within the study area.

Ecological values identified within the study area were recorded using a hand-held GPS or tablet with an accuracy of +/-5 metres. This level of accuracy is considered to provide an accurate assessment of the ecological values present within the study area; however, this data should not be used for detailed surveying purposes.

The terrestrial flora and fauna data collected during the field assessment and information obtained from relevant desktop sources is considered to adequately inform an accurate assessment of the ecological values present within the study area.



## 3 RESULTS

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### 3.1 Vegetation Condition

Several patches of native vegetation and scattered native trees were recorded within the study area. The remainder of the study area comprised introduced and planted vegetation, present as pasture grass and plantation timber. It is worth noting that the plantation timber within the study area had been recently harvested at the time of the most recent field assessment.

A list of all flora species recorded during the field assessment are provided in Appendix 1.1.

#### 3.1.1 Patches of Native Vegetation

Native vegetation in the study area is representative of two EVCs: Lowland Forest (EVC 16) and Swampy Woodland (EVC 937). The presence of these EVCs is generally consistent with the modelled pre-1750s native vegetation mapping (DELWP 2020c). Specific details relating to observed EVCs are provided below.

The results of the habitat hectare assessment are provided in Appendix 1.2.

#### Lowland Forest

Lowland Forest is typically an open forest dominated by Messmate Stringybark and Narrow-leaf Peppermint with an understorey of shrubby ericoid species, saw-sedges and wire-grasses. It generally occurs within lowland plains and lower foothill slopes on moderately fertile soils (Oates and Taranto 2001). Lowland Forest is predominately located within the Deans Road and Varys Track roadsides.

Lowland Forest is generally dominated by Messmate Stringybark, Narrow-leaf Peppermint and Silverleaf Stringybark *Eucalyptus cephalocarpa*. However, Lowland Forest also supports Mountain Grey-gum *Eucalyptus cypellocarpa* and Manna Gum *Eucalyptus viminalis* subsp. *viminalis*.

The understorey within Lowland Forest within the study area is generally of moderate-high quality, supporting a high cover of indigenous shrubs, sedges, herbs and grasses including Blackwood *Acacia melanoxylon*, Prickly Tea-tree *Leptospermum continentale*, Trailing Ground-berry *Acrotriche prostrata*, Tall Sundew *Drosera auriculata*, Common Raspwort *Gonocarpus tetragynus*, Shining Pennywort *Hydrocotyle sibthorpioides* and Weeping Grass *Microlaena stipoides* (Plate 1 and 2).



**Plate 1.** A patch of Lowland Forest along the road reserve within the study area (Ecology and Heritage Partners Pty Ltd 02/08/2018).



**Plate 2.** Lowland Forest within the study area (Ecology and Heritage Partners Pty Ltd 02/08/2018).

### Swampy Woodland

Swampy Woodland generally occupies streambanks within the foothills and plains, and typically comprises a combination of shrubs and tussock grasses underneath a eucalypt canopy (DELWP 2020c). Swampy Woodland is present within the west of the study area, with the majority of Swampy Woodland vegetation located within the footprint of Terminal Station Option B.

Several patches of Swampy Woodland were recorded within the west of the study area (Figure 2A and Figure 2B). Swamp Gum *Eucalyptus ovata* was the dominant overstorey species, with Prickly Tea-tree and Swamp Paperbark *Melaleuca ericifolia* present within the shrub layer. Sedges and rushes, including Spiny-headed Mat-rush *Lomandra longifolia* and Sword Sedge *Lepidosperma* spp. were the dominant ground layer species.

Numerous Radiata Pines *Pinus radiata* were also present within patches of Swampy Woodland due to the close proximity of the plantation operations to the vegetation.



**Plate 3.** Swampy Woodland within the study area (Ecology and Heritage Partners Pty Ltd 16/09/2020).



**Plate 4.** Swampy Woodland within the study area (Ecology and Heritage Partners Pty Ltd 16/09/2020).



### 3.1.2 *Large Trees in Patches*

A total of 17 Large Trees (LTs) in patches were present (Figure 2A and Figure 2B). Most of these specimens were Manna Gums, with Swamp Gums and Messmates also present (Plate 5; Plate 6; Appendix 1.3).



**Plate 5.** Large tree within Lowland Forest within the Deans Road road reserve (Ecology and Heritage Partners Pty Ltd 02/08/2018).



**Plate 6.** Large tree within the centre of the study area (Ecology and Heritage Partners Pty Ltd 02/08/2018).

### 3.1.3 *Scattered Trees*

A total of 12 scattered trees (predominately Swamp Gum, Manna Gum and Messmate) were recorded within the study area, which consisted of six large and six small scattered trees (Figure 2A and Figure 2B; Appendix 1.3). These trees would have once formed part of the Lowland Forest EVC; however, the understorey vegetation contained predominantly introduced species (mainly exotic pasture grasses) and the trees no longer formed a patch of native vegetation (Plate 7; Plate 8).



**Plate 7.** A large scattered tree within the Deans Road road reserve (Ecology and Heritage Partners Pty Ltd 02/08/2018)



**Plate 8.** Small scattered trees within the Deans Road road reserve (Ecology and Heritage Partners Pty Ltd 02/08/2018).

#### 3.1.4 Introduced and Planted Vegetation

Current land uses such as forestry operations and agriculture have resulted in the introduction of non-native vegetation, particularly in road reserves. Disturbed areas are dominated by environmental weeds such as Cocksfoot *Dactylis glomerata* and Paspalum *Paspalum* spp. Planted vegetation within the study area consisted of Radiata Pine *Pinus radiata* and Tasmanian Blue Gum *Eucalyptus globulus*, much of which has been recently harvested (Plate 9).

Noxious weeds are present throughout the study area, with scattered occurrences of Soursob *Oxalis pes-caprae* and Spear Thistle *Cirsium vulgare*, along with the Weed of National Significance (WoNS) Blackberry *Rubus fruticosus* spp. agg.



**Plate 9.** Recently harvested plantation within the study area (TSB) (Ecology and Heritage Partners Pty Ltd 16/09/2020).

### 3.2 Fauna Habitat

Most of the study area consisted of plantation which had been recently harvested in 2019 and 2020. These areas are likely to be used as a foraging resource by common fauna species that are tolerant of modified open areas, including Australian Magpie *Cracticus tibicen*, Little Raven *Corvus mellori*, Wagtail *Rhipidura leucophrys*, Red Fox *Vulpes vulpes* and European Rabbit *Oryctolagus cuniculus*.

Native vegetation within the road reserve and areas of retained native vegetation within recently harvested plantation plots are likely to provide 'stepping stones' of vegetation, which have numerous benefits to native flora and fauna populations, particularly in modified landscapes where much of the surrounding vegetation is restricted to linear strips along roadsides.

### 3.3 Removal, Destruction or Lopping of Native Vegetation (the Guidelines)

The below clearing scenario is based on the access requirements and construction footprint provided by Delburn Wind Farm Pty Ltd. The impact area and proposed native vegetation impacts have been calculated based on a conservative impact footprint that includes a 15-metre buffer around all works to compensate for any unintended impacts during construction.

#### 3.3.1 Vegetation proposed to be removed

The study area is within Location 1, with 1.053 hectares of native vegetation proposed to be removed to facilitate Terminal Station Option A and 1.657 hectares of native vegetation proposed to be removed to facilitate Terminal Station Option B. As such, the permit application falls under the Detailed assessment pathway (Table 3).

Condition scores for vegetation proposed to be removed are provided in Appendix 1.2.

**Table 3.** Removal of Native Vegetation (the Guidelines) (DELWP 2017).

	Terminal Station Option A	Terminal Station Option B
Assessment pathway	Detailed	Detailed
Location Category	1	1
Total Extent (past and proposed) (ha)	1.053	1.657
Extent of past removal (ha)	0	0
Extent of proposed removal (ha)	1.053	1.657
Large Trees (scattered and in patches) to be removed (no.)	2	4
EVC Conservation Status of vegetation to be removed	Endangered (Swampy Woodland) and Vulnerable (Lowland Forest)	Endangered (Swampy Woodland) and Vulnerable (Lowland Forest)

### 3.3.2 Offset Targets

The offset requirement for native vegetation removal associated with Terminal Station Option A is 0.351 General Habitat Units and 2 Large Trees. The offset requirement for native vegetation removal associated with Terminal Station Option B is 0.683 General Habitat Units and 4 Large Trees.

A summary of proposed vegetation losses and associated offset requirements is presented in Table 4 and the NVR reports are presented in Appendix 3.

**Table 4.** Offset Targets.

	Terminal Station Option A	Terminal Station Option B
General Offsets Required	0.351 General Habitat Units	0.683 General Habitat Units
Large Trees	2	4
Vicinity (catchment/council)	West Gippsland CMA / Latrobe City Council	West Gippsland CMA / Latrobe City Council
Minimum Strategic Biodiversity Value*	0.231	0.197

\*The minimum Strategic Biodiversity Value is 80% of the weighted average score across habitat zones where a General offset is required.

## 3.4 Significance Assessment

### 3.4.1 Flora

The VBA contains records of five nationally significant and 24 State significant flora species previously recorded within 10 kilometres of the study area (DELWP 2020f) (Figure 3). The PMST nominated an additional six nationally significant species which have not been previously recorded but have the potential to occur in the locality (DAWE 2020) (Figure 3; Appendix 1.4).

Several common State 'protected' flora species (not State significant species) were recorded during the site assessment, including Slender Greenhood *Pterostylis foliata* Common Cassinia *Cassinia aculeata* and Snowy Daisy-bush *Olearia lirata*. Based on the modified nature of the study area, landscape context, the proximity of previous records and the results of targeted species surveys undertaken as part of the Delburn Wind Farm ecological investigations (Ecology and Heritage Partners 2020), State-listed and nationally significant flora species are considered unlikely to occur within the study area due to the and high levels of disturbance and absence of suitable habitat.

### 3.4.2 Fauna

The VBA contains records of eight nationally significant and 19 State significant fauna species previously recorded within 10 kilometres of the study area (DELWP 2020f) (Figure 4). The PMST nominated an additional 12 nationally significant species which have not been previously recorded but have the potential to occur in the locality (DAWE 2020) (Figure 4; Appendix 2.1).

Based on the modified nature of the study area, landscape context, the proximity of previous records and results of the targeted species surveys undertaken as part of the Delburn Wind Farm ecological investigations



(Ecology and Heritage Partners 2020), significant fauna species are considered unlikely to rely on habitat within the study area for foraging or breeding purposes due to the lack of suitable and/or important habitat features.

### 3.4.3 *Ecological Communities*

One nationally listed ecological community Gippsland Red Gum (*Eucalyptus tereticornis* subsp. *mediana*) Grassy Woodland and Associated Native Grassland is a listed ecological community that is predicted to potentially occur within the study area (DAWE 2020). Due to the absence of Gippsland Red-gum (Plains Grassy Woodland EVC) and other key indicator species, Gippsland Red Gum Grassy Woodland and Associated Native Grassland is not present within the study area.

The native vegetation within and adjacent to the impact area did not meet the descriptive characteristics of Herb-rich Plains Grassy Wetland (West Gippsland) Community, which is an FFG Act-listed ecological community. As such, this FFG Act-listed ecological community, or any other listed communities do not occur within the study area (DELWP 2019a).

## 4 LEGISLATIVE AND POLICY IMPLICATIONS

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### 4.1 *Environment Protection and Biodiversity Conservation Act 1999* (Commonwealth)

The EPBC Act establishes a Commonwealth process for the assessment of proposed actions (i.e. project, development, undertaking, activity, or series of activities) that are likely to have a significant impact on matters of national environmental significance (NES), or on Commonwealth land. An action, unless otherwise exempt, requires approval from the Commonwealth Environment Minister if it is considered likely to have an impact on any matters of NES

The terminal station formed part of the action referred to the Commonwealth under the EPBC Act for the Delburn Wind Farm (2020/8688). The proposed action was deemed 'not a controlled action' by the Minister on 17 July 2020.

### 4.2 *Flora and Fauna Guarantee Act 1988* (Victoria)

The FFG Act is the primary legislation dealing with biodiversity conservation and sustainable use of native flora and fauna in Victoria. Proponents are required to apply for an FFG Act Permit to 'take' listed and/or protected<sup>1</sup> flora species, listed vegetation communities and listed fish species in areas of public land (i.e. within road reserves, drainage lines and public reserves). An FFG Act permit is generally not required for removal of species or communities on private land, or for the removal of habitat for a listed terrestrial fauna species.

There is suitable habitat within the study area for several species listed and protected under the FFG Act. The majority of the study area is located within private property; however, the proposed development will impact native vegetation within publicly owned road reserves, in which case, an FFG Act permit is required.

### 4.3 *Planning and Environment Act 1987* (Victoria)

The *Planning and Environment Act 1987* outlines the legislative framework for planning in Victoria and for the development and administration of planning schemes. All planning schemes contain native vegetation provisions at Clause 52.17, which require a planning permit from the relevant local Council to remove, destroy or lop native vegetation, unless an exemption at Clause 52.17-7 on the Victoria Planning Provisions applies.

#### 4.3.1 *Local Planning Scheme*

The study area is located within the Latrobe City Council. The following zoning and overlays apply (DELWP 2020d):

- Special Use Zone – Schedule 1 (SUZ1)

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<sup>1</sup> In addition to 'listed' flora species, the FFG Act identifies 'protected' flora species. This includes any of the Asteraceae (Daisies), all orchids, ferns (excluding *Pteridium esculentum*) and *Acacia* species (excluding *Acacia dealbata*, *Acacia decurrens*, *Acacia implexa*, *Acacia melanoxylon* and *Acacia paradoxa*), as well as any taxa that may be a component of a listed ecological community. A species may be both listed and protected.

- Bushfire Management Overlay (BMO)

#### 4.3.2 *The Guidelines*

The State Planning Policy Framework and the decision guidelines at Clause 12.01 Biodiversity and Clause 52.17 Native Vegetation require Planning and Responsible Authorities to have regard for the Guidelines (DELWP 2017).

#### 4.3.3 *Implications*

As discussed in Section 3.3, the study area is within Location 1, with 1.053 hectares of native vegetation proposed to be removed to facilitate Terminal Station Option A and 1.657 hectares of native vegetation proposed to be removed to facilitate Terminal Station Option B.

The offset requirement for native vegetation removal associated with Terminal Station Option A is 0.351 General Habitat Units and 2 Large Trees. The offset requirement for native vegetation removal associated with Terminal Station Option A is 0.683 General Habitat Units and 4 Large Trees.

A planning permit from the Latrobe City Council is required to remove, destroy or lop any native vegetation under Clause 52.17 of the Planning Scheme. In this instance, the application may be referred to DELWP as it falls under the Detailed Assessment Pathway.

### 4.4 ***Catchment and Land Protection Act 1994 (Victoria)***

Several weeds listed as noxious under the *Catchment and Land Protection Act 1994* were recorded during the assessment. Similarly, there is evidence that the study area is currently occupied by several pest fauna species listed under the CaLP Act. Listed noxious weeds/pests should be appropriately controlled throughout the study area. Planning permit conditions may include the requirement for a Weed Management Plan.

### 4.5 ***Wildlife Act 1975 and Wildlife Regulations 2013 (Victoria)***

The *Wildlife Act 1975* (and associated Wildlife Regulations 2013) is the primary legislation in Victoria providing for protection and management of wildlife. Authorisation for habitat removal may be obtained under the *Wildlife Act 1975* through a licence granted under the *Forests Act 1958*, or under any other Act such as the *Planning and Environment Act 1987*. Any persons engaged to remove, salvage, hold or relocate native fauna during construction must hold a current Management Authorisation under the *Wildlife Act 1975*, issued by DELWP.

### 4.6 ***Water Act 1989 (Victoria)***

A 'works on waterways' permit from the West Gippsland CMA is likely to be required where any action impacts on waterways within the study area. Additionally, where structures are installed within or across waterways that potentially interfere with the passage of fish or the quality of aquatic habitat, these activities should be referred to DELWP with the West Gippsland CMA included for comment.

## 5 MITIGATION MEASURES

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### 5.1 Avoid and Minimise Statement

It is not possible to avoid all impacts to native vegetation due to the engineering and road safety standards required to facilitate acceptable access and egress into the study area. Two alternative locations for the terminal station have been identified within the terrain constraints in areas adjacent to the existing 220 kV transmission line; being east of Varys Track (Terminal Station Option A), and west of Varys Track (Terminal Station Option B).

Native vegetation removal associated with the required road upgrades (to facilitate delivery of major components (i.e. transformer) and general construction traffic) along Deans Road and Varys Track have been determined based on the recommendations of the Traffic Impact Assessment (AECOM 2020). The removal of native vegetation associated with the necessary road upgrades has been minimised through strategically placed overtaking bays, located in specific locations to maximise line of sight and to minimise impacts on roadside native vegetation. An assessment has also been undertaken on the swept path turns to determine the minimum roadworks required, with native vegetation impacts minimised where possible.

A conservative 15-metre buffer has been applied to the proposed development footprints of both Terminal Station options, with opportunities for further avoidance and minimisation possible during the implementation of detailed design and construction. The preferred site, based on constructability and native vegetation impacts, is Option A; however, we understand that other factors such as land tenure rights may result in Option B being required to be pursued.

This Avoid and Minimise statement will be developed further once the preferred Terminal Station option has been determined.

#### 5.1.1 Recommendations

Based on the current development footprints, Terminal Station Option A is considered the preferred option when considering impacts to ecological values within the study area. Additionally, a desktop geotechnical and hydrological assessment completed for the study area (Golder 2020) determined that Terminal Station Option A (referred to as Option 2 in Golder 2020) could be positioned to avoid direct impacts to waterways within the study area. Conversely, Terminal Station Option B (referred to as Option 2 in Golder 2020) is likely to directly impact minor tributaries of the Morwell River and, subject to detailed hydrological studies, would likely require the drainage line to be piped under or diverted around the terminal station (Golder 2020). If Terminal Station Option B is pursued and modifications to drainage within the study area are required, further site-specific studies on the impacts of the altered drainage would be required to determine the potential impacts on the groundwater dependent ecosystem in the study area (Golder 2020).

### 5.2 Best Practice Mitigation Measures

Recommended measures to mitigate impacts upon terrestrial and aquatic values present within the study area may include:

- Minimise impacts to native vegetation and habitats through construction and micro-siting techniques, including fencing retained areas of native vegetation. If indeed necessary, trees should be lopped or trimmed rather than removed. Similarly, soil disturbance and sedimentation within wetlands should be avoided or kept to a minimum, to avoid, or minimise impacts to fauna habitats;
- All contractors should be aware of ecologically sensitive areas to minimise the likelihood of inadvertent disturbance to areas marked for retention. Native vegetation (areas of sensitivity) should be included as a mapping overlay on any construction plans;
- Tree Protection Zones (TPZs) should be implemented to prevent indirect losses of native vegetation during construction activities (DSE 2011). A TPZ applies to a tree and is a specific area above and below the ground, with a radius 12 x the DBH. At a minimum standard a TPZ should consider the following:
  - A TPZ of trees should be a radius no less than two metres or greater than 15 metres;
  - Construction, related activities and encroachment (i.e. earthworks such as trenching that disturb the root zone) should be excluded from the TPZ;
  - Where encroachment is 10% or more of the total area of the TPZ, the tree should be considered as lost and offset accordingly (unless an arboricultural report specifies otherwise);
    - Where trees are considered lost but removal is not required, the tree should be left in situ if it is deemed safe to do so;
  - Directional drilling may be used for works within the TPZ without being considered encroachment. The directional bore should be at least 600 millimetres deep;
  - The above guidelines may be varied if a qualified arborist confirms the works will not significantly damage the tree (including stags / dead trees). In this case the tree would be retained, and no offset would be required; and,
  - Where the minimum standard for a TPZ has not been met an offset may be required.
- Removal of any habitat trees or shrubs (particularly hollow-bearing trees or trees/shrubs with nests) should be undertaken between February and September to avoid the breeding season for most fauna species. If any habitat trees or shrubs are proposed to be removed, this should be undertaken under the supervision of an appropriately qualified zoologist to salvage and translocate any displaced fauna. A Fauna Management Plan may be required to guide the salvage and translocation process;
- Where possible, construction stockpiles, machinery, roads, and other infrastructure should be placed away from areas supporting native vegetation, Large Trees and/or wetlands;
- Ensure that best practice sedimentation and pollution control measures are undertaken at all times, in accordance with Environment Protection Authority guidelines (EPA 1991; EPA 1996; Victorian Stormwater Committee 1999) to prevent offsite impacts to waterways and wetlands; and,
- As indigenous flora provides valuable habitat for indigenous fauna, it is recommended that any landscape plantings that are undertaken as part of the proposed works are conducted using indigenous species sourced from a local provenance, rather than exotic deciduous trees and shrubs.

### **5.3 Offset Impacts and Strategy**

According to DELWPs Native Vegetation Offset Register (DELWP 2020e), there are 19 offset sites within the West Gippsland CMA or Latrobe City Council region that can be used to satisfy the General Habitat Unit and Large tree offset requirements for Terminal Station options A or B (Appendix 4).



## 6 FURTHER REQUIREMENTS

Further requirements associated with development of the study area, as well as additional studies or reporting that may be required, are provided in Table 5.

**Table 5.** Further requirements associated with development of the study area.

Relevant Legislation	Implications	Further Action
<i>Environment Protection and Biodiversity Conservation Act 1999</i>	The terminal station formed part of the action referred to the Commonwealth under the EPBC Act for the Delburn Wind Farm (2020/8688). The proposed action was deemed 'not a controlled action' by the Minister on 17 July 2020.	No further action required.
<i>Flora and Fauna Guarantee Act 1988</i>	There is suitable habitat within the study area for several species listed and protected under the FFG Act. The majority of the study area is located within private property; however, the proposed development will impact native vegetation within publicly owned road reserves, in which case, an FFG Act permit is required.	Prepare and submit an FFG Act permit application to DELWP.
<i>Planning and Environment Act 1987</i>	The study area is within Location 1, with 1.053 hectares of native vegetation proposed to be removed to facilitate Terminal Station Option A and 1.657 hectares of native vegetation proposed to be removed to facilitate Terminal Station Option B.  The offset requirement for native vegetation removal associated with Terminal Station Option A is 0.351 General Habitat Units and 2 Large Trees. The offset requirement for native vegetation removal associated with Terminal Station Option B is 0.683 General Habitat Units and 4 Large Trees.  A planning permit from the Latrobe City Council is required to remove, destroy or lop any native vegetation under Clause 52.17 of the Planning Scheme. In this instance, the application is required to be referred to DELWP.	Prepare and submit a Planning Permit application.
<i>Catchment and Land Protection Act 1994</i>	Two weed species listed under the CaLP Act were recorded within the study area. To meet requirements under the CaLP Act, listed noxious weeds should be appropriately controlled throughout the study area.	Planning Permit conditions may include a requirement for a Weed Management Plan.
<i>Wildlife Act 1975</i>	Any persons engaged to conduct salvage and translocation or general handling of terrestrial fauna species must hold a current Management Authorisation.	Ensure wildlife specialists hold a current Management Authorisation.
<i>Water Act 1989</i>	A 'works on waterways' permit is likely to be required from the West Gippsland CMA where any action impacts on waterways within the study area.	Obtain a 'works on waterways' permit from the West Gippsland CMA.

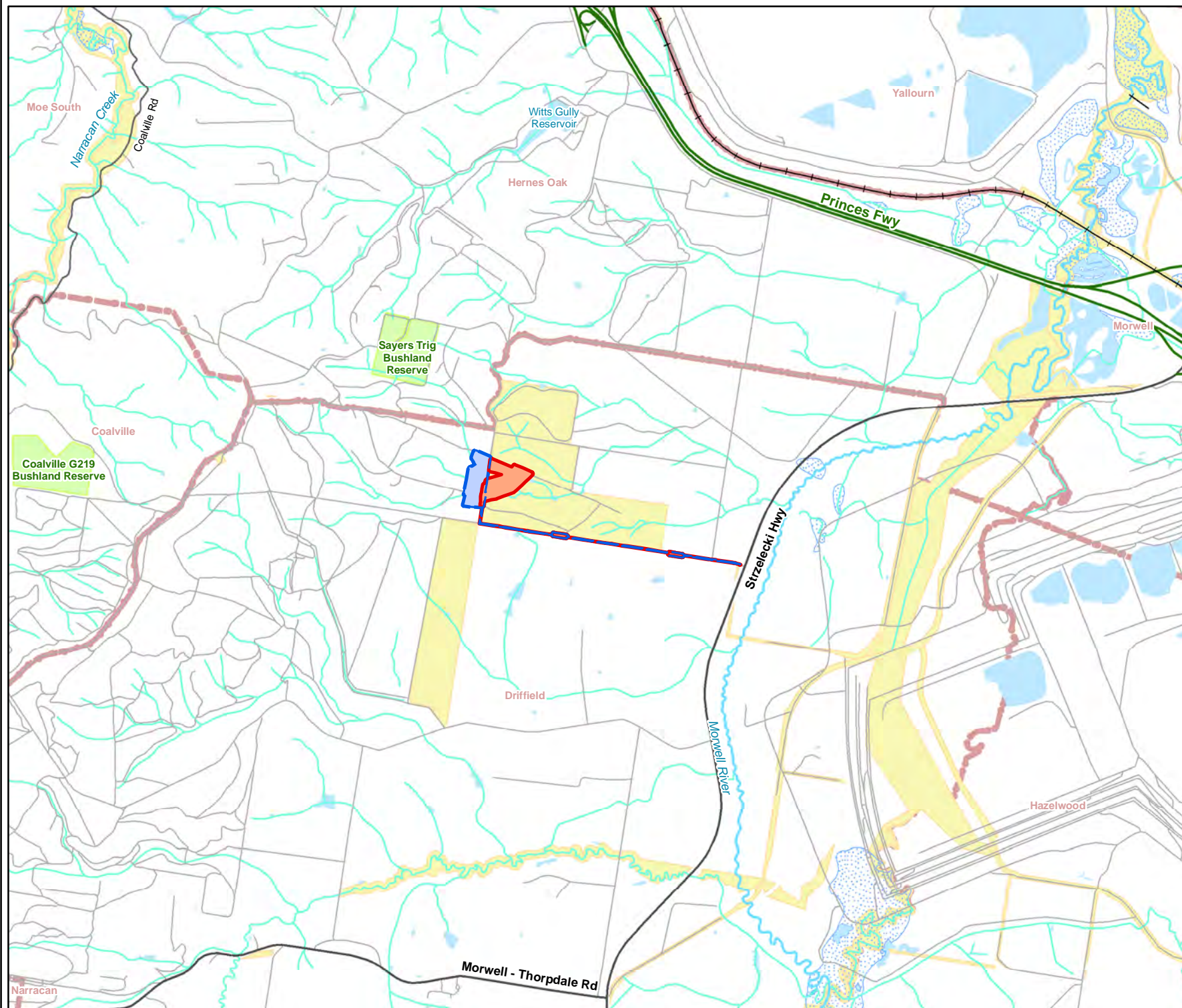
## REFERENCES

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- AECOM 2020. Delburn Terminal Station – Traffic Impact Assessment. Unpublished report (draft) prepared for Delburn Wind Farm Pty. Ltd by AECOM Australia Pty. Ltd., Melbourne, Australia.
- DAWE 2020. Protected Matters Search Tool. [www Document] URL: <http://www.environment.gov.au/epbc/pmst/index.html>. Commonwealth Department of Agriculture, Water and the Environment, Canberra, ACT.
- DELWP 2017. *Guidelines for the removal, destruction or lopping of native vegetation*. December 2017. Victorian Department of Environment, Land, Water and Planning, Melbourne, Victoria.
- DELWP 2018. *Assessor's handbook: Applications to remove, destroy or lop native vegetation*. October 2018. Victorian Department of Environment, Land, Water and Planning, Melbourne, Victoria.
- DELWP 2019a. *Flora and Fauna Guarantee Act 1988 Threatened List* – November 2019 [www Document]. URL: [https://www.environment.vic.gov.au/\\_data/assets/pdf\\_file/0024/115827/20191114-FFG-Threatened-List.pdf](https://www.environment.vic.gov.au/_data/assets/pdf_file/0024/115827/20191114-FFG-Threatened-List.pdf). Victorian Department of Environment, Land, Water and Planning, Melbourne, Victoria.
- DELWP 2019b. *Flora and Fauna Guarantee Act 1988 Protected Flora List* – November 2019 [www Document]. URL: [https://www.environment.vic.gov.au/\\_data/assets/pdf\\_file/0011/50420/20191114-FFG-protected-flora-list.pdf](https://www.environment.vic.gov.au/_data/assets/pdf_file/0011/50420/20191114-FFG-protected-flora-list.pdf). Victorian Department of Environment, Land, Water and Planning, Melbourne, Victoria.
- DELWP 2019c. *Flora and Fauna Guarantee Act 1988 Threatened List – Characteristics of Threatened Communities* [www Document]. URL: [https://www.environment.vic.gov.au/\\_data/assets/pdf\\_file/0018/50418/04072019-Flora-and-Fauna-Guarantee-Characteristics-of-Threatened-Communities-3.pdf](https://www.environment.vic.gov.au/_data/assets/pdf_file/0018/50418/04072019-Flora-and-Fauna-Guarantee-Characteristics-of-Threatened-Communities-3.pdf). Victorian Department of Environment, Land, Water and Planning, Melbourne, Victoria.
- DELWP 2020a. NatureKit Map [www Document]. URL: <http://maps.biodiversity.vic.gov.au/viewer/?viewer=NatureKit>. Victorian Department of Environment, Land, Water and Planning, Melbourne, Victoria.
- DELWP 2020b. Native Vegetation Information Management Tool [www Document]. URL: <https://nvim.delwp.vic.gov.au>. Victorian Department of Environment, Land, Water and Planning, Melbourne, Victoria.
- DELWP 2020c. Ecological Vegetation Class (EVC) Benchmarks for each Bioregion [www Document]. URL: <https://www.environment.vic.gov.au/biodiversity/bioregions-and-evc-benchmarks>. Victorian Department of Environment, Land, Water and Planning, Melbourne, Victoria.
- DELWP 2020d. VicPlan Map [www Document]. URL: <https://mapshare.maps.vic.gov.au/vicplan/>. Victorian Department of Environment, Land, Water and Planning, Melbourne, Victoria.
- DELWP 2020e. Search for Native Vegetation Credit Register [www Document]. URL: <https://nvcr.delwp.vic.gov.au/Home/Index>. Victorian Department of Environment, Land, Water and Planning, Melbourne, Victoria.

- DELWP 2020f. Victorian Biodiversity Atlas. Sourced from GIS layers: “VBA\_FLORA25”, “VBA\_FLORA100”, “VBA\_FAUNA25”, “VBA\_FAUNA100”. August 2020. Victorian Department of Environment, Land, Water and Planning, Melbourne, Victoria.
- DEPI 2014. *Advisory List of Rare or Threatened Plants in Victoria*. Victorian Department of Environment and Primary Industries, Melbourne, Victoria.
- DSE 2004. *Vegetation quality assessment manual: Guidelines for applying the habitat hectares scoring method*. Version 1.3. Victorian Department of Sustainability and Environment, Melbourne Victoria.
- DSE 2009. *Advisory list of Threatened Invertebrate Fauna in Victoria – 2009*. Victorian Department of Sustainability and Environment, Melbourne, Victoria.
- DSE 2011. *Native Vegetation Technical information sheet: Defining an acceptable distance for tree retention during construction works*. Victorian Department of Sustainability and Environment, Melbourne, Victoria.
- DSE 2013. *Advisory list of Threatened Vertebrate Fauna in Victoria – 2013*. Victorian Department of Sustainability and Environment, Melbourne, Victoria.
- Ecology and Heritage Partners 2020. Biodiversity Assessment for the proposed Delburn Wind Farm, Gippsland, Victoria. Unpublished report for Delburn Wind Farm Pty Ltd by Ecology and Heritage Partners, Melbourne, Victoria
- EPA 1991. *Construction Techniques for Sediment Pollution Control*. Published document prepared by the Victorian Environment Protection Authority, Melbourne, Victoria.
- EPA 1996. *Environmental Guidelines for Major Construction Sites*. Published document prepared by the Victorian Environmental Protection Authority, Melbourne, Victoria.
- Golder Associates 2020. Delburn Wind Farm, Gippsland, Victoria: Desktop Assessment of Potential Geotechnical, Contaminated Land and Hydrogeological Impacts at Proposed Terminal Stations. Unpublished report for Delburn Wind Farm Pty Ltd by Golder Associates, Melbourne, Victoria.
- Gullan, P. 2017. Illustrated Flora Information System of Victoria (IFISV). Viridans Pty Ltd, Victoria.
- Homewood Consulting 2020. Construction Impact Assessment for Ecology and Heritage Partners. Assessment of trees and vegetation patches at Delburn Wind farm. Unpublished report for Ecology and Heritage Partners Pty Ltd by Homewood Consulting Pty. Ltd. July 2020
- Victorian Urban Stormwater Committee 1999. *Urban Stormwater: Best Practice Environmental Management Guidelines*. CSIRO, Collingwood, Victoria.





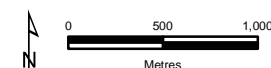
## Legend

- Study Area - Option A
- Study Area - Option B
- Railway
- Freeway
- Major Road
- Collector Road
- Minor Road
- Minor Watercourse
- Major Watercourse
- Permanent Waterbody
- Land Subject to Inundation
- Parks and Reserves
- Crown Land
- Localities



**Figure 1**

**Location of the study area**  
*Biodiversity Assessment for  
 the Terminal Station Options -  
 Delburn Wind Farm*



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10745\_Fig01\_StudyArea\_TS 16/09/2020 melsley





## Legend

- Impact Footprint - Option A
- Wind Energy Facility footprint
- Current Wetlands
- ★ Scattered Large Tree
- ★ Scattered Small Tree
- Large Tree within a patch
- ✕ Impacted tree

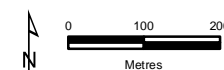
## Ecological Vegetation Classes

- Lowland Forest (EVC 16)
- Swampy Woodland (EVC 937)
- Impacted vegetation



## Figure 2a Overview

**Ecological features**  
*Biodiversity Assessment for  
 the Terminal Station Option A -  
 Delburn Wind Farm*



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## Legend

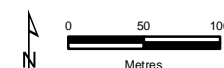
- Impact Footprint - Option A
- Wind Energy Facility footprint
- Current Wetlands
- ✱ Scattered Large Tree
- ✱ Scattered Small Tree
- Large Tree within a patch
- ✕ Impacted tree

## Ecological Vegetation Classes

- Lowland Forest (EVC 16)
- Swampy Woodland (EVC 937)
- Impacted vegetation



**Figure 2a - i**  
**Ecological features**  
*Biodiversity Assessment for the Terminal Station Option A - Delburn Wind Farm*



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## Legend

- Impact Footprint - Option A
- Current Wetlands
- ★ Scattered Large Tree
- ★ Scattered Small Tree
- Large Tree within a patch

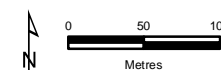
## Ecological Vegetation Classes

- Lowland Forest (EVC 16)
- Impacted vegetation



**Figure 2a - ii**

**Ecological features**  
*Biodiversity Assessment for  
 the Terminal Station Option A -  
 Delburn Wind Farm*



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## Legend

- Impact Footprint - Option B
- Wind Energy Facility footprint
- Current Wetlands
- ★ Scattered Large Tree
- ★ Scattered Small Tree
- Large Tree within a patch
- X Impacted tree

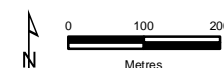
## Ecological Vegetation Classes

- Lowland Forest (EVC 16)
- Swampy Woodland (EVC 937)
- Impacted vegetation



## Figure 2b Overview

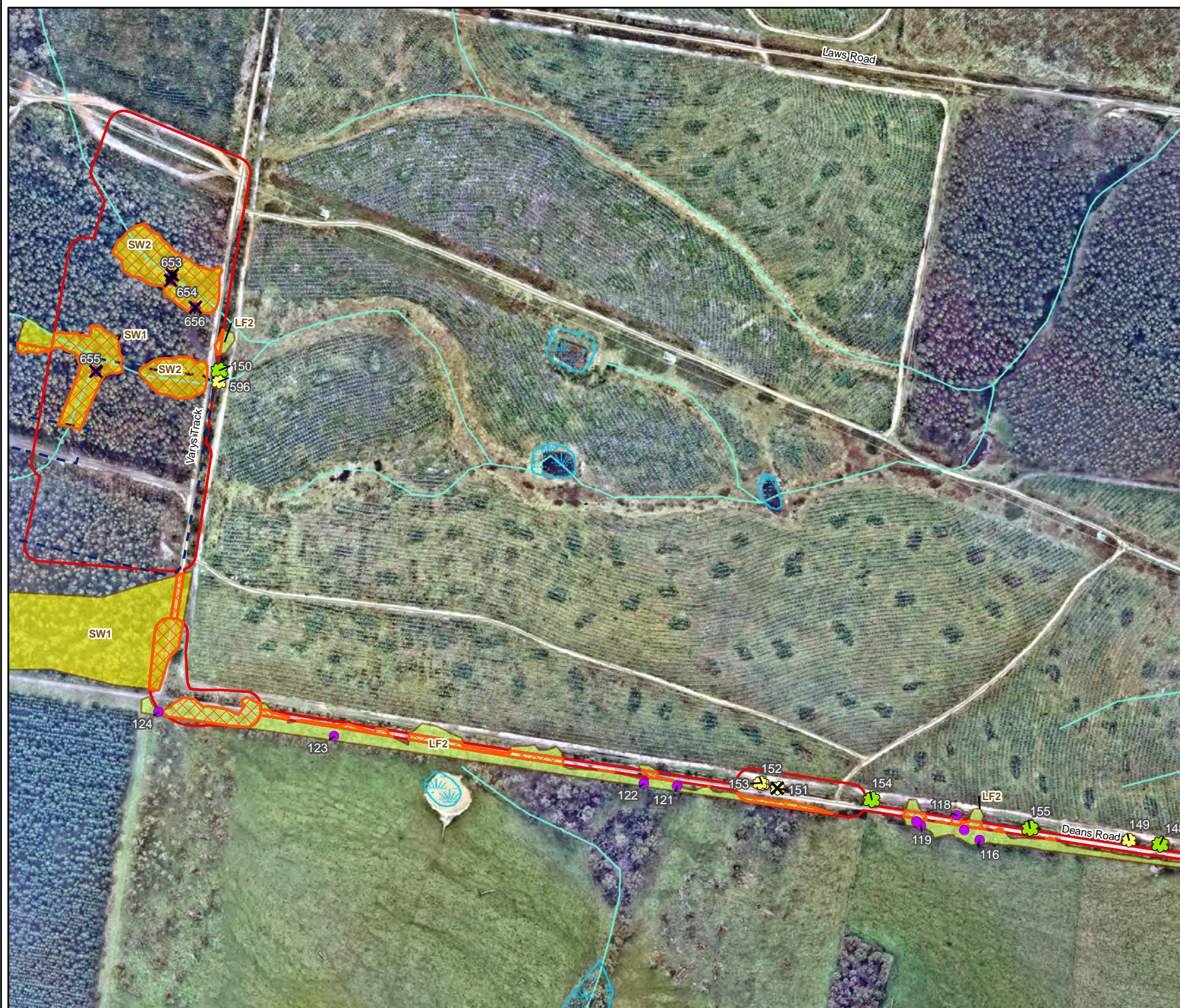
**Ecological features**  
Biodiversity Assessment for  
the Terminal Station Option B -  
Delburn Wind Farm



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## Legend

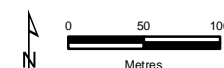
- Impact Footprint - Option B
- Wind Energy Facility footprint
- Current Wetlands
- ★ Scattered Large Tree
- ★ Scattered Small Tree
- Large Tree within a patch
- ✕ Impacted tree

## Ecological Vegetation Classes

- Lowland Forest (EVC 16)
- Swampy Woodland (EVC 937)
- Impacted vegetation



**Figure 2b - i**  
**Ecological features**  
*Biodiversity Assessment for the Terminal Station Option B - Delburn Wind Farm*



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## Legend

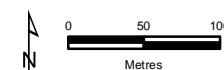
- Impact Footprint - Option B
- Current Wetlands
- ★ Scattered Large Tree
- ★ Scattered Small Tree
- Large Tree within a patch

## Ecological Vegetation Classes

- Lowland Forest (EVC 16)
- Impacted vegetation



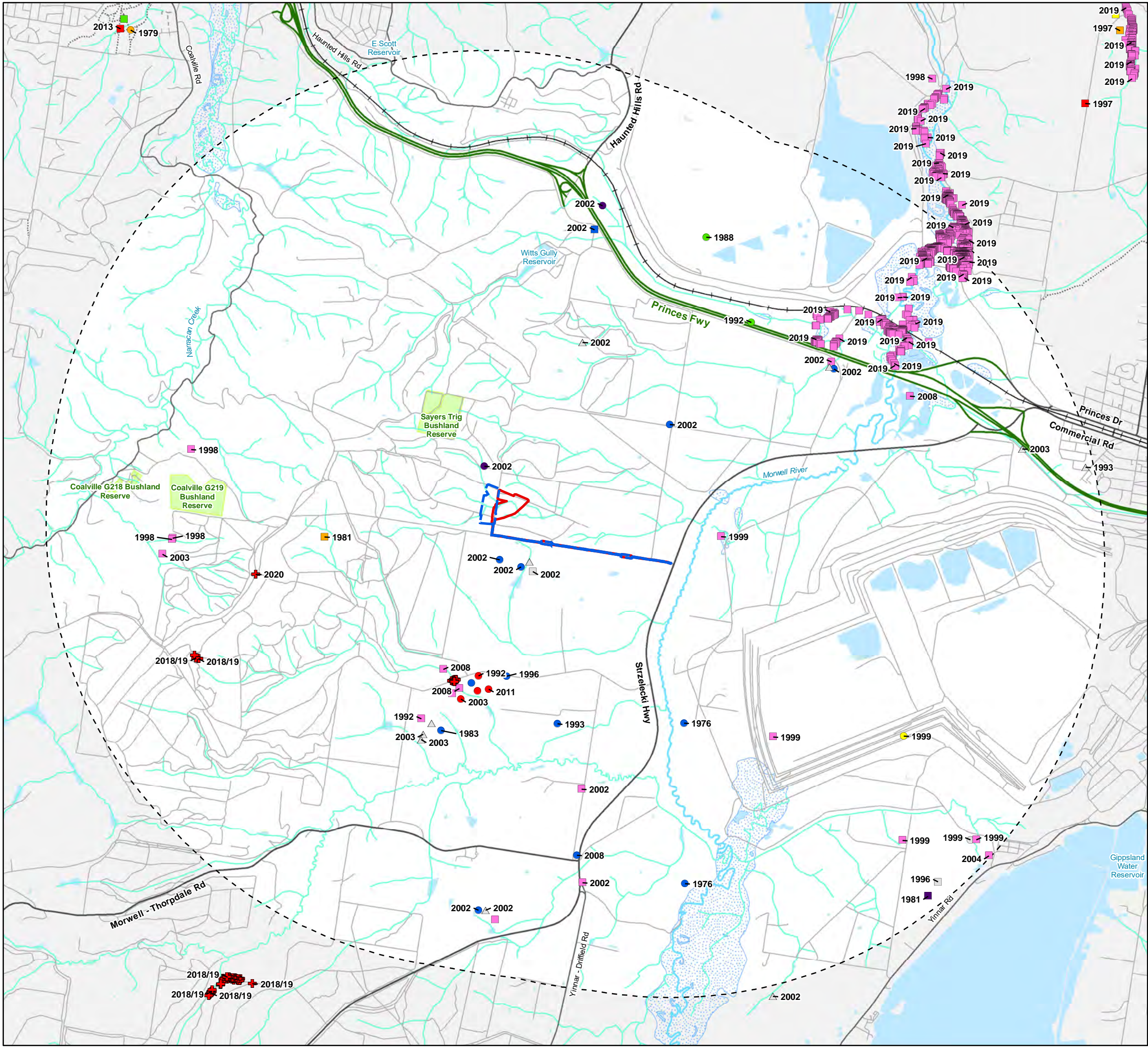
**Figure 2b - ii**  
**Ecological features**  
*Biodiversity Assessment for  
 the Terminal Station Option B -  
 Delburn Wind Farm*



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**Legend**

Study Area - Option A

Study Area - Option B

**Significant flora (VBA 2020)**

- Annual Bitter-cress
- Cobra Greenhood
- Eastern Spider-orchid
- Fluffy-fruit Wood-sorrel
- Giant Honey-myrtle
- Green Scentbark
- Mountain Bird-orchid
- River Swamp Wallaby-grass
- Rosemary Grevillea
- Slender Bitter-cress
- Slender Tree-fern
- Spotted Gum
- Sticky Wattle
- Strzelecki Gum
- Thin Pondweed
- Yarra Gum

**Ecology and Heritage Partners (2018-2020)**

- Strzelecki Gum



**Figure 3**  
**Previously documented significant flora within 5km of the study area**  
*Biodiversity Assessment for the Terminal Station Options - Delburn Wind Farm*

N

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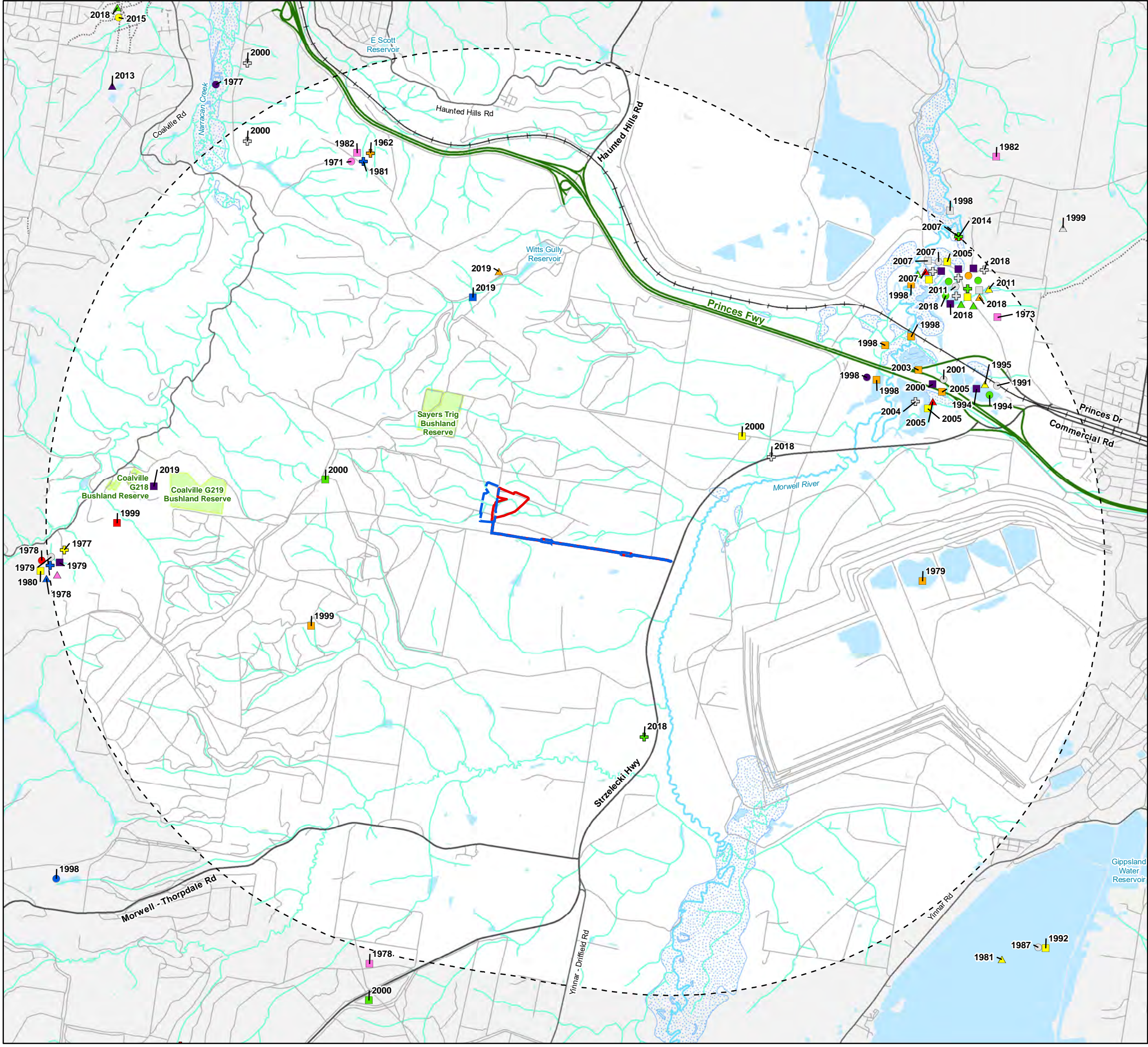
Kilometres

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10745\_Fig03\_SigFlora\_TS\_16/09/2020\_melslev





**Legend**  

Study Area - Option

Study Area - Option B

**Significant fauna**

Australasian Shoveler

Australian Gull-billed Tern

Australian Little Bittern

Azure Kingfisher

Blue-billed Duck

Chestnut-rumped Heathwren

Common Bent-wing Bat

Dwarf Galaxias

Eastern Snake-necked Turtle

Emu

Flinders Pygmy Perch

Great Egret

Grey Goshawk

Grey-headed Flying-fox

Growling Grass Frog

Hardhead

Hooded Robin

Latham's Snipe

Lewin's Rail

Musk Duck

Nankeen Night Heron

Pied Cormorant

Plumed Egret

Powerful Owl

Royal Spoonbill

Southern Brown Bandicoot

Spot-tailed Quoll

Spotted Harrier

White-bellied Sea-Eagle

White-throated Needletail



**Figure 4**  
**Previously documented significant fauna within 5km of the study area**  
*Biodiversity Assessment for the Terminal Station Options - Delburn Wind Farm*

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Kilometres

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10745\_Fig04\_SigFauna\_TS\_16/09/2020\_melsley



## APPENDIX 1 - FLORA

### Appendix 1.1 - Flora Results

**Legend:**

**I** Protected under the FFG Act (DELWP 2019b);

**\*** Listed as a noxious weed under the CaLP Act;

**w** Weed of National Significance;

**#** Planted Victorian and non-Victorian species;

**Table A1.1.** Flora within the study area.

Scientific Name	Common Name	Comments
<b>Native Species</b>		
<i>Acacia mearnsii</i>	Black Wattle	I
<i>Acacia melanoxylon</i>	Blackwood	-
<i>Acacia mucronata</i> subsp. <i>longifolia</i>	Narrow-leaf Wattle	I
<i>Acacia verticillata</i>	Prickly Moses	I
<i>Austrostipa</i> spp.	Spear Grass	-
<i>Bursaria spinosa</i>	Sweet Bursaria	-
<i>Cassinia aculeata</i>	Common Cassinia	I
<i>Cassytha</i> spp.	Dodder Laurel	-
<i>Clematis</i> spp.	Clematis	-
<i>Comesperma volubile</i>	Love Creeper	-
<i>Coprosma quadrifida</i>	Prickly Currant-bush	-
<i>Dichondra repens</i>	Kidney-weed	-
<i>Epacris impressa</i>	Common Heath	I
<i>Eucalyptus cypellocarpa</i>	Mountain Grey-gum	-
<i>Eucalyptus obliqua</i>	Messmate Stringybark	-
<i>Eucalyptus ovata</i>	Swamp Gum	-
<i>Eucalyptus viminalis</i>	Manna Gum	-
<i>Exocarpos cupressiformis</i>	Cherry Ballart	-
<i>Gahnia radula</i>	Thatch Saw-sedge	-
<i>Geranium</i> spp.	Crane's Bill	-
<i>Gonocarpus tetragynus</i>	Common Raspwort	-
<i>Goodenia</i> spp.	Goodenia	-
<i>Hydrocotyle sibthorpioides</i>	Shining Pennywort	-
<i>Lepidosperma laterale</i>	Variable Sword-sedge	-
<i>Leptospermum continentale</i>	Prickly Tea-tree	-
<i>Lomandra filiformis</i>	Wattle Mat-rush	-

Scientific Name	Common Name	Comments
<i>Lomandra longifolia</i>	Spiny-headed Mat-rush	-
<i>Pteridium esculentum</i>	Austral Bracken	-
<i>Pterostylis foliata</i>	Slender Greenhood	I
<i>Senecio quadridentatus</i>	Cotton Fireweed	I
<i>Senecio</i> spp.	Groundsel	I
<i>Tetrarrhena juncea</i>	Forest Wire-grass	-
<i>Viola hederacea</i>	Ivy-leaf Violet	-
<b>Introduced Species</b>		
<i>Arctotheca calendula</i>	Capeweed	-
<i>Cirsium vulgare</i>	Spear Thistle	*
<i>Cynodon dactylon</i>	Couch	-
<i>Dactylis glomerata</i>	Cocksfoot	-
<i>Oxalis pes-caprae</i>	Soursob	*
<i>Oxalis purpurea</i>	Large-flower Wood-sorrel	-
<i>Paspalum</i> spp.	Paspalum	-
<i>Pinus radiata</i>	Radiata Pine	#
<i>Plantago lanceolata</i>	Plantain	-
<i>Rubus fruticosus</i> spp. agg.	Blackberry	*W
<i>Sporobolus</i> spp.	Rat-tail Grass	-
<i>Trifolium repens</i> var. <i>repens</i>	White Clover	-
<i>Vinca major</i>	Blue Periwinkle	-



## Appendix 1.2 - Habitat Hectare Assessment

**Table A1.2.** Habitat Hectare Assessment Table.

Vegetation Zone		LF <sub>1</sub>	LF <sub>2</sub>	LF <sub>3</sub>	SW <sub>1</sub>	SW <sub>2</sub>
Bioregion		SR	SR	SR	SR	SR
EVC / Tree		LF	LF	LF	SW	SW
EVC Number		16	16	16	937	937
EVC Conservation Status		Vu	Vu	Vu	En	En
Patch Condition	Large Old Trees /10	0	0	0	2	2
	Canopy Cover /5	0	3	5	4	4
	Under storey /25	5	5	15	20	20
	Lack of Weeds /15	2	6	11	9	9
	Recruitment /10	3	0	3	6	6
	Organic Matter /5	2	5	5	3	3
	Logs /5	0	0	0	5	5
	Treeless EVC Multiplier	1.00	1.00	1.00	1.00	1.00
Subtotal =		12.00	19.00	39.00	49.00	49.00
Landscape Value /25		10	10	10	10	10
Habitat Points /100		22	29	49	49	59
Habitat Score		0.22	0.29	0.49	0.49	0.59

**Note:** LF = Lowland Forest; SW = Swampy Woodland; En = Endangered; Vu = Vulnerable; SR = Strzelecki Ranges.

## Appendix 1.3 - Scattered Trees and Large Trees in Patches

**Table A1.3.** Scattered Trees and Large Trees in Patches.

Tree ID	Species	DBH	Type	Status
112	<i>E. viminalis subsp. pryoriana</i>	75	Large Tree within a patch	Retained
113	<i>E. viminalis subsp. pryoriana</i>	135	Large Tree within a patch	Retained
114	<i>E. viminalis subsp. pryoriana</i>	100	Large Tree within a patch	Retained
115	<i>E. viminalis subsp. pryoriana</i>	80	Large Tree within a patch	Retained
116	<i>E. viminalis subsp. pryoriana</i>	80	Large Tree within a patch	Retained
117	<i>E. viminalis subsp. pryoriana</i>	80	Large Tree within a patch	Retained
118	<i>E. viminalis subsp. pryoriana</i>	80	Large Tree within a patch	Retained
119	<i>E. viminalis subsp. pryoriana</i>	90	Large Tree within a patch	Retained
120	<i>E. viminalis subsp. pryoriana</i>	75	Large Tree within a patch	Retained
121	<i>E. viminalis subsp. pryoriana</i>	75	Large Tree within a patch	Retained
122	<i>E. radiata</i>	80	Large Tree within a patch	Retained
123	<i>E. viminalis subsp. pryoriana</i>	75	Large Tree within a patch	Retained
124	<i>E. cypellocarpa</i>	80	Large Tree within a patch	Retained
145	<i>Euc sp</i>	45	Scattered Small Tree	Retained
146	<i>Euc sp</i>	75	Scattered Large Tree	Retained
147	<i>Euc sp</i>	76	Scattered Large Tree	Retained
148	<i>E. viminalis subsp. pryoriana</i>	70	Scattered Large Tree	Retained
149	<i>E. viminalis subsp. pryoriana</i>	60	Scattered Small Tree	Retained
150	<i>E. cypellocarpa</i>	90	Scattered Large Tree	Impacted (TSA)
151	<i>E. obliqua</i>	60	Scattered Small Tree	Impacted (TSA and TSB)
152	<i>E. obliqua</i>	60	Scattered Small Tree	Retained
153	<i>E. obliqua</i>	60	Scattered Small Tree	Retained
154	<i>E. viminalis subsp. pryoriana</i>	90	Scattered Large Tree	Retained
155	<i>E. viminalis subsp. pryoriana</i>	75	Scattered Large Tree	Retained
596	<i>E. ovata</i>	42	Scattered Small Tree	Impacted (TSA)
653	<i>E. ovata</i>	76	Large Tree within a patch	Impacted (TSB)
654	<i>E. ovata</i>	73	Large Tree within a patch	Impacted (TSB)
655	<i>E. ovata</i>	75	Large Tree within a patch	Impacted (TSA and TSB)
656	<i>E. ovata</i>	72	Large Tree within a patch	Impacted (TSB)

Note: TSA = Terminal Station Option A; TSB = Terminal Station Option B

## Appendix 1.4 - Significant Flora Species

**Table A1.4** Significant flora recorded within 10 kilometres of the study area

**Likelihood:** Habitat characteristics of significant flora species previously recorded within 10 kilometres of the study area, or that may potentially occur within the study area were assessed to determine their likelihood of occurrence. The likelihood of occurrence rankings is defined below:

1	Known Occurrence	<ul style="list-style-type: none"> <li>Recorded within the study area recently (i.e. within ten years)</li> </ul>
2	High Likelihood	<ul style="list-style-type: none"> <li>Previous records of the species in the local vicinity; and/or,</li> <li>The study area contains areas of high-quality habitat.</li> </ul>
3	Moderate Likelihood	<ul style="list-style-type: none"> <li>Limited previous records of the species in the local vicinity; and/or</li> <li>The study area contains poor or limited habitat.</li> </ul>
4	Low Likelihood	<ul style="list-style-type: none"> <li>Poor or limited habitat for the species, however other evidence (such as lack of records or environmental factors) indicates there is a very low likelihood of presence.</li> </ul>
5	Unlikely	<ul style="list-style-type: none"> <li>No suitable habitat and/or outside the species range.</li> </ul>

Notes: EPBC = *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act), FFG = *Flora and Fauna Guarantee Act 1988* (FFG Act), DELWP = Advisory List of Rare or Threatened Plants in Victoria (DEPI 2014), L = Listed, # = Records identified from EPBC Act Protected Matters Search Tool, Data source: Victorian Biodiversity Atlas (DELWP 2020f); Protected Matters Search Tool (DAWE 2020).  
Order: Alphabetical.

Scientific name	Common name	Total # of documented records	Last documented record	EPBC	FFG	DEPI	Likely occurrence in study area
<b>NATIONAL SIGNIFICANCE</b>							
<i>Amphibromus fluitans</i>	River Swamp Wallaby-grass	6	2003	VU	X	-	3-4
<i>Caladenia orientalis</i>	Eastern Spider-orchid	2	1979	EN	L	e	4
<i>Caladenia tessellate</i> #	Thick-lip Spider-orchid	-	-	VU	-	-	4
<i>Callitris oblonga</i> subsp. <i>oblonga</i>	Dwarf Cypress-pine	2	1998	EN	-	-	3-4 (non-indigenous)
<i>Dianella amoena</i>	Matted Flax-lily	22	2012	EN	L	e	3-4
<i>Eucalyptus strzeleckii</i>	Strzelecki Gum	1470	2019	VU	L	v	2-3
<i>Glycine latrobeana</i> #	Clover Glycine	-	-	VU	L	v	4
<i>Pomaderris vacciniifolia</i> #	Round-leaf Pomaderris	-	-	CR	L	e	4
<i>Prasophyllum frenchii</i> #	Maroon Leek-orchid	-	-	EN	L	e	4
<i>Pterostylis chlorogramma</i> #	Green-striped Greenhood	-	-	VU	L	v	4
<i>Senecio psilocarpus</i>	Swamp Fireweed	-	-	VU	-	v	4
<i>Xerochrysum palustre</i> #	Swamp Everlasting	-	-	VU	L	v	4
<b>STATE SIGNIFICANCE</b>							
<i>Acacia howittii</i>	Sticky Wattle	1	2002	-	-	r	3
<i>Brachyscome salkiniae</i>	Elegant Daisy	2	1989	-	-	r	4
<i>Caladenia aurantiaca</i>	Orange-tip Finger-orchid	1	1942	-	-	r	4
<i>Caladenia australis</i>	Southern Spider-orchid	1	1947	-	-	k	3
<i>Caladenia vulgaris</i>	Slender Pink-fingers	1	2004	-	-	r	3

Scientific name	Common name	Total # of documented records	Last documented record	EPBC	FFG	DEPI	Likely occurrence in study area
<i>Cardamine paucijuga</i> s.s.	Annual Bitter-cress	1	1999	-	-	P	4
<i>Cardamine tenuifolia</i>	Slender Bitter-cress	2	1997	-	-	P	4
<i>Chiloglottis jeanesii</i>	Mountain Bird-orchid	2	2002	-	-	r	3
<i>Craspedia canens</i>	Grey Billy-buttons	1	2004	-	L	e	3
<i>Cyathea cunninghamii</i>	Slender Tree-fern	1	1997	-	L	v	4
<i>Desmodium varians</i>	Slender Tick-trefoil	3	2003	-	-	k	3
<i>Diuris X palachila</i>	Broad-lip Diuris	1	1947	-	-	r	4
<i>Eucalyptus fulgens</i>	Green Scentbark	16	2008	-	-	r	3
<i>Eucalyptus ignorabilis</i> s.s.	Grey Scentbark	1	2012	-	-	r	3
<i>Eucalyptus yarraensis</i>	Yarra Gum	14	2011	-	-	r	1
<i>Grevillea rosmarinifolia</i>	Rosemary Grevillea	2	2013	-	-	P	4
<i>Marsilea mutica</i>	Smooth Nardoo	1	1983	-	-	k	4
<i>Melaleuca armillaris</i> subsp. <i>armillaris</i>	Giant Honey-myrtle	2	1992	-	-	r	3
<i>Oxalis thompsoniae</i>	Fluffy-fruit Wood-sorrel	1	1999	-	-	k	4
<i>Platysace ericoides</i>	Heath Platysace	2	2003	-	-	r	3
<i>Potamogeton australiensis</i>	Thin Pondweed	3	1981	-	-	k	4
<i>Pterostylis grandiflora</i>	Cobra Greenhood	4	2011	-	-	r	3
<i>Pultenaea prolifera</i>	Otway Bush-pea	1	1989	-	-	r	4

## APPENDIX 2 FAUNA

### Appendix 2.1 - Significant Fauna Species

**Table A2.1.** Significant fauna within 10 kilometres of the study area.

**Likelihood:** Habitat characteristics of significant fauna species previously recorded within 10 kilometres of the study area, or that may potentially occur within the study area were assessed to determine their likelihood of occurrence. The likelihood of occurrence rankings is defined below.

1	High Likelihood	<ul style="list-style-type: none"> <li>Known resident in the study area based on site observations, database records, or expert advice; and/or,</li> <li>Recent records (i.e. within five years) of the species in the local area (DELWP 2020f); and/or,</li> <li>The study area contains the species' preferred habitat.</li> </ul>
2	Moderate Likelihood	<ul style="list-style-type: none"> <li>The species is likely to visit the study area regularly (i.e. at least seasonally); and/or,</li> <li>Previous records of the species in the local area (DELWP 2020f); and/or,</li> <li>The study area contains some characteristics of the species' preferred habitat.</li> </ul>
3	Low Likelihood	<ul style="list-style-type: none"> <li>The species is likely to visit the study area occasionally or opportunistically whilst en route to more suitable sites; and/or,</li> <li>There are only limited or historical records of the species in the local area (i.e. more than 20 years old); and/or,</li> <li>The study area contains few or no characteristics of the species' preferred habitat.</li> </ul>
4	Unlikely	<ul style="list-style-type: none"> <li>No previous records of the species in the local area; and/or,</li> <li>The species may fly over the study area when moving between areas of more suitable habitat; and/or,</li> <li>Out of the species' range; and/or,</li> <li>No suitable habitat present.</li> </ul>

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

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

DSE *Advisory List of Threatened Vertebrate Fauna in Victoria* (DSE 2013); *Advisory List of Threatened Invertebrate Fauna in Victoria* (DSE 2009)

NAP *National Action Plan* (Cogger *et al.* 1993; Duncan *et al.* 1999; Garnet *et al.* 2011; Woinarski *et al.* 2014; Sands and New 2002; Tyler 1997)

EX	Extinct	DD	Data deficient (insufficiently or poorly known)
RX	Regionally extinct	L	Listed as threatened under FFG Act
CR	Critically endangered	EN	Endangered
#	Listed on the Protected Matters Search Tool	NT	Near threatened
VU	Vulnerable	CD	Conservation dependent
LC	least concern	RA	Rare

Common Name	Scientific Name	Last Documented Record (VBA)	# Records (VBA)	EPBC Act	FFG ACT	DSE (2013)	Likelihood of occurrence within the study area
<b>NATIONAL SIGNIFICANCE</b>							
Australasian Bittern	<i>Botaurus poiciloptilus</i> #	2009 (Morwell Bridge – Birdline Victoria)	1	EN	L	EN	4
Australian Grayling	<i>Prototroctes maraena</i>	1981	2	VU	L	VU	4
Australian Painted Snipe	<i>Rostratula australis</i> #	-	-	VU	L	CR	4
Broad-toothed Rat	<i>Mastacomys fuscus mordicus</i> #	-	-	VU	L	EN	4
Curlew Sandpiper	<i>Calidris ferruginea</i> #	-	-	CR	-	EN	4
Dwarf Galaxias	<i>Galaxiella pusilla</i>	2012	7	VU	L	EN	4
Eastern Curlew	<i>Numenius madagascariensis</i> #	-	-	CR	-	VU	4
Eastern Quoll	<i>Dasyurus viverrinus</i>	-	1	EN	L	RX	4

Common Name	Scientific Name	Last Documented Record (VBA)	# Records (VBA)	EPBC Act	FFG ACT	DSE (2013)	Likelihood of occurrence within the study area
Golden Sun Moth	<i>Synemon plana</i> #	-	-	CR	L	CR	4
Greater Glider	<i>Petauroides Volans</i>	1981	2	VU	-	VU	3
Grey Falcon	<i>Falco hypoleucos</i> #	-	-	VU	L	EN	4
Grey-headed Flying-fox	<i>Pteropus poliocephalus</i>	2019	1	VU	L	VU	3
Growing Grass Frog	<i>Litoria raniformis</i>	2010	7	VU	L	EN	3
Long-nosed Potoroo	<i>Potorous tridactylus tridactylus</i>	-	-	VU	L	NT	4
Painted Honeyeater	<i>Grantiella picta</i> #	-	-	VU	L	VU	4
Regent Honeyeater	<i>Anthochaera phrygia</i> #	-	-	CR	L	CR	4
Smoky Mouse	<i>Pseudomys fumeus</i> #	-	-	EN	L	EN	4
Southern Brown Bandicoot	<i>Isodon obesulus obesulus</i>	1973	1	EN	L	NT	4
Spot-tailed Quoll	<i>Dasyurus maculatus maculatus</i> #	-	-	EN	L	EN	4
Swift Parrot	<i>Lathamus discolor</i> #	-	-	CR	L	EN	4
<b>STATE SIGNIFICANCE</b>							
Black Falcon	<i>Falco subniger</i>	2000	3	-	L	VU	2
Blue-billed Duck	<i>Oxyura australis</i>	2019	16	-	L	EN	3
Brush-tailed Phascogale	<i>Phascogale tapoatafa</i>	1932	3	-	L	VU	4
Caspian Tern	<i>Hydroprogne caspia</i>	1978	2	-	L	NT	4
Chestnut-rumped Heathwren	<i>Calamanthus pyrrhopygius</i>	1998	1	-	L	VU	4



Common Name	Scientific Name	Last Documented Record (VBA)	# Records (VBA)	EPBC Act	FFG ACT	DSE (2013)	Likelihood of occurrence within the study area
Common Bent-wing Bat	<i>Miniopterus schreibersii</i>	1971	2	-	L	-	4
Diamond Firetail	<i>Stagonopleura guttata</i>	1998	1	-	L	NT	4
Freckled Duck	<i>Stictonetta naevosa</i>	2018	1	-	-	EN	4
Hardhead	<i>Aythya australis</i>	2019	39	-	-	VU	2
Musk Duck	<i>Biziura lobata</i>	2018	9	-	-	VU	2
Narracan Burrowing Crayfish	<i>Engaeus phyllocercus</i>	2011	1	-	L	EN	3
Powerful Owl	<i>Ninox strenua</i>	2013	3	-	L	VU	2
White-bellied Sea-Eagle	<i>Haliaeetus leucogaster</i>	2018	6	-	L	VU	2
White-throated Needletail	<i>Hirundapus caudacutus</i>	2001	22	-	-	VU	2
<b>REGIONAL SIGNIFICANCE</b>							
Emu	<i>Dromaius novaehollandiae</i>	2000	4	-	-	NT	4
Latham's Snipe	<i>Gallinago hardwickii</i>	2014	9	-	-	NT	3
Pied Cormorant	<i>Phalacrocorax varius</i>	1999	16	-	-	NT	4
Royal Spoonbill	<i>Platalea regia</i>	2019	15	-	-	NT	4
Spotted Harrier	<i>Circus assimilis</i>	1977	1	-	-	NT	3
Spotted Quail-thrush	<i>Cinclosoma punctatum</i>	1979	1	-	-	NT	4

## **APPENDIX 3 – NVR REPORTS (DELWP)**

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### **Appendix 3.1 - Terminal Station Option A**

# Native vegetation removal report

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

Date of issue: 01/10/2020

Report ID: EHP\_2020\_178

Time of issue: 12:11 pm

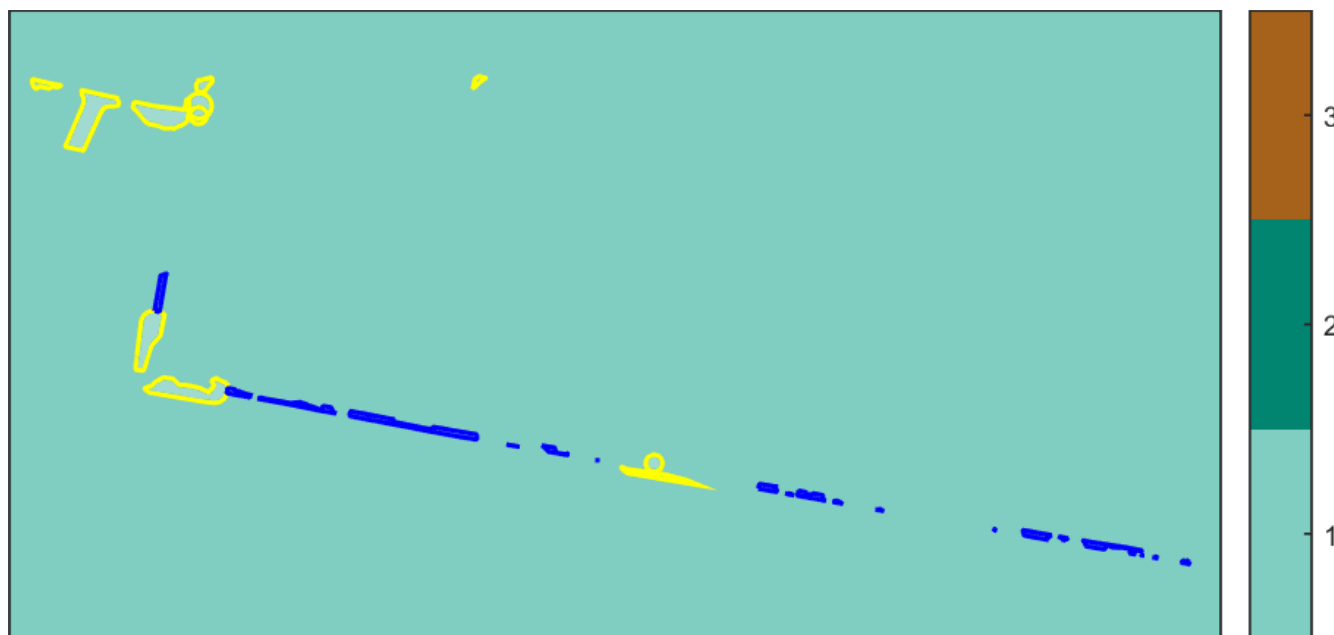
Project ID

EHP10745\_Delburn\_TS1\_VG94

## Assessment pathway

Assessment pathway	Detailed Assessment Pathway
Extent including past and proposed	1.053 ha
Extent of past removal	0.000 ha
Extent of proposed removal	1.053 ha
No. Large trees proposed to be removed	2
Location category of proposed removal	Location 1 The native vegetation is not in an area mapped as an endangered Ecological Vegetation Class (as per the statewide EVC map), sensitive wetland or coastal area. Removal of less than 0.5 hectares in this location will not have a significant impact on any habitat for a rare or threatened species

### 1. Location map



## Offset requirements if a permit is granted

Any approval granted will include a condition to obtain an offset that meets the following requirements:

<b>General offset amount<sup>1</sup></b>	0.351 general habitat units
Vicinity	West Gippsland Catchment Management Authority (CMA) or Latrobe City Council
Minimum strategic biodiversity value score <sup>2</sup>	0.231
Large trees	2 large trees

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

Appendix 1 includes information about the native vegetation to be removed

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

Appendix 3 includes maps showing native vegetation to be removed and extracts of relevant species habitat importance maps

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<sup>1</sup> The general offset amount required is the sum of all general habitat units in Appendix 1.

<sup>2</sup> Minimum strategic biodiversity score is 80 per cent of the weighted average score across habitat zones where a general offset is required

## Next steps

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

If you wish to remove the mapped native vegetation you are required to apply for a permit from your local council. Council will refer your application to DELWP for assessment, as required. **This report is not a referral assessment by DELWP.**

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

Refer to the *Guidelines for the removal, destruction or lopping of native vegetation* (the Guidelines) for a full list of application requirements. This report provides information that meets the following application requirements:

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

Additional application requirements must be met including:

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

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# Appendix 1: Description of native vegetation to be removed

The species-general offset test was applied to your proposal. This test determines if the proposed removal of native vegetation has a proportional impact on any rare or threatened species habitats above the species offset threshold. The threshold is set at 0.005 per cent of the mapped habitat value for a species. When the proportional impact is above the species offset threshold a species offset is required. This test is done for all species mapped at the site. Multiple species offsets will be required if the species offset threshold is exceeded for multiple species.

Where a zone requires species offset(s), the species habitat units for each species in that zone is calculated by the following equation in accordance with the Guidelines:

$$\text{Species habitat units} = \text{extent} \times \text{condition} \times \text{species landscape factor} \times 2, \text{ where the species landscape factor} = 0.5 + (\text{habitat importance score}/2)$$

The species offset amount(s) required is the sum of all species habitat units per zone

Where a zone does not require a species offset, the general habitat units in that zone is calculated by the following equation in accordance with the Guidelines:

$$\text{General habitat units} = \text{extent} \times \text{condition} \times \text{general landscape factor} \times 1.5, \text{ where the general landscape factor} = 0.5 + (\text{strategic biodiversity value score}/2)$$

The general offset amount required is the sum of all general habitat units per zone.

## Native vegetation to be removed

Information provided by or on behalf of the applicant in a GIS file							Information calculated by EnSym					
Zone	Type	BioEVC	BioEVC conservation status	Large tree(s)	Partial removal	Condition score	Polygon Extent	Extent without overlap	SBV score	HI score	Habitat units	Offset type
6-K	Patch	gipp0016	Vulnerable	0	yes	0.145	0.020	0.020	0.750		0.004	General
7-K	Patch	gipp0016	Vulnerable	0	no	0.290	0.022	0.022	0.180		0.006	General
17-O	Patch	gipp0937	Endangered	0	no	0.490	0.135	0.135	0.190		0.059	General
19-L	Patch	gipp0016	Vulnerable	0	yes	0.245	0.002	0.002	0.750		0.001	General
20-L	Patch	gipp0016	Vulnerable	0	yes	0.245	0.000	0.000	0.750		0.000	General
21-L	Patch	gipp0016	Vulnerable	0	yes	0.245	0.000	0.000	0.750		0.000	General
22-L	Patch	gipp0016	Vulnerable	0	yes	0.245	0.000	0.000	0.750		0.000	General
23-K	Patch	gipp0016	Vulnerable	0	yes	0.145	0.002	0.002	0.750		0.000	General
24-K	Patch	gipp0016	Vulnerable	0	yes	0.145	0.019	0.019	0.555		0.003	General
25-K	Patch	gipp0016	Vulnerable	0	yes	0.145	0.000	0.000	0.220		0.000	General
26-K	Patch	gipp0016	Vulnerable	0	yes	0.145	0.001	0.001	0.220		0.000	General



Information provided by or on behalf of the applicant in a GIS file							Information calculated by EnSym					
Zone	Type	BioEVC	BioEVC conservation status	Large tree(s)	Partial removal	Condition score	Polygon Extent	Extent without overlap	SBV score	HI score	Habitat units	Offset type
27-K	Patch	gipp0016	Vulnerable	0	yes	0.145	0.001	0.001	0.480		0.000	General
28-K	Patch	gipp0016	Vulnerable	0	yes	0.145	0.000	0.000	0.480		0.000	General
29-K	Patch	gipp0016	Vulnerable	0	yes	0.145	0.010	0.010	0.480		0.002	General
30-K	Patch	gipp0016	Vulnerable	0	yes	0.145	0.006	0.006	0.480		0.001	General
31-K	Patch	gipp0016	Vulnerable	0	yes	0.145	0.013	0.013	0.480		0.002	General
32-K	Patch	gipp0016	Vulnerable	0	no	0.290	0.041	0.041	0.480		0.013	General
33-K	Patch	gipp0016	Vulnerable	0	yes	0.145	0.000	0.000	0.480		0.000	General
34-K	Patch	gipp0016	Vulnerable	0	yes	0.145	0.000	0.000	0.480		0.000	General
35-K	Patch	gipp0016	Vulnerable	0	yes	0.145	0.007	0.007	0.480		0.001	General
36-K	Patch	gipp0016	Vulnerable	0	yes	0.145	0.000	0.000	0.480		0.000	General
37-K	Patch	gipp0016	Vulnerable	0	yes	0.145	0.077	0.077	0.323		0.011	General
38-K	Patch	gipp0016	Vulnerable	0	yes	0.145	0.026	0.026	0.347		0.004	General
39-K	Patch	gipp0016	Vulnerable	0	yes	0.145	0.013	0.013	0.530		0.002	General
40-K	Patch	gipp0016	Vulnerable	0	no	0.290	0.167	0.167	0.434		0.052	General
3-TS	Scattered Tree	gipp0016	Vulnerable	0	no	0.200	0.031	0.031	0.480		0.007	General
7-TS	Scattered Tree	gipp0029	Endangered	0	no	0.200	0.031	0.011	0.180		0.002	General
2-TL	Scattered Tree	gipp0029	Vulnerable	1	no	0.200	0.070	0.067	0.180		0.012	General
77-CW	Patch	wetland	Vulnerable	0	no	0.340	0.009	0.009	0.250		0.003	General
78-X	Patch	gipp0937	Endangered	0	no	0.590	0.138	0.138	0.180		0.072	General
18-O	Patch	gipp0937	Endangered	0	yes	0.245	0.026	0.026	0.190		0.006	General

Information provided by or on behalf of the applicant in a GIS file							Information calculated by EnSym					
Zone	Type	BioEVC	BioEVC conservation status	Large tree(s)	Partial removal	Condition score	Polygon Extent	Extent without overlap	SBV score	HI score	Habitat units	Offset type
1-W	Patch	gipp0937	Endangered	0	no	0.490	0.020	0.020	0.150		0.008	General
2-W	Patch	gipp0937	Endangered	1	no	0.490	0.187	0.187	0.159		0.080	General

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

This table lists all rare or threatened species' habitats mapped at the site .

Species common name	Species scientific name	Species number	Conservation status	Group	Habitat impacted	% habitat value affected
Strzelecki Gum	<i>Eucalyptus strzeleckii</i>	504558	Vulnerable	Dispersed	Habitat importance map	0.0003
Woolly Waterlily	<i>Philydrum lanuginosum</i>	502494	Vulnerable	Dispersed	Habitat importance map	0.0001
Veined Spear-grass	<i>Austrostipa rudis</i> subsp. <i>australis</i>	504940	Rare	Dispersed	Habitat importance map	0.0001
Green Scentbark	<i>Eucalyptus fulgens</i>	505175	Rare	Dispersed	Habitat importance map	0.0000
Spurred Helmet-orchid	<i>Corybas aconitiflorus</i>	500835	Rare	Dispersed	Habitat importance map	0.0000
Thick-lip Spider-orchid	<i>Caladenia tessellata</i>	500547	Vulnerable	Dispersed	Habitat importance map	0.0000
Bog Gum	<i>Eucalyptus kitsoniana</i>	501290	Rare	Dispersed	Habitat importance map	0.0000
Forest Red-box	<i>Eucalyptus polyanthemus</i> subsp. <i>longior</i>	504754	Rare	Dispersed	Habitat importance map	0.0000
Matted Flax-lily	<i>Dianella amoena</i>	505084	Endangered	Dispersed	Habitat importance map	0.0000
Rush Lily	<i>Sowerbaea juncea</i>	503207	Rare	Dispersed	Habitat importance map	0.0000
Cobra Greenhood	<i>Pterostylis grandiflora</i>	502798	Rare	Dispersed	Habitat importance map	0.0000
Grey Goshawk	<i>Accipiter novae-hollandiae novae-hollandiae</i>	10220	Vulnerable	Dispersed	Habitat importance map	0.0000
One-flower Early Nancy	<i>Wurmbea uniflora</i>	503583	Rare	Dispersed	Habitat importance map	0.0000
Lewin's Rail	<i>Lewinia pectoralis pectoralis</i>	10045	Vulnerable	Dispersed	Habitat importance map	0.0000
Rough Blown-grass	<i>Lachnagrostis rudis</i> subsp. <i>rudis</i>	500159	Endangered	Dispersed	Habitat importance map	0.0000
Silky Kidney-weed	<i>Dichondra</i> sp. 1	505786	Rare	Dispersed	Habitat importance map	0.0000
Swamp Skink	<i>Lissolepis coventryi</i>	12407	Vulnerable	Dispersed	Habitat importance map	0.0000
Pale Swamp Everlasting	<i>Coronidium gunnianum</i>	504655	Vulnerable	Dispersed	Habitat importance map	0.0000
Southern Toadlet	<i>Pseudophryne semimarmorata</i>	13125	Vulnerable	Dispersed	Habitat importance map	0.0000

Masked Owl	<i>Tyto novaehollandiae novaehollandiae</i>	10250	Endangered	Dispersed	Habitat importance map	0.0000
Golden Pomaderris	<i>Pomaderris aurea</i>	502651	Rare	Dispersed	Habitat importance map	0.0000
Black Falcon	<i>Falco subniger</i>	10238	Vulnerable	Dispersed	Habitat importance map	0.0000
Powerful Owl	<i>Ninox strenua</i>	10248	Vulnerable	Dispersed	Habitat importance map	0.0000
White-throated Needletail	<i>Hirundapus caudacutus</i>	10334	Vulnerable	Dispersed	Habitat importance map	0.0000
Fringed Helmet-orchid	<i>Corybas fimbriatus</i>	500839	Rare	Dispersed	Habitat importance map	0.0000
Martin's Toadlet	<i>Uperoleia martini</i>	13930	Critically endangered	Dispersed	Habitat importance map	0.0000
Slender Pink-fingers	<i>Caladenia vulgaris</i>	504449	Rare	Dispersed	Habitat importance map	0.0000
Fisch's Greenhood	<i>Pterostylis fischii</i>	502795	Rare	Dispersed	Habitat importance map	0.0000
Grey Billy-buttons	<i>Craspedia canens</i>	504643	Endangered	Dispersed	Habitat importance map	0.0000
Lace Monitor	<i>Varanus varius</i>	12283	Endangered	Dispersed	Habitat importance map	0.0000
Lanky Buttons	<i>Leptorhynchus elongatus</i>	501941	Endangered	Dispersed	Habitat importance map	0.0000
Australasian Bittern	<i>Botaurus poiciloptilus</i>	10197	Endangered	Dispersed	Habitat importance map	0.0000
Heath Platysace	<i>Platysace ericoides</i>	502571	Rare	Dispersed	Habitat importance map	0.0000
Baillon's Crake	<i>Porzana pusilla palustris</i>	10050	Vulnerable	Dispersed	Habitat importance map	0.0000
Leafy Twig-sedge	<i>Cladium procerum</i>	500786	Rare	Dispersed	Habitat importance map	0.0000
Austral Crane's-bill	<i>Geranium solanderi</i> var. <i>solanderi</i> s.s.	505337	Vulnerable	Dispersed	Habitat importance map	0.0000
Orange-tip Finger-orchid	<i>Caladenia aurantiaca</i>	500523	Rare	Dispersed	Habitat importance map	0.0000
Austral Moonwort	<i>Botrychium australe</i>	500445	Vulnerable	Dispersed	Habitat importance map	0.0000
Slender Wire-lily	<i>Laxmannia gracilis</i>	501889	Rare	Dispersed	Habitat importance map	0.0000
Tremont Bundy	<i>Eucalyptus</i> aff. <i>goniocalyx</i> (Dandenong Ranges)	507008	Vulnerable	Dispersed	Habitat importance map	0.0000

#### Habitat group

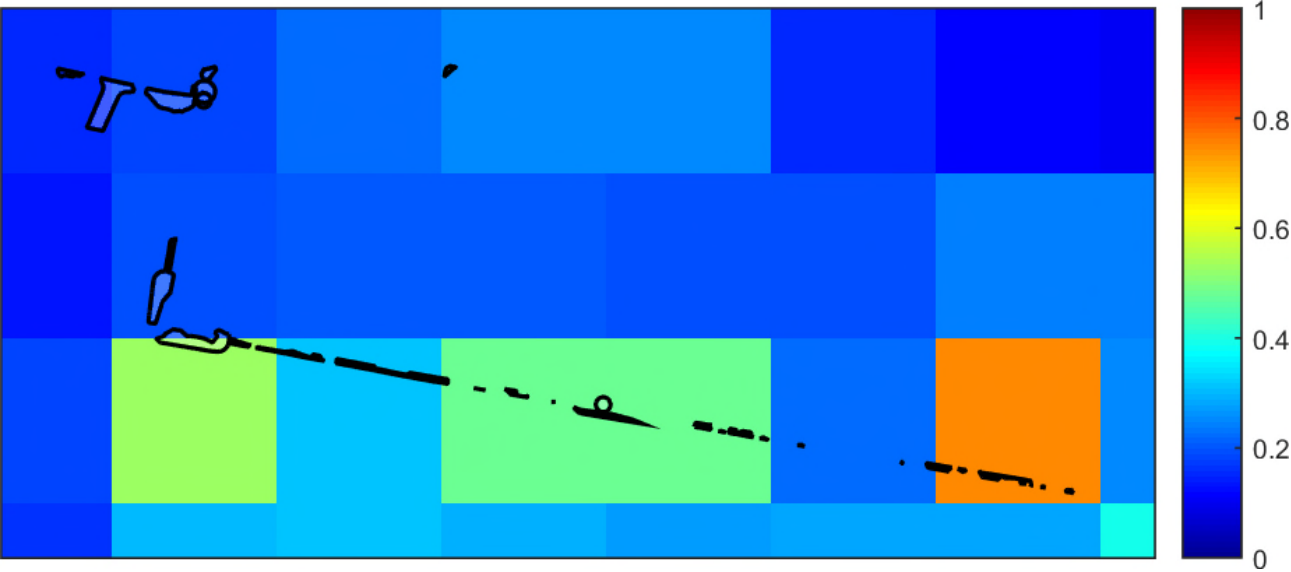
- Highly localised habitat means there is 2000 hectares or less mapped habitat for the species
- Dispersed habitat means there is more than 2000 hectares of mapped habitat for the species

**Habitat impacted**

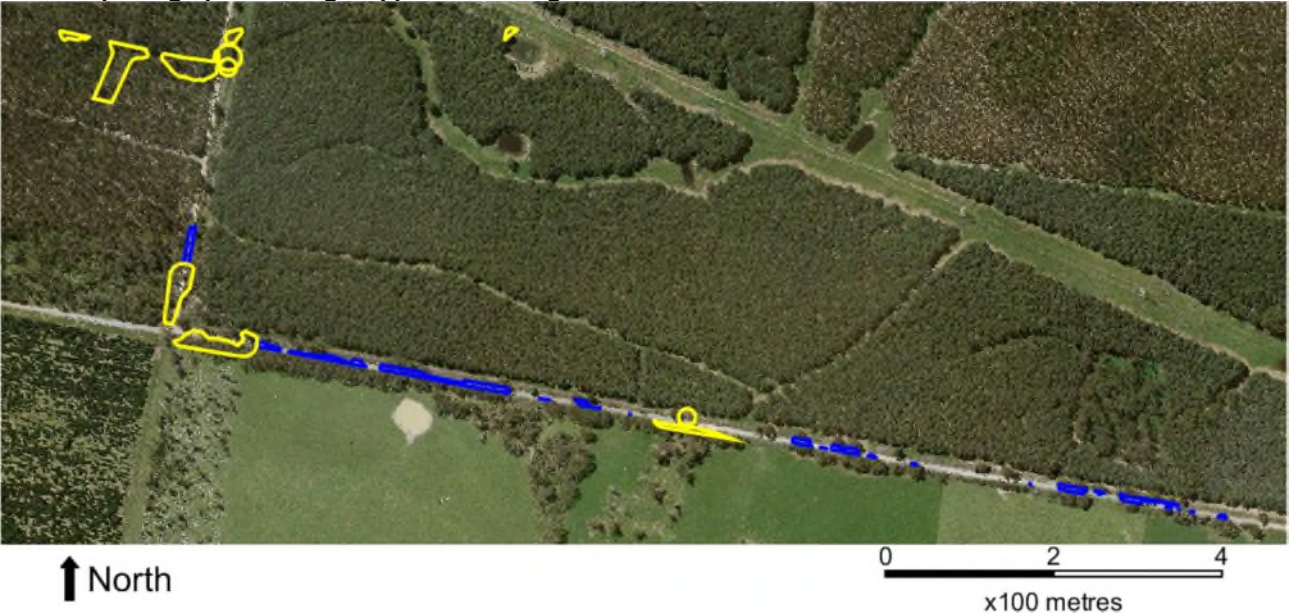
- Habitat importance maps are the maps defined in the Guidelines that include all the mapped habitat for a rare or threatened species
- Top ranking maps are the maps defined in the Guidelines that depict the important areas of a dispersed species habitat, developed from the highest habitat importance scores in dispersed species habitat maps and selected VBA records
- Selected VBA record is an area in Victoria that represents a large population, roosting or breeding site etc.

Appendix 3 – Images of mapped native vegetation

2. Strategic biodiversity values map

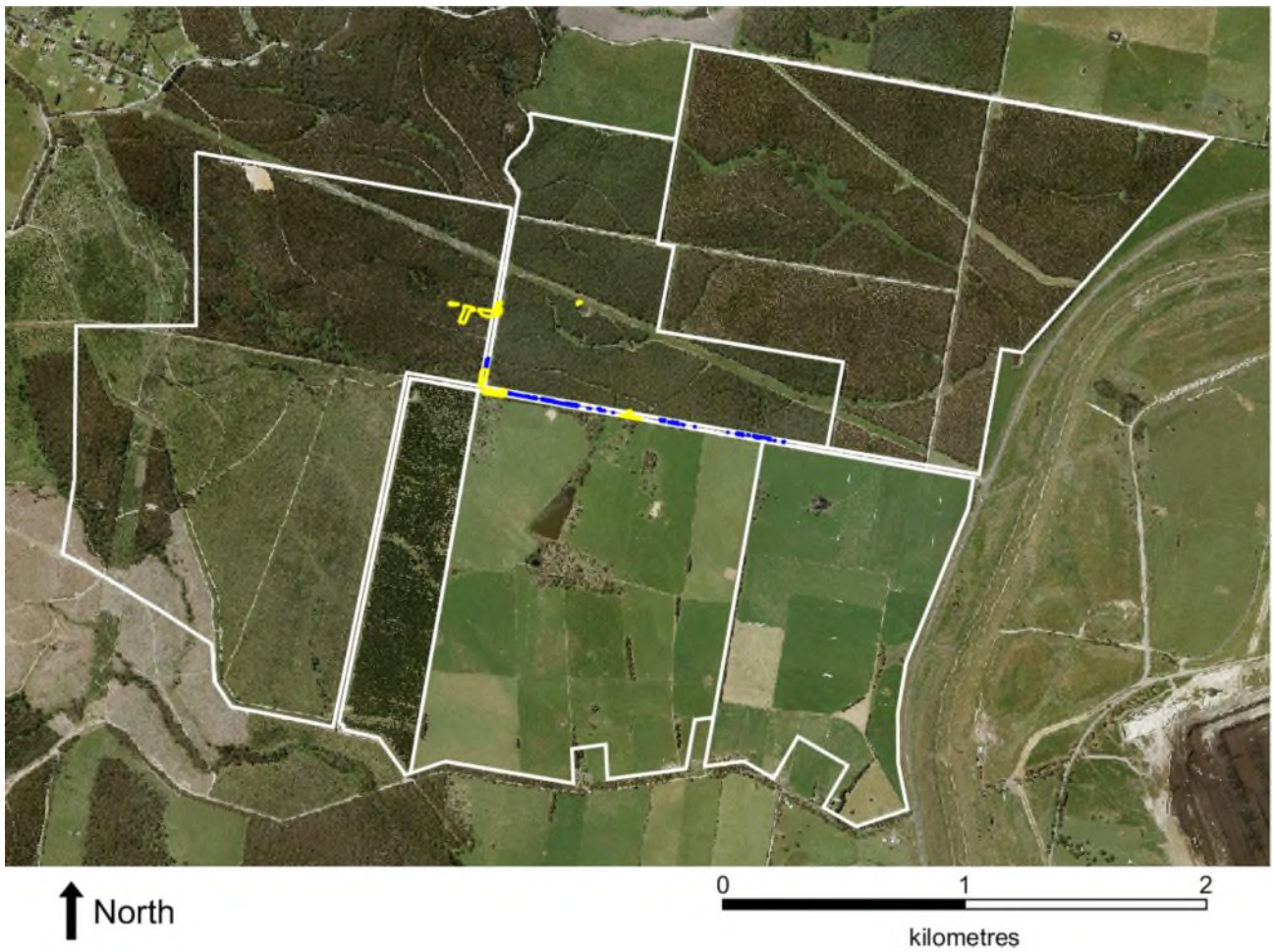


3. Aerial photograph showing mapped native vegetation





#### 4. Map of the property in context



Yellow boundaries denote areas of proposed native vegetation removal.

Blue boundaries denote zones of partial removal with a halved condition score.



## **Appendix 3.2 - Terminal Station Option B**

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

Date of issue: 01/10/2020

Report ID: EHP\_2020\_179

Time of issue: 12:46 pm

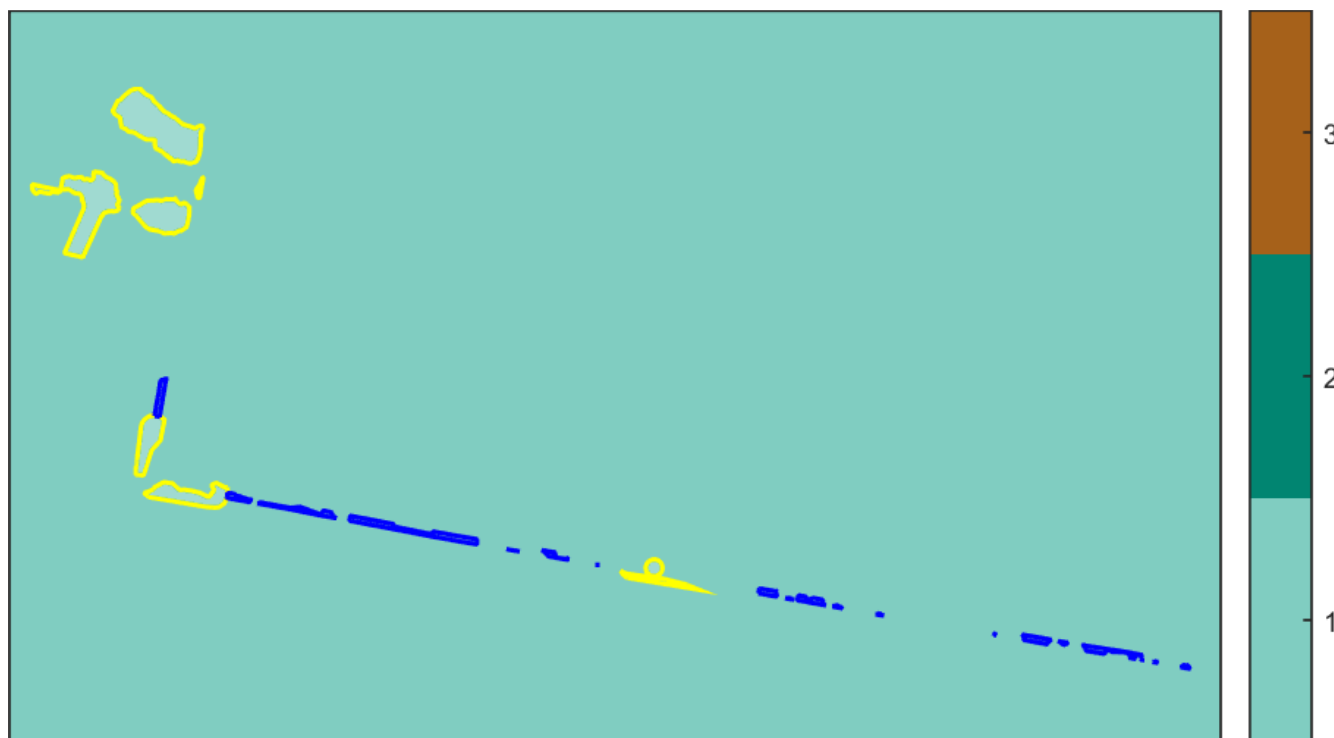
Project ID

EHP10745\_Delburn\_TS2\_VG94

## Assessment pathway

Assessment pathway	Detailed Assessment Pathway
Extent including past and proposed	1.657 ha
Extent of past removal	0.000 ha
Extent of proposed removal	1.657 ha
No. Large trees proposed to be removed	4
Location category of proposed removal	Location 1 The native vegetation is not in an area mapped as an endangered Ecological Vegetation Class (as per the statewide EVC map), sensitive wetland or coastal area. Removal of less than 0.5 hectares in this location will not have a significant impact on any habitat for a rare or threatened species

### 1. Location map



## Offset requirements if a permit is granted

Any approval granted will include a condition to obtain an offset that meets the following requirements:

<b>General offset amount<sup>1</sup></b>	0.683 general habitat units
Vicinity	West Gippsland Catchment Management Authority (CMA) or Latrobe City Council
Minimum strategic biodiversity value score <sup>2</sup>	0.197
Large trees	4 large trees

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

Appendix 1 includes information about the native vegetation to be removed

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

Appendix 3 includes maps showing native vegetation to be removed and extracts of relevant species habitat importance maps

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<sup>1</sup> The general offset amount required is the sum of all general habitat units in Appendix 1.

<sup>2</sup> Minimum strategic biodiversity score is 80 per cent of the weighted average score across habitat zones where a general offset is required

## Next steps

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

If you wish to remove the mapped native vegetation you are required to apply for a permit from your local council. Council will refer your application to DELWP for assessment, as required. **This report is not a referral assessment by DELWP.**

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

Refer to the *Guidelines for the removal, destruction or lopping of native vegetation* (the Guidelines) for a full list of application requirements. This report provides information that meets the following application requirements:

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

Additional application requirements must be met including:

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

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# Appendix 1: Description of native vegetation to be removed

The species-general offset test was applied to your proposal. This test determines if the proposed removal of native vegetation has a proportional impact on any rare or threatened species habitats above the species offset threshold. The threshold is set at 0.005 per cent of the mapped habitat value for a species. When the proportional impact is above the species offset threshold a species offset is required. This test is done for all species mapped at the site. Multiple species offsets will be required if the species offset threshold is exceeded for multiple species.

Where a zone requires species offset(s), the species habitat units for each species in that zone is calculated by the following equation in accordance with the Guidelines:

$$\text{Species habitat units} = \text{extent} \times \text{condition} \times \text{species landscape factor} \times 2, \text{ where the species landscape factor} = 0.5 + (\text{habitat importance score}/2)$$

The species offset amount(s) required is the sum of all species habitat units per zone

Where a zone does not require a species offset, the general habitat units in that zone is calculated by the following equation in accordance with the Guidelines:

$$\text{General habitat units} = \text{extent} \times \text{condition} \times \text{general landscape factor} \times 1.5, \text{ where the general landscape factor} = 0.5 + (\text{strategic biodiversity value score}/2)$$

The general offset amount required is the sum of all general habitat units per zone.

## Native vegetation to be removed

Information provided by or on behalf of the applicant in a GIS file							Information calculated by EnSym					
Zone	Type	BioEVC	BioEVC conservation status	Large tree(s)	Partial removal	Condition score	Polygon Extent	Extent without overlap	SBV score	HI score	Habitat units	Offset type
6-K	Patch	gipp0016	Vulnerable	0	yes	0.145	0.020	0.020	0.750		0.004	General
19-L	Patch	gipp0016	Vulnerable	0	yes	0.245	0.002	0.002	0.750		0.001	General
20-L	Patch	gipp0016	Vulnerable	0	yes	0.245	0.000	0.000	0.750		0.000	General
21-L	Patch	gipp0016	Vulnerable	0	yes	0.245	0.000	0.000	0.750		0.000	General
22-L	Patch	gipp0016	Vulnerable	0	yes	0.245	0.000	0.000	0.750		0.000	General
23-K	Patch	gipp0016	Vulnerable	0	yes	0.145	0.002	0.002	0.750		0.000	General
24-K	Patch	gipp0016	Vulnerable	0	yes	0.145	0.019	0.019	0.555		0.003	General
25-K	Patch	gipp0016	Vulnerable	0	yes	0.145	0.000	0.000	0.220		0.000	General
26-K	Patch	gipp0016	Vulnerable	0	yes	0.145	0.001	0.001	0.220		0.000	General
27-K	Patch	gipp0016	Vulnerable	0	yes	0.145	0.001	0.001	0.480		0.000	General
28-K	Patch	gipp0016	Vulnerable	0	yes	0.145	0.000	0.000	0.480		0.000	General



Information provided by or on behalf of the applicant in a GIS file							Information calculated by EnSym					
Zone	Type	BioEVC	BioEVC conservation status	Large tree(s)	Partial removal	Condition score	Polygon Extent	Extent without overlap	SBV score	HI score	Habitat units	Offset type
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30-K	Patch	gipp0016	Vulnerable	0	yes	0.145	0.006	0.006	0.480		0.001	General
31-K	Patch	gipp0016	Vulnerable	0	yes	0.145	0.013	0.013	0.480		0.002	General
32-K	Patch	gipp0016	Vulnerable	0	no	0.290	0.041	0.041	0.480		0.013	General
33-K	Patch	gipp0016	Vulnerable	0	yes	0.145	0.000	0.000	0.480		0.000	General
34-K	Patch	gipp0016	Vulnerable	0	yes	0.145	0.000	0.000	0.480		0.000	General
35-K	Patch	gipp0016	Vulnerable	0	yes	0.145	0.007	0.007	0.480		0.001	General
36-K	Patch	gipp0016	Vulnerable	0	yes	0.145	0.000	0.000	0.480		0.000	General
37-K	Patch	gipp0016	Vulnerable	0	yes	0.145	0.077	0.077	0.323		0.011	General
38-K	Patch	gipp0016	Vulnerable	0	yes	0.145	0.026	0.026	0.347		0.004	General
3-TS	Scattered Tree	gipp0016	Vulnerable	0	no	0.200	0.031	0.031	0.480		0.007	General
7-K	Patch	gipp0016	Vulnerable	0	no	0.290	0.009	0.009	0.180		0.002	General
17-O	Patch	gipp0937	Endangered	0	no	0.490	0.135	0.135	0.190		0.059	General
39-K	Patch	gipp0016	Vulnerable	0	yes	0.145	0.013	0.013	0.530		0.002	General
40-K	Patch	gipp0016	Vulnerable	0	no	0.290	0.167	0.167	0.434		0.052	General
18-O	Patch	gipp0937	Endangered	0	yes	0.245	0.026	0.026	0.190		0.006	General
1-W	Patch	gipp0937	Endangered	0	no	0.490	0.020	0.020	0.150		0.008	General
2-W	Patch	gipp0937	Endangered	1	no	0.490	0.343	0.343	0.162		0.146	General
1-X	Patch	gipp0937	Endangered	3	no	0.590	0.475	0.475	0.177		0.247	General
2-X	Patch	gipp0937	Endangered	0	no	0.590	0.210	0.210	0.180		0.110	General

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

This table lists all rare or threatened species' habitats mapped at the site .

Species common name	Species scientific name	Species number	Conservation status	Group	Habitat impacted	% habitat value affected
Strzelecki Gum	<i>Eucalyptus strzeleckii</i>	504558	Vulnerable	Dispersed	Habitat importance map	0.0007
Woolly Waterlily	<i>Philydrum lanuginosum</i>	502494	Vulnerable	Dispersed	Habitat importance map	0.0004
Veined Spear-grass	<i>Austrostipa rudis</i> subsp. <i>australis</i>	504940	Rare	Dispersed	Habitat importance map	0.0002
Green Scentbark	<i>Eucalyptus fulgens</i>	505175	Rare	Dispersed	Habitat importance map	0.0002
Spurred Helmet-orchid	<i>Corybas aconitiflorus</i>	500835	Rare	Dispersed	Habitat importance map	0.0001
Thick-lip Spider-orchid	<i>Caladenia tessellata</i>	500547	Vulnerable	Dispersed	Habitat importance map	0.0001
Rush Lily	<i>Sowerbaea juncea</i>	503207	Rare	Dispersed	Habitat importance map	0.0001
Matted Flax-lily	<i>Dianella amoena</i>	505084	Endangered	Dispersed	Habitat importance map	0.0001
Forest Red-box	<i>Eucalyptus polyanthemus</i> subsp. <i>longior</i>	504754	Rare	Dispersed	Habitat importance map	0.0001
Cobra Greenhood	<i>Pterostylis grandiflora</i>	502798	Rare	Dispersed	Habitat importance map	0.0001
Swamp Skink	<i>Lissolepis coventryi</i>	12407	Vulnerable	Dispersed	Habitat importance map	0.0001
One-flower Early Nancy	<i>Wurmbea uniflora</i>	503583	Rare	Dispersed	Habitat importance map	0.0000
Rough Blown-grass	<i>Lachnagrostis rudis</i> subsp. <i>rudis</i>	500159	Endangered	Dispersed	Habitat importance map	0.0000
Silky Kidney-weed	<i>Dichondra</i> sp. 1	505786	Rare	Dispersed	Habitat importance map	0.0000
Bog Gum	<i>Eucalyptus kitsoniana</i>	501290	Rare	Dispersed	Habitat importance map	0.0000
Grey Goshawk	<i>Accipiter novaehollandiae</i> <i>novaehollandiae</i>	10220	Vulnerable	Dispersed	Habitat importance map	0.0000
Pale Swamp Everlasting	<i>Coronidium gunnianum</i>	504655	Vulnerable	Dispersed	Habitat importance map	0.0000
Golden Pomaderris	<i>Pomaderris aurea</i>	502651	Rare	Dispersed	Habitat importance map	0.0000
Masked Owl	<i>Tyto novaehollandiae</i> <i>novaehollandiae</i>	10250	Endangered	Dispersed	Habitat importance map	0.0000

Southern Toadlet	<i>Pseudophryne semimarmorata</i>	13125	Vulnerable	Dispersed	Habitat importance map	0.0000
Powerful Owl	<i>Ninox strenua</i>	10248	Vulnerable	Dispersed	Habitat importance map	0.0000
Black Falcon	<i>Falco subniger</i>	10238	Vulnerable	Dispersed	Habitat importance map	0.0000
Lewin's Rail	<i>Lewinia pectoralis pectoralis</i>	10045	Vulnerable	Dispersed	Habitat importance map	0.0000
White-throated Needletail	<i>Hirundapus caudacutus</i>	10334	Vulnerable	Dispersed	Habitat importance map	0.0000
Lanky Buttons	<i>Leptorhynchus elongatus</i>	501941	Endangered	Dispersed	Habitat importance map	0.0000
Fringed Helmet-orchid	<i>Corybas fimbriatus</i>	500839	Rare	Dispersed	Habitat importance map	0.0000
Tremont Bundy	<i>Eucalyptus</i> aff. <i>goniocalyx</i> (Dandenong Ranges)	507008	Vulnerable	Dispersed	Habitat importance map	0.0000
Martin's Toadlet	<i>Uperoleia martini</i>	13930	Critically endangered	Dispersed	Habitat importance map	0.0000
Slender Pink-fingers	<i>Caladenia vulgaris</i>	504449	Rare	Dispersed	Habitat importance map	0.0000
Fisch's Greenhood	<i>Pterostylis fischii</i>	502795	Rare	Dispersed	Habitat importance map	0.0000
Lace Monitor	<i>Varanus varius</i>	12283	Endangered	Dispersed	Habitat importance map	0.0000
Grey Billy-buttons	<i>Craspedia canens</i>	504643	Endangered	Dispersed	Habitat importance map	0.0000
Heath Platysace	<i>Platysace ericoides</i>	502571	Rare	Dispersed	Habitat importance map	0.0000
Austral Crane's-bill	<i>Geranium solanderi</i> var. <i>solanderi</i> s.s.	505337	Vulnerable	Dispersed	Habitat importance map	0.0000
Orange-tip Finger-orchid	<i>Caladenia aurantiaca</i>	500523	Rare	Dispersed	Habitat importance map	0.0000
Austral Moonwort	<i>Botrychium australe</i>	500445	Vulnerable	Dispersed	Habitat importance map	0.0000
Slender Wire-lily	<i>Laxmannia gracilis</i>	501889	Rare	Dispersed	Habitat importance map	0.0000

#### Habitat group

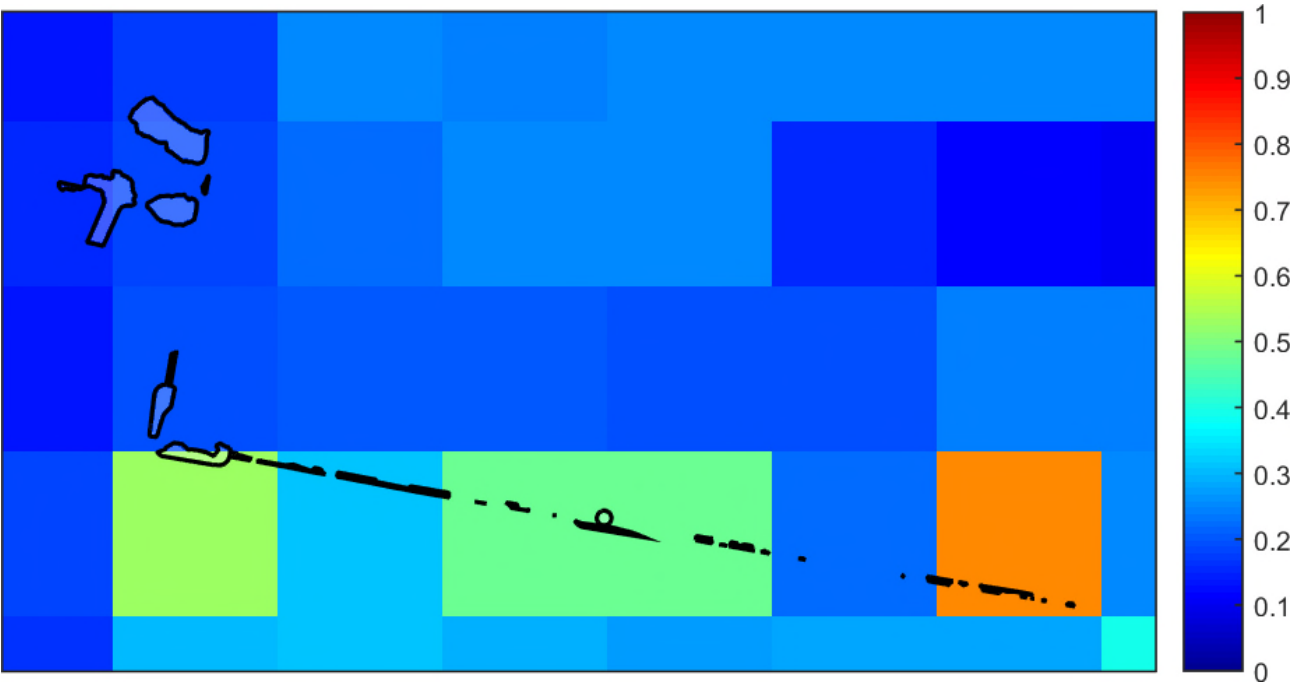
- Highly localised habitat means there is 2000 hectares or less mapped habitat for the species
- Dispersed habitat means there is more than 2000 hectares of mapped habitat for the species

#### Habitat impacted

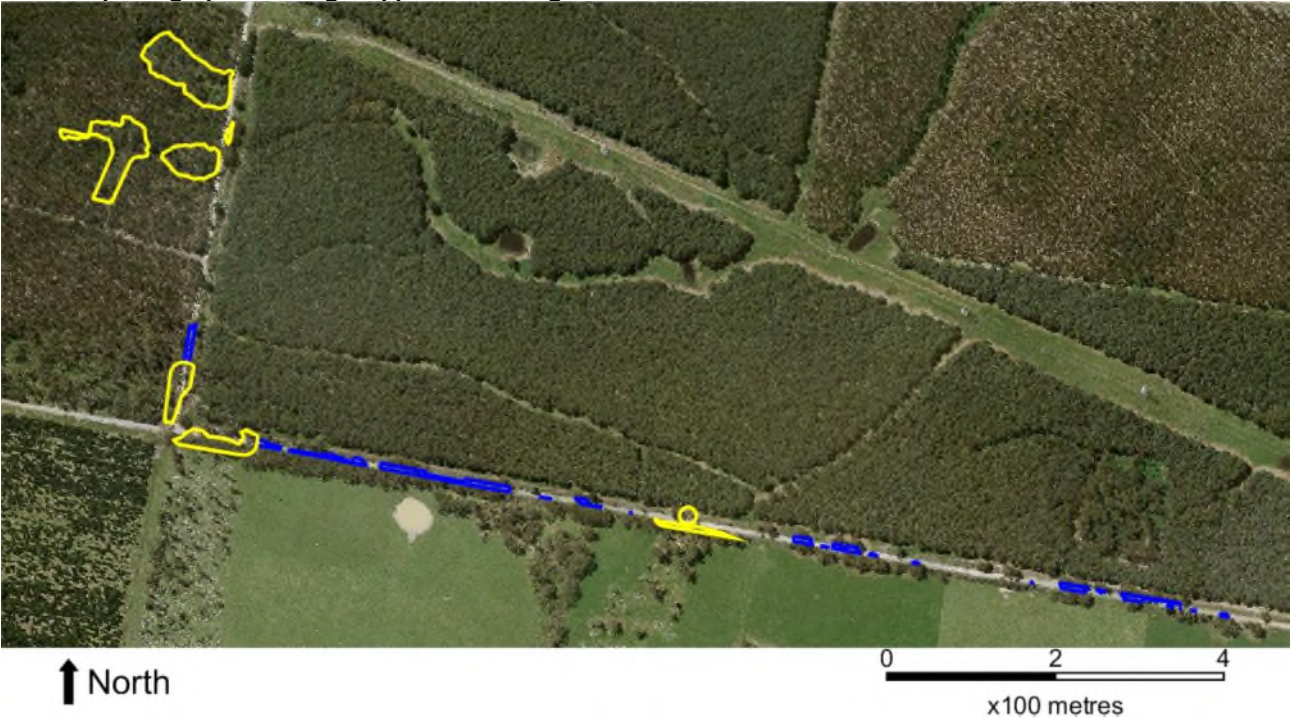
- Habitat importance maps are the maps defined in the Guidelines that include all the mapped habitat for a rare or threatened species
- Top ranking maps are the maps defined in the Guidelines that depict the important areas of a dispersed species habitat, developed from the highest habitat importance scores in dispersed species habitat maps and selected VBA records
- Selected VBA record is an area in Victoria that represents a large population, roosting or breeding site etc.

# Appendix 3 – Images of mapped native vegetation

## 2. Strategic biodiversity values map

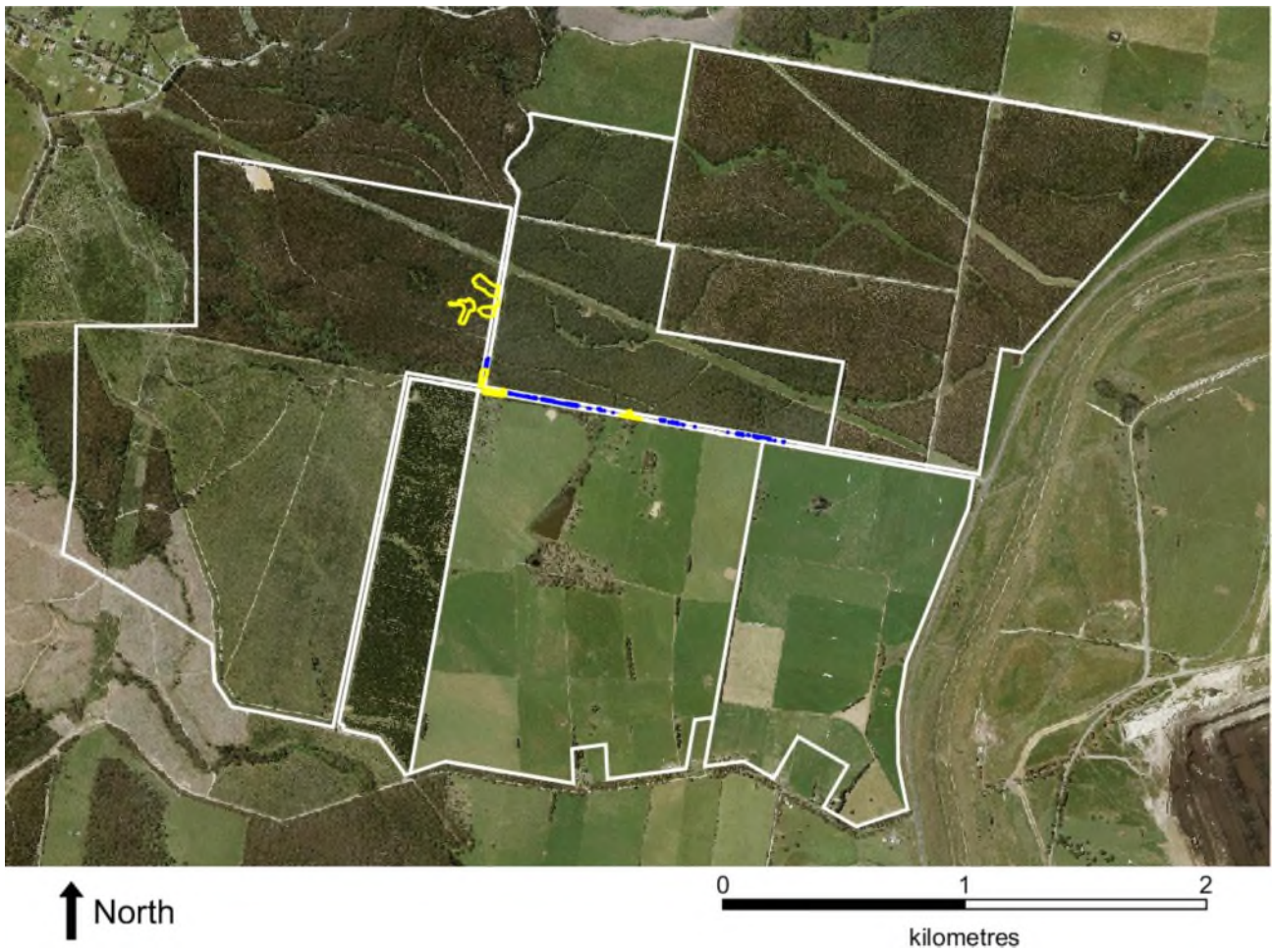


## 3. Aerial photograph showing mapped native vegetation





#### 4. Map of the property in context



Yellow boundaries denote areas of proposed native vegetation removal.

Blue boundaries denote zones of partial removal with a halved condition score.



## **APPENDIX 4 - AVAILABLE NATIVE VEGETATION CREDITS**

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# Report of available native vegetation credits

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

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

Date and time: 24/09/2020 07:47

Report ID: 5923

## What was searched for?

### General offset

General habitat units	Strategic biodiversity value	Large trees	Vicinity (Catchment Management Authority or Municipal district)	
0.681	0.198	4	CMA	West Gippsland
			or LGA	Latrobe City

## Details of available native vegetation credits on 24 September 2020 07:47

### These sites meet your requirements for general offsets.

Credit Site ID	GHU	LT	CMA	LGA	Land owner	Trader	Fixed price	Broker(s)
BBA-0119	6.752	73	West Gippsland	South Gippsland Shire	Yes	Yes	No	VegLink
BBA-0138	24.007	1605	West Gippsland	Wellington Shire	Yes	Yes	No	Ecocentric
BBA-0759	18.868	659	West Gippsland	Wellington Shire	Yes	Yes	No	Contact NVOR
BBA-1041	8.504	212	West Gippsland	Wellington Shire	Yes	Yes	No	Bio Offsets, Ethos, VegLink
BBA-1146	1.194	8	West Gippsland	South Gippsland Shire	Yes	Yes	No	Contact NVOR
BBA-2321	3.564	201	West Gippsland	Wellington Shire	Yes	Yes	No	Bio Offsets, VegLink
BBA-2623	25.882	933	West Gippsland	Baw Baw Shire	Yes	Yes	No	Contact NVOR
BBA-2766	92.457	522	West Gippsland	Wellington Shire	Yes	Yes	No	Contact NVOR
BBA-2810	7.758	613	West Gippsland	Latrobe City	Yes	Yes	No	VegLink
BBA-2833	5.008	17	West Gippsland	Wellington Shire	Yes	Yes	No	Ethos
BBA-2839	0.929	14	West Gippsland	Baw Baw Shire	Yes	Yes	No	Contact NVOR
BBA-2845	28.727	1080	West Gippsland	Baw Baw Shire	Yes	Yes	No	Contact NVOR
BBA-2855	3.158	10	West Gippsland	Wellington Shire	Yes	Yes	No	VegLink
TFN-C0698	4.036	118	West Gippsland	East Gippsland Shire	Yes	Yes	No	Ecocentric, Ethos, VegLink
TFN-C0977	2.959	54	West Gippsland	Baw Baw Shire	Yes	Yes	No	TFN
TFN-C1442	2.726	58	West Gippsland	Baw Baw Shire	Yes	Yes	No	TFN
TFN-C1692	2.291	324	West Gippsland	South Gippsland Shire	Yes	Yes	No	Ecocentric, Ethos, VegLink
TFN-C1893	2.005	82	West Gippsland	Wellington Shire	Yes	Yes	No	Ecocentric, Ethos

VC_CFL-2320_02	5.910	14	West Gippsland	Wellington Shire	Yes	Yes	No	VegLink
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## These sites meet your requirements using alternative arrangements for general offsets.

Credit Site ID	GHU	LT	CMA	LGA	Land owner	Trader	Fixed price	Broker(s)
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There are no sites listed in the Native Vegetation Credit Register that meet your offset requirements when applying the alternative arrangements as listed in section 11.2 of the Guidelines for the removal, destruction or lopping of native vegetation.

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

Credit Site ID	GHU	LT	CMA	LGA	Land owner	Trader	Fixed price	Broker(s)
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There are no potential sites listed in the Native Vegetation Credit Register that meet your offset requirements.

*LT - Large Trees*

*CMA - Catchment Management Authority*

*LGA - Municipal District or Local Government Authority*

## Next steps

### If applying for approval to remove native vegetation

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

### If you have approval to remove native vegetation

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

## Broker contact details

Broker Abbreviation	Broker Name	Phone	Email	Website
Abezco	Abzeco Pty. Ltd.	(03) 9431 5444	offsets@abzeco.com.au	www.abzeco.com.au
Baw Baw SC	Baw Baw Shire Council	(03) 5624 2411	bawbaw@bawbawshire.vic.gov.au	www.bawbawshire.vic.gov.au
Bio Offsets	Biodiversity Offsets Victoria	0452 161 013	info@offsetsvictoria.com.au	www.offsetsvictoria.com.au
Contact NVOR	Native Vegetation Offset Register	136 186	nativevegetation.offsetregister@delwp.vic.gov.au	www.environment.vic.gov.au/native-vegetation
Ecocentric	Ecocentric Environmental Consulting	0410 564 139	ecocentric@me.com	Not available
Ethos	Ethos NRM Pty Ltd	(03) 5153 0037	offsets@ethosnrm.com.au	www.ethosnrm.com.au
Nillumbik SC	Nillumbik Shire Council	(03) 9433 3316	offsets@nillumbik.vic.gov.au	www.nillumbik.vic.gov.au
TFN	Trust for Nature	8631 5888	offsets@tfn.org.au	www.trustfornature.org.au
VegLink	Vegetation Link Pty Ltd	(03) 8578 4250 or 1300 834 546	offsets@vegetationlink.com.au	www.vegetationlink.com.au
Yarra Ranges SC	Yarra Ranges Shire Council	1300 368 333	biodiversityoffsets@yarraranges.vic.gov.au	www.yarraranges.vic.gov.au

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For more information contact the DELWP Customer Service Centre 136 186 or the Native Vegetation Credit Register at [nativevegetation.offsetregister@delwp.vic.gov.au](mailto:nativevegetation.offsetregister@delwp.vic.gov.au)

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

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