

Summary of Ecological Investigations for the proposed Delburn Wind Farm

Introduction

Ecology and Heritage Partners Pty Ltd was commissioned by OSMI Australia Pty Ltd to undertake detailed ecological investigations of the proposed Delburn Wind Farm, Strzelecki Ranges, Victoria.

An existing conditions report has been prepared that outlines the methods and results of ecological studies undertaken for the project to date. This includes detailed vegetation mapping, terrestrial fauna surveys and targeted surveys for significant flora and fauna species. The findings of the ecological investigations will feed into the referral under the Commonwealth *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act) and the referral under the State *Environment Effects Act 1978*.

Methods

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

Several field assessments between 2018 and 2019 have been undertaken by Ecology and Heritage Partners. The field assessments sought primarily to assess the extent and condition of native vegetation communities and potential flora and fauna habitat within the proposed impact footprint, with particular consideration given to significant ecological communities and species of conservation concern, such as threatened and migratory species.

Results

Surveys of the study area recorded 57 species of flora (including 47 native species and 10 introduced species), and 75 species of fauna (68 native species and 7 introduced species).

Two nationally significant species were recorded within the study area: Strzelecki Gum *Eucalyptus strzeleckii* and Growling Grass Frog *Litoria raniformis*.

Of bird species identified, 53 native species were recorded, including the Flame Robin *Petroica phoenicea*, Southern Boobook *Ninox boobook* and Yellow-tailed Black Cockatoo *Calyptorhynchus funereus*.

The study area intersects two bioregions: the Gippsland Plain and Strzelecki Ranges. The native vegetation assessment confirmed the presence of the following Ecological Vegetation Classes (EVCs) within the impact footprint:

- Six EVCs of the Gippsland Plain bioregion: Aquatic Herbland (EVC 653), Damp Forest (EVC 29), Lowland Forest (EVC 16), Swamp Scrub (EVC 53), Swampy Woodland (EVC 937) and Tall Marsh (EVC 821), and;
- Four EVCs of the Strzelecki Ranges bioregions: Damp Forest (EVC 29), Herb-rich Foothill Forest (EVC 23), Lowland Forest (EVC 16) and Swampy Woodland (EVC 937).

Most mapped patches of native vegetation within the impact area were of moderate-high quality, based on the habitat condition score for each habitat zone using the VQA methodology (DSE 2004).

The desktop and field assessments identified a number of key ecological features within the impact area and surrounding landscape; these are summarised in Table S1.

Table S1. Summary of the ecological values that occur within the impact area (note the study area encompasses a much larger area, not all of which will be impacted by the proposed wind farm).

Species diversity	A diverse assemblage of plants and animals, with 57 flora species and 76 fauna species recorded during 2018-2019 surveys conducted by Ecology and Heritage Partners.
Remnant vegetation	<ul style="list-style-type: none"> • A total of 209.86 hectares of mapped native vegetation in the impact area • 42.37 hectares of remnant vegetation represented by six EVCs of the Gippsland bioregion: <ul style="list-style-type: none"> ○ Aquatic Herbland (EVC 653) 0.69 hectares. ○ Damp Forest (EVC 29) 4.63 hectares; ○ Lowland Forest (EVC 16) 30.83 hectares; ○ Swamp Scrub (EVC 53) 0.11 hectares; ○ Swampy Woodland (EVC 937) 6.35 hectares; ○ Tall Marsh (EVC 821) 0.745 hectares; • 166.48 hectares of remnant vegetation represented by four EVCs of the Strzelecki Ranges bioregion: <ul style="list-style-type: none"> ○ Damp Forest (EVC 29) 55.26 hectares; ○ Herb-rich Foothill Forest (EVC 23) 92.98 hectares; ○ Lowland Forest (EVC 16) 12.02 hectares; ○ Swampy Woodland (EVC 937) 6.22 hectares; • A final count of Large trees (40) within patches and scattered trees (21) identified in the impact area is yet to be determined, due to a pending Large Tree assessment.
Wetlands	The Western Port Ramsar site is located approximately 25 kilometres south-west of the study area (downstream).
Significant ecological communities	No national or State significant ecological communities occur within the impact area.
Significant flora species	<ul style="list-style-type: none"> • The known occurrence of one nationally significant flora species <ul style="list-style-type: none"> ○ Strzelecki Gum <i>Eucalyptus strzeleckii</i> • No additional state significant flora species were recorded • No flora species ‘protected’ under the FFG Act in Family/genera Acacia, Orchidaceae, Pteridophyta, Grevillea and Asteraceae, were recorded.

Significant
fauna species

- The known occurrence of one nationally significant fauna recorded within the impact area during the targeted surveys:
 - Growling Grass Frog *Litoria raniformis*
 - The known presence of several State significant fauna species recorded within, or immediately adjacent to the impact area (e.g. Great Egret *Ardea modesta*)
- Non-threatened species of public interest recorded within the impact area are:
 - Strzelecki Koala *Phascolarctos cinereus*, and;
 - Yellow-tailed Black-Cockatoo *Calyptorhynchus funereus*.