

Final

Biodiversity Assessment for the Proposed Bookaar Solar Farm, Bookaar, Victoria

Prepared for

Bookaar Renewables Pty Ltd

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RELEVANT APPLICATION REQUIREMENTS

Clause 52.17 - Native Vegetation

The following responds to the application requirements under Clause 52.17 (Native Vegetation) is provided below (Table S1).

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 Basic 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 defendable 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 defendable space is in conjunction with an application under the Bushfire Management Overlay.	Not applicable as the vegetation clearance is not for defendable 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	A site assessment report of the native vegetation to be removed, including: <ul style="list-style-type: none"> A habitat hectare assessment of any patches of native vegetation, including the condition, extent (in hectares), Ecological Vegetation Class and bioregional conservation status. 	Refer to Figure 2, Appendix 1.2 (habitat hectares assessment)
11	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.	Refer to Appendix 3 (NVR Report)

Clause 53.13 – Renewable Energy Facilities

A permit is required under Clause 53.13 of the Corangamite Planning Scheme to use to develop a renewable energy facility (other than a wind energy facility). This report satisfies the relevant ecological application requirements listed in Clause 53.13-2, specifically relating to the extent of native vegetation removal (Section 3.3) and the impacts of the proposal on any species listed under *the Flora and Fauna Guarantee Act 1988* or *Environment Protection and Biodiversity Conservation Act 1999* (Section 3.4, 4.1 and 4.2), with consideration of the Solar Energy Facilities Design and Development Guideline (DELWP 2019). A summary of the requirements is provided in Section 4.3.3.

1 INTRODUCTION

1.1 Background

Ecology and Heritage Partners Pty Ltd was commissioned by Bookaar Renewables Pty Ltd (the 'Proponent') to undertake a Biodiversity Assessment at the proposed location of the Bookaar Solar Farm, encompassing part of 520 Meningoort Road, lots 51 and 52 and Res 1 on LP4677, and adjacent parts of Meningoort Road, Bookaar, Victoria (the 'Study area').

We understand that the Proponent submitted a planning permit application for a Solar Farm Development at the same site, which was unsuccessful (the 'Previous Development'). Despite the unsuccessful planning application, the VCAT decision broadly accepted that the selected location is suitable for solar development, and noted the potential for resubmission. We understand the Proponent wishes to submit a new planning application for the Bookaar Solar Farm which will take into consideration the VCAT decision, and provide additional information where necessary.

Ecology and Heritage Partners previously completed an ecological due diligence assessment of the study area for the Previous Application (Ecology and Heritage Partners 2018a), and a Biodiversity Assessment for the construction of culverts within the original development footprint (Ecology and Heritage Partners 2018b). This current report included an assessment of impacted vegetation and summary of native vegetation offset requirements for the proposed removal of 0.019 hectares of native vegetation. The two prior reports will be superseded by the current report.

The purpose of this assessment is to confirm the extent and type of native vegetation present within the study area, provide an updated assessment under the Guidelines (DELWP 2017) and a summary of impacted vegetation and offset requirements for the proposed Bookaar Solar Farm. This report presents the results of the recent assessment and discusses the potential ecological and legislative implications associated with the proposed action, along with an assessment against the Solar Energy Facilities Design and Development Guidelines (DELWP 2019).

1.2 Study Area

The study area is located at 520 Meningoort Road, Bookaar, including some adjacent land, and is approximately 170 kilometres south-west of Melbourne's CBD (Figure 1). The study area includes both the proposed location of the Bookaar Solar Farm (the 'development footprint'), associated access roads, and surrounding land which covers approximately 620 hectares. The development footprint covers 588 hectares.

The study area is currently used for agricultural purposes (i.e. grazing and cropping). It is generally flat and gently slopes downwards towards the east in the eastern half of the study area. There is a minor drainage line (that eventually becomes Blind Creek) running east-west in the lower third of the study area (the 'east-west drainage line').

According to the Department of Environment, Land, Water and Planning (DELWP) NatureKit Map (DELWP 2020a), the study area is located within the Victorian Volcanic Plain bioregion, Corangamite Catchment Management Authority (CMA) and Corangamite Shire.

1.3 The Proposal

The Proponent is proposing to develop a 200MW solar energy facility (the 'Proposal') within the development footprint. The Proposal includes the following elements:

- 'Array Areas', containing Photovoltaic (PV) panels mounted on a single axis tracking system with a maximum height of 4 m above natural ground at maximum tilt. The tracking system would be supported by piles driven into the ground. Row spacing (pile to pile) is either 12.75 m (south of the 220kV transmission line) or 13 m (north of the 220kV transmission line);
- 82 inverters located centrally throughout the Site in pairs at 41 locations across the Site (inverter stations). Inverter stations are located at least 171 m from the Site boundary;
- Below ground cabling connecting the PV panels between trackers and inverters;
- Below ground cabling connecting the inverters to the substation;
- An internal track network of all-weather gravel tracks (4 m), including a perimeter track which forms part of a 10 m wide defensible Asset Protection Zone (APZ) that surrounds the Site;
- Four (4) gated main site access points via Meningoort Road;
- Four (4) gated emergency access points along the western boundary of the Site;
- Eight dedicated water tanks for firefighting (maximum of 3.6m high), located adjacent to each access point;
- A perimeter security fence 2.5 m high (chain mesh);
- Perimeter vegetation screens (20 m wide with 4 rows of trees and maintained to a height of at least 4 m), planted on the outside of the security fencing;
- A SCADA system that will gather, monitor and analyse data generated through operating the Proposal;
- On-demand, downward facing lighting (restricted to 4m in height); and
- Sensor triggered CCTV security cameras located around the perimeter of the Site and adjacent to key infrastructure.

Substation Area (1.76 ha):

- Substation connecting the Proposal to the onsite 220KV transmission line, via two (2) new high voltage (HV) 220 kV transmission lines;
- A Control building (3 m high);
- Substation Operations and Maintenance building (up to 5 m high);
- A security fence (chain mesh) up to 2.5 m high, enclosing the Substation;
- A 10 m wide defensible APZ around the perimeter of the Substation; and
- Parking for 5 vehicles.

Battery Area (0.91 ha):

- A series of separate containerised battery units, connected by underground cables to the Substation (approximately 2.5 m high);
- A separate transformer adjacent to each battery; and
- A 10m defensible APZ around the perimeter of the Battery Area.

Operations Buildings Area (0.96 ha):

- A Site office building including amenities with a height of 3.6 m;
- A maintenance building and workshop with a height of 5 m;
- 3 Storage sheds with a height of 4.1 m;
- Car parking for twelve (12) vehicles;
- A septic tank and potable water tank;
- A defensible APZ of 20 m, which allows the area to function as the nominated 'Shelter in Place' location (see the 'Bushfire Risk Assessment and Mitigation Plan').

In addition to the key components outlined above, there will be a temporary construction compound (1.44 ha) to facilitate the construction phase of the Proposal. The construction compound would include:

- Temporary construction offices (up to 5 m high);
- Car and bus parking areas for construction vehicles (51 workers cars, 5 mini vans; and additional parking space provided for delivery vehicles and construction machinery);
- Staff amenity block including portable toilets, showers and a kitchen, designed for peak staff numbers during the construction period; and
- Laydown areas.

Once the Proposal is operational, the construction compound will be decommissioned and revegetated.

The Proposal has a lifespan of 30 years. The construction phase would take approximately 12 months and require up to 150 full-time staff. The operational phase would be approximately 28 years and will generate between 8- and 12 full time positions nationally, with six (fte) positions likely to be based locally. Decommissioning is expected to take 12 months and would require a similar workforce to the construction period. Following decommissioning all infrastructure associated with the solar farm would be removed from the Site.

2 METHODS

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 2018);
- 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;
- 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 and immediate surrounds;
- Solar Energy Facilities Design and Development Guideline (DELWP 2019);
- Aerial photography of the study area; and
- Previous ecological assessments relevant to the study area, including:
 - Ecological Due Diligence: 520 Meningoort Road, Bookaar, Victoria (Ecology and Heritage Partners 2018a);
 - Biodiversity Assessment for construction of Bookaar Solar Farm at 520 Meningoort Road, Bookaar (Ecology and Heritage Partners 2018b).

2.2 Field Assessment

A field assessment was undertaken on 27 March 2020 to obtain information on flora and fauna values within the study area. A previous field assessment was undertaken on 1 November 2017 (Ecology and Heritage Partners 2018b). 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).

Due to the nearby location of two wetlands, Lake Bookaar and Lake Colongulac, a number of wetland bird species have been recorded in the broader region (Figure 4). Habitat within the study area was assessed to determine if the study area supported habitat features suitable for wetland bird species.

Where native vegetation was identified a habitat hectare assessment was undertaken following methodology described in the Vegetation Quality Assessment Manual (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 Corangamite 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).

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
Patch of native vegetation	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> .
Scattered tree	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 (10m 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 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.

2.3.4 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.

3 RESULTS

3.1 Vegetation Condition

Three small patches of native vegetation were recorded within the study area. The remainder of the study area comprised introduced and planted vegetation, present as pasture grass and windrows or blocks of planted eucalypt.

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: Plains Grassy Woodland (EVC 55) and Plains Sedgy Wetland (EVC 647). The presence of these EVCs is generally consistent with the modelled pre-1750s native vegetation mapping (DELWP 2020c), however with slight variations to the location of the EVCs. Specific details relating to observed EVCs are provided below.

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

Plains Grassy Woodland

Two small patches of Plains Grassy Woodland were present in a modified state within the study area (one patch on the Site's western boundary and one at the intersection of Meningoort Road and Darlington Camperdown Road). Each patch was characterised by a Blackwood *Acacia melanoxylon* recruitment cohort located amongst planted eucalyptus trees and an exotic understory (Plate 1).

Plains Sedgy Wetland

Plains Sedgy Wetland was recorded in a narrow drain running east to west across the study area, which contained a low cover (25%) of one native sedge, Common Spike-sedge *Eleocharis acuta* (Plate 2). The drain was dry and highly disturbed at the time of assessment through soil pugging by cattle.



Plate 1. Modified patch of Plains Grassy Woodland present within the study area (Ecology and Heritage Partners Pty Ltd 27/03/2020).



Plate 2. Artificial drain way with native sedge present creating modified patch of Plains Sedgy Wetland (Ecology and Heritage Partners Pty Ltd 27/03/2020).

3.1.2 Large Trees in Patches

No Large Trees in native vegetation patches were recorded within the study area.

3.1.3 Scattered Trees

No native Scattered Trees were recorded within the study area.

3.1.4 Introduced and Planted Vegetation

Areas not supporting native vegetation had a high cover (>90%) of exotic grass species, many of which were direct-seeded for use as pasture (Plate 3). Bare areas of recently cropped land were also present (Plate 4). These areas are shown on Figure 2 where mapped native vegetation is absent.

The majority of the study area contains exotic grasses and herbs, some of which are considered environmental weeds within Corangamite Shire (such as Toowoomba Canary-grass *Phalaris aquatica*, Capeweed *Arctotheca calendula* and Spear Thistle *Cirsium vulgare*). The study area is largely dominated by Barley Grass *Hordeum leporinum*, Perennial Rye-grass *Lolium perenne*, Annual Meadow Grass *Poa annua*, Common Mouse-ear Chickweed *Cerastium glomeratum* and White Clover *Trifolium repens*. Other less commonly observed species included Capeweed, Wild Oat *Avena fatua* and Buck's-horn Plantain *Plantago coronopus*.

Two noxious weeds were present within the study area in limited numbers, Bathurst Burr *Xanthium spinosum* and Spear Thistle, located within the eastern half of the study area (Plate 5).

Several areas of planted vegetation with exotic understories are present, primarily located along the boundary of the study area (Plate 6, Figure 2). Four fenced-off densely planted revegetation areas with exotic understories are present along the western boundary (Figure 2), with the trees all being approximately 10 metres tall. These areas are all approximately 50 metres wide and range in length from approximately 170 to 400 metres. These revegetation areas contain a variety of native species, including Swamp Gum *Eucalyptus ovata*, Lightwood *Acacia implexa*, Blackwood and Swamp She-oak *Casuarina glauca*. Planted vegetation will be managed for bushfire risk in accordance with the principles outlined in Appendix D of the bushfire Risk Assessment and Mitigation Plan (Fire Risk Consultants Pty Ltd 2020).

Two small isolated areas of Sugar Gum *Eucalyptus cladocalyx*, which is native to South Australia, are identified along Meningoort Road along the study area's southwestern boundary (Figure 2). These are not fenced although were avoided when the paddock was planted out with crops.



Plate 3. Exotic pasture grass dominates the study area (Ecology and Heritage Partners Pty Ltd 27/03/2020).



Plate 4. Recently ploughed areas devoid of native vegetation across the majority of the southern portion of the study area (Ecology and Heritage Partners Pty Ltd 27/03/2020).



Plate 5. One noxious weed (Bathurst Burr) recorded in the eastern end of the study area (Ecology and Heritage Partners Pty Ltd 27/03/2020).



Plate 6. Planted eucalyptus is common along the western borders of the study area (Ecology and Heritage Partners Pty Ltd 27/03/2020).

3.2 Fauna Habitat

A wide range of birds were observed within the study area, with the three types of vegetation structures providing habitat for various types of birds.

3.2.1 *Planted eucalypts*

The planted River Red-gums throughout the study area are all mature, with some senescing (i.e. dying) and others dead. Hollows of various sizes, limb failure points and lifting bark are observed across the population, which provide valuable habitat for foraging, roosting and nesting that the younger revegetation areas cannot provide. Although no animals were observed using the hollows or lifting bark for nesting at the time of the assessment, they provide benefits to birds, possums, bats and insects.

3.2.2 Fenced-off Revegetation

The four fenced-off revegetation areas located throughout the study area are valuable as foraging, roosting and nesting habitat for mobile generalist fauna, including locally common birds and microbats. Species observed using this habitat include the Red Wattlebird *Anthochaera carunculata*, Crested Pigeon *Ocyphaps lophotes*, Grey Butcherbird *Cracticus torquatus* and Noisy Miner *Manorina melanocephala*.

3.2.3 Introduced Grasslands

The majority of the study area consists of paddocks that contain improved exotic pastures, with the southern 'triangle' being used for cropping. These areas are of low ecological value and provide a sub-optimal foraging resource for common generalist bird species which are tolerant of modified open areas. Birds observed using this habitat include Australian Magpie *Cracticus tibicen*, Little Raven *Corvus mellori*, Little Corella *Cacatua sanguinea*, Magpie-lark *Grallina cyanoleuca* and Australasian Pipit *Anthus novaeseelandiae*. The introduced Eurasian Skylark *Alauda arvensis* was also seen.

3.2.4 Wetland System and Drainage Line

A wetland system known as the Western District lakes, which includes Lake Bookaar, is located approximately one kilometre east of the study area. There is also a dam and a drainage line (the 'east-west' drainage line), which eventually becomes Blind Creek, located within the study area (Figure 2). Two common waterbirds (White-necked Heron *Ardea pacifica* and Australian Shelduck *Tadorna tadornoides*) were observed within the study area.

The habitat within the study area is not considered suitable to provide breeding or flocking resources for state significant waterbirds such as Brolga *Grus rubicunda*. The east-west drainage line, which connects to a drainage line that runs just outside and parallel to the study area's eastern boundary heading north (the 'north-south' drainage line), does not connect to the wetland system (Figure 1). Likewise, water run-off from the study area does not reach the wetland system (Venant Solutions 2020), being intercepted by the north-south drainage line, or settling on either side of it during significant flood events (Figure 2). The waterbodies within and immediately adjacent to the study area provide low quality habitat for common waterbird species compared with the high-quality habitat present throughout the wetlands that form part of the Western District Lakes Ramsar Site.

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

The below clearing scenario is based on the updated construction footprint for the Proposal, provided by the client on 2 July 2020.

3.3.1 Vegetation proposed to be removed

The proposed removal of native vegetation is associated with a required road upgrade entering Meningoort Road from Darlington-Camperdown Road, and the construction of two culverts located along the east-west drainage line that crosses the study area. The proposed road upgrade intersects the southern edge of a patch of Plains Grassy Woodland, located in the north east of the study area (Figure 2). Two culverts, approximately

four metre wide, impact on a single contiguous patch of Plains Sedgy Wetland present along the east-west drainage line, and will each be constructed within a six metre wide construction envelope.

The study area is within Location 1 (DELWP 2020b), with 0.019 hectares of native vegetation proposed to be removed, comprising 0.015 hectares Plains Grassy Woodland and 0.0042 hectares Plains Sedgy Wetland. As such, the permit application falls under the Basic 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).

Assessment pathway	Basic
Location Category	1
Total Extent (past and proposed) (ha)	0.019
Extent of past removal (ha)	0.00
Extent of proposed removal (ha)	0.019
Large Trees (scattered and in patches) to be removed (no.)	0
EVC Conservation Status of vegetation to be removed	Endangered (Plains Grassy Woodland) and Endangered (Plains Sedgy Wetland)

3.3.2 Offset Targets

The offset requirement for native vegetation removal is 0.004 General Habitat Units.

A summary of proposed vegetation losses and associated offset requirements is presented in Table 4 and the Native Vegetation Removal (NVR) report is presented in Appendix 3.

Table 4. Offset Targets.

General Offsets Required	0.004 General Habitat Units
Large Trees	0
Vicinity (catchment/council)	Corangamite CMA / Corangamite Shire
Minimum Strategic Biodiversity Value*	0.336

*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 one nationally significant and seven State significant flora species previously recorded within 10 kilometres of the study area (DELWP 2018) (Figure 3). The PMST nominated an additional 16 nationally significant species which have not been previously recorded but have the potential to occur in the locality (DAWE 2020) (Figure 3, Appendix 1.3). Of these records, the majority were recorded at nearby Lake Bookaar, which forms a part of the Western District Lakes Ramsar site. Habitat within the development

footprint does not contain suitable characteristics to support these nearby significant flora species (i.e. permanent saline waterbodies)

No national or State significant flora were recorded during the recent or previous site assessments, and based on the modified nature of the study area, landscape context and the proximity of previous records, significant flora species are considered unlikely to occur within the study area due to the and high levels of disturbance through previous agricultural activity and absence of suitable habitat.

3.4.2 Fauna

The VBA contains records of four nationally significant and 22 State significant fauna species previously recorded within 10 kilometres of the study area (DELWP 2018) (Figure 4). The PMST nominated an additional 21 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).

Of the above records, numerous records relate to significant migratory waterbirds which have been recorded in several nearby wetlands. However, none of the records fall within the study area due to the lack of suitable foraging or breeding habitat. This is attributed to the modified nature of the study area through its extensive agricultural land use history, and historical lack of a large wetland waterbody. While there is the possibility that migratory waterbirds may fly over the study area on occasions, there is no important or limiting habitat for any migratory bird species within or directly surrounding the study area (e.g. species are not likely to rely on the habitat within the study area).

3.4.2.1 Impacts to significant fauna species

Several state significant bird species such as Brolga, Freckled Duck *Stictonetta naevosa* and Hardhead *Aythya australis* have been observed within close proximity to the study area at Lake Bookaar and Lake Colongulac (Figure 4). These species may occasionally fly over the study area when moving between areas of more suitable habitat, however they are unlikely to use the study area for foraging or breeding given the lack of suitable habitat.

Given the lack of significant habitat for other species such as terrestrial bird species or bats, the construction and operation of the solar farm is unlikely to directly or indirectly impact any significant fauna species.

3.4.3 Ecological Communities

No national or State significant ecological communities are present within the study area.

4 LEGISLATIVE AND POLICY IMPLICATIONS

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 National Environmental Significance (NES).

For species listed under the EPBC Act, a 'significant impact' is defined as an impact which is important, notable, or of consequence, having regard to its context or intensity (DoE 2013). Whether or not an action is likely to have a significant impact depends upon the sensitivity, value, and quality of the environment which is affected, and upon the intensity, duration, magnitude and geographic extent of the impacts. Importantly, for a 'significant impact' to be 'likely', it is not necessary for a significant impact to have a greater than 50% chance of happening; it is sufficient if a significant impact on the environment is a real or not a remote chance or possibility (DoE 2013).

Due to the nearby location of Lake Bookaar, which is a lake included in the Western District Lakes Ramsar site, an assessment of impact against the significant impact criteria for the Western District Lakes Ramsar site is described below (Table 5), which summaries that it is highly unlikely that the Proposal will result in a significant impact on the Ramsar site.

4.1.1 Ramsar Wetlands

The Proposal is highly unlikely to have a significant impact on the Western District Lakes Ramsar site with a summary of the significant impact criteria for the Ramsar Site provided in Table 5 below.

Table 5. Significant impact assessment on Ramsar wetlands.

Will the project result in a significant impact under the EPBC Act?	
Ramsar sites will not be significantly impacted by the project.	
Significant Impact Criteria - will the activity:	Ramsar Wetlands
Areas of the wetland being destroyed or substantially modified	The Proposal will not result in a Ramsar site being destroyed or substantially modified, nor will it result in impacts to the critical components, critical processes and critical services and benefits of the Western District Lakes Ramsar site (SEWPaC 2011).
A substantial and measurable change in the hydrological regime of the wetland, for example, a substantial change to the volume, timing, duration and frequency of ground and surface water flows to and within the wetland	The Potential impacts of the Proposal will be confined to the development area, with offsite / indirect impacts avoided or minimised (Venant Solutions 2020). Therefore, given the context of the development, a substantial and measurable change in the hydrological regime of the Western District Lakes Ramsar site (e.g. a substantial change to the volume, timing, duration and frequency of ground and surface water flows to and within the wetland), is highly unlikely.
The habitat or lifecycle of native species, including invertebrate fauna and fish species, dependent upon the wetland being seriously affected.	The Proposal is not linked to any waterbodies that directly flow into the Ramsar site, and therefore it is highly unlikely that the habitat or lifecycle of native species, including invertebrate fauna and fish species, dependent upon the wetland being seriously affected by the proposed development.
A substantial and measurable change in the water quality of the wetland – for example, a substantial change in the level of salinity, pollutants, or nutrients in the wetland, or water temperature which may adversely impact on biodiversity, ecological integrity, social amenity or human health.	The Proposal will not result in a substantial and measurable change in the water quality of the wetland, including a substantial change in the level of salinity, pollutants, or nutrients in the wetland, or water temperature which may adversely impact on biodiversity, ecological integrity, social amenity or human health.

<p>An invasive species that is harmful to the ecological character of the wetland being established (or an existing invasive species being spread) in the wetland.</p>	<p>Based on the criteria under the Ramsar wetland, the Proposal is not likely to result in any invasive species that are harmful to the ecological character of the wetland being established (or an existing invasive species being spread) in the wetland.</p>
<p>Conclusion</p>	<p>The Proposal will not result in a Ramsar site being destroyed or substantially modified, nor will it result in impacts to the critical components, critical processes and critical services and benefits of the Western District Lakes Ramsar site (SEWPaC 2011). That is, whilst there may be minor changes to groundwater and surface flows, the Proposal is not expected to have impacts on hydrology, salinity, threatened flora, waterbirds, wetland diversity, physical habitat, priority wetland species or threatened species (Table E3 in SEWPaC 2011).</p>

4.1.2 Implications

The proposed action is highly unlikely to have a significant impact on any matter of NES. As such, a referral to the Commonwealth Environment Minister is not required regarding matters listed under the EPBC Act.

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 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.

4.2.1 *Implications*

There are no confirmed records of species or ecological communities listed as threatened and/or protected under the FFG Act recorded within the study area.

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 under clause 52.17-7 of the Victorian Planning Schemes applies. In addition, Solar Farm development is subject to Clause 53.13 of the Corangamite Shire Planning Scheme, as a Renewable Energy Facility, which states within the application requirements that the extent of vegetation removal, ecological legislative implications, and an environmental management plan must be addressed, with the Minister for Planning as the responsible authority for assessment of a proposal for the use and development of land as a renewable energy facility.

Victorian Planning Provision’s Clause 19.01 ‘Energy’ outlines the policy objectives and strategies that support the development of solar energy facilities.

4.3.1 *Local Planning Scheme*

The study area is located within the Corangamite Shire. The following zoning and overlays apply (DELWP 2020d):

- Farming Zone – Schedule 1 (FZ1)
- Significant Landscape Overlay – Schedule 1 (SLO1)

4.3.2 *The Guidelines (Clause 52.17)*

The State Planning Policy Framework and the decision guidelines at Clause 52.17 (Native Vegetation) and Clause 12.01 require the Responsible Authority to have regard for the ‘Guidelines for the removal, destruction or lopping of native vegetation’ (the Guidelines) (DELWP 2017a).

Implications

The study area is within Location 1, with 0.019 hectares of native vegetation proposed to be removed. As such, the permit application falls under the Basic assessment pathway.

The offset requirement for native vegetation removal is 0.004 General Habitat Units.

4.3.3 *Renewable Energy Facility (other than Wind Facility) (Clause 53.13)*

The Renewable Energy Facility Clause of the Corangamite Planning Scheme seeks to facilitate the establishment and expansion of renewable energy facilities in appropriate locations, with minimal impact on the amenity of the area. Any applications must consider the Solar Energy Facilities Design and Development Guideline (DELWP 2019), which includes the following considerations related to ecology for any application:

- Existing vegetation types and their condition and coverage;
- Species of flora and fauna listed under the FFG Act and EPBC Act;
- Sites of flora and fauna listed under the FFG Act and EPBC Act, including significant habitat corridors, and movement corridors for these fauna;
- National parks, state parks, coastal reserves and other land subject to the *National Parks Act 1975*; and,
- Land declared a Ramsar wetland as defined under section 17 of the EPBC Act.

Implications

The study area consisted of both native and exotic vegetation, with a total of 0.575 hectares of native vegetation mapped across the study area (including the access point at Meningoort Road), and of that, 0.019 hectares is proposed to be removed to facilitate vehicle access into and within the development footprint. No species listed under the EPBC Act or FFG Act are considered likely to occur within the study area, and the study area is not considered to contain significant habitat corridors for fauna species. Therefore the construction of the Proposal, inclusive of security fencing (see the 'Site Plan') is unlikely to impede the movement of any fauna. Overtime the additional vegetation screens, to be located around the periphery of the Proposal, are likely to contribute to increased wildlife habitat corridors, compared to existing conditions.

No land subject to the *National Parks Act 1975* is within close proximity or likely to be impacted by the Proposal. One Ramsar site, the 'Western District Lakes Ramsar site', is approximately 1 kilometre from the development footprint, although the Proposal is highly unlikely to result in a significant impact upon the wetland. An impact assessment on the Ramsar site is provided above in Section 4.1.

A permit is required under Clause 53.13 of the Corangamite Planning Scheme to develop a renewable energy facility (other than a wind energy facility). This report satisfies the relevant ecological application requirements listed in Clause 53.13-2. In accordance with Clause 72.01 of the Corangamite Planning Scheme, the Minister for Planning is the Responsible Authority for renewable energy facilities.

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

Two weeds listed as noxious under the *Catchment and Land Protection Act 1994* were recorded during the assessment, Bathurst Burr and Spear Thistle. Similarly, there is evidence that the study area is currently occupied by several pest fauna species listed under the CaLP Act, mainly European Rabbit. Listed noxious weeds/pests should be appropriately controlled throughout the study area.

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.

5 MITIGATION MEASURES

5.1 Avoid and Minimise Statement

The Proposal is wholly located within previously cleared agricultural paddocks, which contain little ecological value. Planted trees surround the edges of the Proposal have been avoided, with particular focus on avoidance in areas supporting larger planted River Red-gums due to the habitat value they provide within the landscape and their contribution to a native wildlife corridor. It is understood that additional vegetation screening plantings will be located surrounding the Solar Farm, which will in future contribute to the wildlife habitat corridors whilst screening the development from the surrounding environment.

Two patches of native vegetation are proposed to be impacted, both which were present in a modified state, containing limited ecological values. Of these, the impacts to the Plains Grassy Woodland patch do not involve the removal of the entire patch, with impacts restricted to the southern edge of the patch where it intersects with the proposed road upgrades. The majority of the patch will be retained, and the proposed works do not fragment the overall woodland patch. The Small patch of Plains Grassy Woodland identified on the western boundary of the Site has been avoided.

Two small patches (comprising 0.0042 hectares) of Plains Sedgy Wetland are proposed to be impacted to create two vehicle crossings over the east-west drainage line. The Plains Sedgy Wetland patch extends along the east-west drainage line, and the remaining areas of Plains Sedgy Wetland are not expected to be impacted by the installation of the culverts.

In the context of the development, the modified condition of ecological values proposed to be impacted, and overall lack of native vegetation recorded within the study area, the minimisation measures undertaken are appropriate and adequate to satisfy the objectives of the Guidelines (DELWP 2017). Further, a total of 0.575 hectares of native vegetation was recorded throughout the study area, and of this, 0.556 hectares is avoided.

5.2 Best Practice Mitigation Measures

Recommended measures to mitigate impacts upon terrestrial values present within the study are during construction 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;
- 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;
- Where possible, construction stockpiles, machinery, roads, and other infrastructure should be placed away from areas supporting native vegetation; 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 DELWP's Native Vegetation Offset Register (DELWP 2020e), there are 20 offset sites within the Corangamite CMA or Corangamite Shire region that can be used to satisfy the General Habitat Unit offset requirements (as of 23 July 2020).

An offset register search statement identifying the relevant offsite sites is provided in Appendix 4.

6 CONCLUSION

A field assessment was undertaken on 27 March 2020 to obtain information on flora and fauna values within the study area (Figure 1). A previous field assessment was undertaken on 1 November 2017 (Ecology and Heritage Partners 2018b) within the same development footprint. Current and past land use of the study area has involved intense agricultural activity, used for cropping and grazing. As a result, the study area contained limited areas of native patch vegetation and no scattered trees as defined under the Guidelines (DELWP 2017).

Three small patches of native vegetation were recorded within the study area. The remainder of the study area comprised introduced and planted vegetation, present as pasture grass and windrows or blocks of planted eucalypt. Several birds were observed within the study area, with the three types of vegetation structures providing habitat for various types of birds.

The development proposes to impact upon 0.019 hectares of native vegetation, which includes 0.015 hectares Plains Grassy Woodland and 0.0042 hectares Plains Sedgy Wetland. Both Plains Grassy Woodland and Plains Sedgy Wetland have a bioregional conservation status of endangered, however neither meet any criteria for listing as a state or nationally significant ecological community. The quality of each patch is low, with only one species making each patch of native vegetation. The patch of Plains Grassy Woodland is represented by a cluster of Blackwood, and the Plains Sedgy Wetland patch comprises Common Spike Sedge. All impacts are fractional, with the retention of the majority of native vegetation mapped across the property. The proposed vegetation removal is to facilitate safe vehicle access into and within the development footprint, through road widening at the access point into the study area from Meningoort Road, and at two proposed culvert locations crossing the east-west drainage line within the development footprint. The removal of Common Spike Sedge along the east-west drainage line to accommodate the two culverts is not expected to have a significant impact on local fauna species, as the watercourse function is not expected to be impacted in the long term. Further, Common Spike Sedge present in the drainage line has degraded since the 2017 site assessment, with recent assessments observing cattle damage and dry conditions have reduced the condition of the vegetation through grazing pressure and lack of water.

All works within the native patches have accommodated construction activity in the overall impact, and therefore no additional native vegetation is likely to be impacted within or adjacent to the study area. The offset requirement is 0.004 General Habitat Units, with numerous offset sites within the Corangamite CMA containing the required offsets. The offsets will be secured through DELWP's Native Vegetation Offset Register once a planning permit is issued and prior to any on-ground construction works.

Given the presence of Lake Bookaar approximately 1 kilometre to the east of the Proposal (a lake forming part of the Western District Lakes Ramsar site), an assessment of impact against the significant impact criteria for the Western District Ramsar site has been undertaken (Table 5). There is a high level of confidence that the Proposal will not significantly impact on the Ramsar site.

Finally, based on the results of the former and more recent site assessment, other than the small area of native vegetation that is proposed to be removed, there are no ecological constraints within the study area and it is highly unlikely that the Proposal will impact any significant flora and fauna species, and ecological communities.

6.1 Summary of Planning and Approval Considerations

Further requirements associated with development of the study area, as well as additional studies or reporting that may be required, are provided below (Table 6).

Table 6. Further requirements associated with development of the study area.

Relevant Legislation	Implications	Further Action
<i>Environment Protection and Biodiversity Conservation Act 1999</i>	The proposed action is highly unlikely to have a significant impact on any matter of NES. As such, a referral to the Commonwealth Environment Minister is not required regarding matters listed under the EPBC Act.	No further action required.
<i>Flora and Fauna Guarantee Act 1988</i>	There are no confirmed records of species or ecological communities listed as threatened and/or protected under the FFG Act recorded within the study area.	No further action required.
<i>Planning and Environment Act 1987</i>	<p>The study area is within Location 1, with 0.019 hectares of native vegetation proposed to be removed. As such, the permit application falls under the Basic assessment pathway.</p> <p>The offset requirement for native vegetation removal is 0.004 General Habitat Units.</p> <p>A planning permit from the Corangamite Shire is required to remove, destroy or lop any native vegetation under Clause 52.17 of the Planning Scheme.</p> <p>A permit is required under Clause 53.13 of the Corangamite Planning Scheme to use to develop a renewable energy facility (other than a wind energy facility). This report satisfies the relevant ecological application requirements listed in Clause 53.13-2.</p> <p>In accordance with Clause 72.01 of the Corangamite Planning Scheme, the Minister for Planning is the Responsible Authority for the use and development of land for a Solar Energy facility.</p>	Prepare and submit a Planning Permit application to address Clause 52.17 and 53.13-2
<i>Catchment and Land Protection Act 1994</i>	Two weed species listed under the CaLP Act were recorded within the study area, Bathurst Burr and Spear Thistle. To meet requirements under the CaLP Act, listed noxious weeds should be appropriately controlled throughout the study area.	Listed noxious weeds and pests should be appropriately controlled throughout the study area
<i>Wildlife Act 1975</i>	Any persons engaged to conduct salvage and relocation or general handling of terrestrial fauna species must hold a current Management Authorisation.	Ensure wildlife specialists hold a current Management Authorisation.

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FIGURES

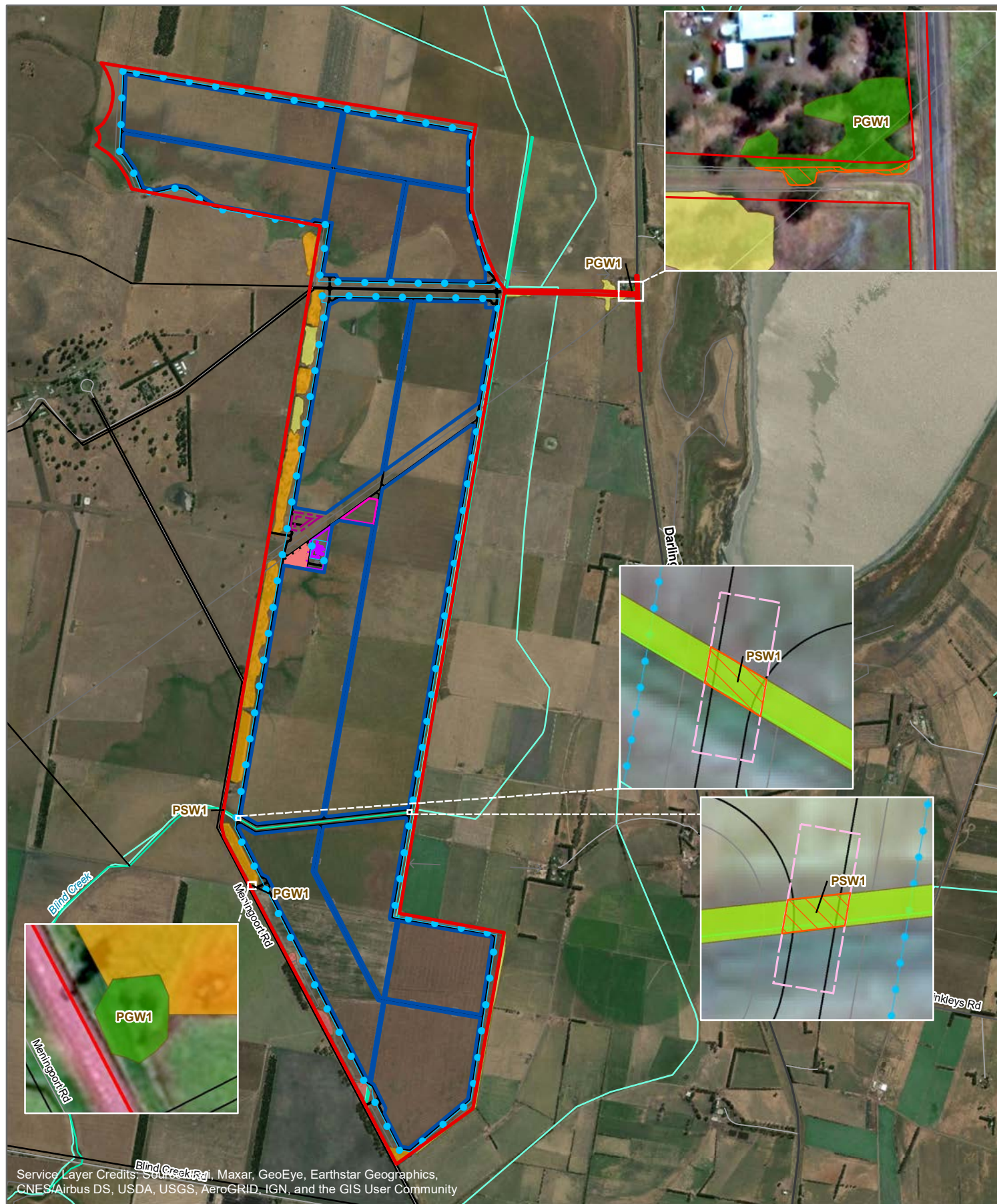


Figure 2
Ecological features
Ecological Assessment
- Bookaar Solar Farm

Legend

 Study Area

Development plan

 Array Boundary

 Operations Area

 Laydown Area

 Battery Area

 Substation Area

 Roads / access roads

 Drains and drainage reserve

● Security Fence

— Other development features

 Culverts

Ecological Vegetation Class

 Plains Grassy Woodland (EVC 55)

 Plains Sedgy Wetland (EVC 647)

Other vegetation

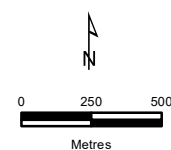
 Planted River Red Gum

 Planted natives

 Planted Sugar Gum

 Planted Cyprus


 Impacted vegetation



Map Scale: 1:27,000 @ A4
 Coordinate System:
 GDA2020 MGA Zone 54

VicMap Data: The State of Victoria does not warrant the accuracy or completeness of information in this publication and any person using or relying upon such information does so on the basis that the State of Victoria shall bear no responsibility or liability whatsoever for any errors, faults, defects or omissions in the information.

Legend

 Study Area

Significant Flora

-  Basalt Sun-orchid
-  Brackish Plains Buttercup
-  Giant Honey-myrtle
-  Large River Buttercup
-  Salt Blown-grass
-  Salt-lake Tussock-grass
-  Wind-blown Tussock-grass



Figure 3
Previously documented significant flora within 10km of the study area
Ecological Assessment - Bookaar Solar Farm



Map Scale: 1:92,000 @ A3
Coordinate System: GDA2020 MGA Zone 54



VBA 2018. Victorian Biodiversity Atlas // Sourced from: 'VBA_FLORA25', 'VBA_FLORA100', 'VBA_FAUNA25' and 'VBA_FAUNA100', March 2018 © The State of Victoria, Department of Environment, Land, Water and Planning. Records prior to 1949 not shown.

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Legend

Study Area

Significant Fauna

- | | |
|--|---------------------------------|
| ● Australasian Shoveler | ▲ Gull-billed Tern |
| ● Black Falcon | ▲ Hardhead |
| ● Blue-billed Duck | ▲ Latham's Snipe |
| ● Brolga | ▲ Little Egret |
| ● Caspian Tern | ▲ Magpie Goose |
| ● Common Bent-wing Bat (southern ssp.) | ▲ Marsh Sandpiper |
| ● Common Sandpiper | ▲ Musk Duck |
| ● Corangamite Water Skink | ▲ Nankeen Night Heron |
| ● Curlew Sandpiper | ▲ Pied Cormorant |
| ● Eastern Great Egret | ▲ Royal Spoonbill |
| ● Eastern Snake-necked Turtle | ▲ Silver Perch |
| ● Fairy Prion | ▲ Southern Toadlet |
| ● Fat-tailed Dunnart | ▲ Spotted Harrier |
| ● Freckled Duck | ▲ Tussock Skink |
| ● Golden Perch | ▲ Whiskered Tern |
| ● Grey Goshawk | ▲ White-throated Needletail |
| | ▲ Wood Sandpiper |
| | ▲ Yellow-bellied Sheathtail Bat |



Figure 4
Previously documented significant fauna within 10km of the study area
Ecological Assessment - Bookaar Solar Farm



VBA 2018. Victorian Biodiversity Atlas // Sourced from: 'VBA_FLORA25', 'VBA_FLORA100', 'VBA_FAUNA25' and 'VBA_FAUNA100', March 2018 © The State of Victoria, Department of Environment, Land, Water and Planning. Records prior to 1949 not shown.

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APPENDIX 1 FLORA

Appendix 1.1 Flora Results

Legend:

- * Listed as a noxious weed under the CaLP Act;
- # Planted Victorian and non-Victorian species;
- ** Planted indigenous species in the study area.

Table A1.1. Flora within the study area.

Scientific Name	Common Name	Notes
INDIGENOUS SPECIES		
<i>Acacia melanoxylon</i>	Blackwood	-
<i>Eleocharis acuta</i>	Common Spike-sedge	-
<i>Eucalyptus camaldulensis</i>	River Red-gum	**
<i>Eucalyptus ovata</i>	Swamp Gum	**
NON-INDIGENOUS OR INTRODUCED SPECIES		
<i>Acacia implexa</i>	Lightwood	#
<i>Arctotheca calendula</i>	Cape weed	-
<i>Avena fatua</i>	Wild Oat	-
<i>Casuarina glauca</i>	Swamp She-oak	-
<i>Cirsium vulgare</i>	Spear Thistle	*
<i>Eucalyptus cladocalyx</i>	Sugar Gum	-
<i>Eucalyptus viminalis</i>	Manna Gum	#
<i>Holcus lanatus</i>	Yorkshire Fog	-
<i>Hordeum vulgare s.l.</i>	Barley	-
<i>Hypochaeris radicata</i>	Flatweed	-
<i>Lolium perenne</i>	Perennial Rye-grass	-
<i>Paspalum dilatatum</i>	Paspalum	-
<i>Phalaris aquatica</i>	Toowoomba Canary-grass	-
<i>Pinus pinaster</i>	Cluster Pine	-
<i>Plantago coronopus</i>	Buck's-horn Plantain	-
<i>Poa annua</i>	Annual Meadow-grass	-
<i>Rumex spp.</i>	Dock	-
<i>Trifolium repens var. repens</i>	White Clover	-
<i>Xanthium spinosum</i>	Bathurst Burr	*

Appendix 1.2 Habitat Hectare Assessment

Table A1.2. Habitat Hectare Assessment Table.

Vegetation Zone		PSW	PGW
Bioregion		Victorian Volcanic Plain	Victorian Volcanic Plain
EVC / Tree		Plains Sedgy Wetland	Plains Grassy Woodland
EVC Number		647	55_61
EVC Conservation Status		Endangered	Endangered
Patch Condition	Large Old Trees /10	0	0
	Canopy Cover /5	0	0
	Under storey /25	5	5
	Lack of Weeds /15	2	2
	Recruitment /10	5	5
	Organic Matter /5	4	4
	Logs /5	0	0
	Treeless EVC Multiplier	1.36	1.00
	Subtotal =	21.76	16.00
Landscape Value /25		3	3
Habitat Points /100		25	19
Habitat Score		0.25	0.19

Note: PSW = Plains Sedgy Wetland, PGW = Plains Grassy Woodland

Appendix 1.3 Significant Flora Species

Table A1.3 Significant flora recorded within 10 kilometres of the study area

Key:

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

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

DEPI *Advisory List of Threatened Flora in Victoria* (DEPI 2014)

EX	Extinct	X	Extinct
CR	Critically endangered	e	Endangered
EN	Endangered	v	Vulnerable
VU	Vulnerable	r	Rare
K	Poorly Known (Briggs and Leigh 1996)	k	Poorly Known
#	Records identified from EPBC Act Protected Matters Search Tool.	L	Listed
*	Records identified from the FIS		

1	Known occurrence	Recorded within the study area recently (i.e. within ten years)
2	High Likelihood	Previous records of the species in the local vicinity; and/or, The study area contains areas of high quality habitat.
3	Moderate Likelihood	Limited previous records of the species in the local vicinity; and/or, The study area contains poor or limited habitat.
4	Low Likelihood	Poor or limited habitat for the species however other evidence (such as a lack of records or environmental factors) indicates there is a very low likelihood of presence.
5	Unlikely	No suitable habitat and/or outside the species range.

Scientific name	Common name	Total # of documented records	Last documented record	EPBC	FFG	DEPI	Likely occurrence in study area
NATIONAL SIGNIFICANCE							
<i>Amphibromus fluitans</i>	River Swamp Wallaby-grass	-	-	VU	-	-	4 – Low likelihood due to lack of suitable habitat and previous records
<i>Dianella amoena</i>	Matted Flax-lily	-	-	EN	L	e	4 – Low likelihood due to lack of suitable habitat and previous records
<i>Dodonaea procumbens</i>	Trailing Hop-bush	-	-	VU	-	v	4 – Low likelihood due to lack of suitable habitat and previous records
<i>Glycine latrobeana</i>	Clover Glycine	-	-	VU	L	v	4 – Low likelihood due to lack of suitable habitat and previous records
<i>Lachnagrostis adamsonii</i>	Adamson's Blown-grass	-	-	EN	L	v	4 – Low likelihood due to lack of suitable habitat and previous records
<i>Lepidium aschersonii</i>	Spiny Peppercross	1	1916	VU	L	e	4 – Low likelihood due to lack of suitable habitat and previous records
<i>Lepidium aschersonii</i>	Spiny Pepper-cress	-	-	VU	L	e	4 – Low likelihood due to lack of suitable habitat and previous records
<i>Leucochrysum albicans</i> var. <i>tricolor</i>	Hoary Sunray	-	-	EN	-	e	4 – Low likelihood due to lack of suitable habitat and previous records
<i>Pimelea spinescens</i> subsp. <i>spinescens</i>	Spiny Rice-flower	-	-	CR	L	e	4 – Low likelihood due to lack of suitable habitat and previous records
<i>Poa sallacustris</i>	Salt-lake Tussock-grass	4	2012	VU	L	v	4 – Low likelihood due to lack of suitable habitat and previous records
<i>Prasophyllum frenchii</i>	Maroon Leek-orchid	-	-	EN	L	e	4 – Low likelihood due to lack of suitable habitat and previous records
<i>Prasophyllum spicatum</i>	Dense Leek-orchid	-	-	VU	-	e	4 – Low likelihood due to lack of suitable habitat and previous records

Scientific name	Common name	Total # of documented records	Last documented record	EPBC	FFG	DEPI	Likely occurrence in study area
<i>Rutidosis leptorhynchoides</i>	Button Wrinklewort	-	-	EN	L	e	4 – Low likelihood due to lack of suitable habitat and previous records
<i>Senecio psilocarpus</i>	Swamp Fireweed	-	-	VU	-	v	4 – Low likelihood due to lack of suitable habitat and previous records
<i>Thelymitra epipactoides</i>	Metallic Sun-orchid	-	-	EN	L	e	4 – Low likelihood due to lack of suitable habitat and previous records
<i>Thelymitra matthewsii</i>	Spiral Sun-orchid	-	-	VU	L	v	4 – Low likelihood due to lack of suitable habitat and previous records
<i>Xerochrysum palustre</i>	Swamp Everlasting	-	-	VU	L	v	4 – Low likelihood due to lack of suitable habitat and previous records
STATE SIGNIFICANCE							
<i>Lachnagrostis robusta</i>	Salt Blown-grass	3	2008	-	-	r	4 – Low likelihood due to lack of suitable habitat and previous records
<i>Lawrencia spicata</i>	Salt Lawrencia	1	1946	-	-	r	4 – Low likelihood due to lack of suitable habitat and previous records
<i>Melaleuca armillaris</i> subsp. <i>armillaris</i>	Giant Honey-myrtle	1	2011	-	-	r	4 – Low likelihood due to lack of suitable habitat and previous records
<i>Poa physocline</i>	Wind-blown Tussock-grass	2	2012	-	L	e	4 – Low likelihood due to lack of suitable habitat and previous records
<i>Ranunculus diminutus</i>	Brackish Plains Buttercup	2	2011	-	-	r	4 – Low likelihood due to lack of suitable habitat and previous records
<i>Ranunculus papulentus</i>	Large River Buttercup	1	1979	-	-	k	4 – Low likelihood due to lack of suitable habitat and previous records
<i>Thelymitra gregaria</i>	Basalt Sun-orchid	1	1977	-	L	e	4 – Low likelihood due to lack of suitable habitat and previous records

Data source: Victorian Biodiversity Atlas (DELWP 2018); Protected Matters Search Tool (DAWE 2020).

Taxonomic order: Alphabetical.

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"> Known resident in the study area based on site observations, database records, or expert advice; and/or, Recent records (i.e. within five years) of the species in the local area (DELWP 2018); and/or, The study area contains the species' preferred habitat.
2	Moderate Likelihood	<ul style="list-style-type: none"> The species is likely to visit the study area regularly (i.e. at least seasonally); and/or, Previous records of the species in the local area (DELWP 2018); and/or, The study area contains some characteristics of the species' preferred habitat.
3	Low Likelihood	<ul style="list-style-type: none"> The species is likely to visit the study area occasionally or opportunistically whilst en route to more suitable sites; and/or, There are only limited or historical records of the species in the local area (i.e. more than 20 years old); and/or, The study area contains few or no characteristics of the species' preferred habitat.
4	Unlikely	<ul style="list-style-type: none"> No previous records of the species in the local area; and/or, The species may fly over the study area when moving between areas of more suitable habitat; and/or, Out of the species' range; and/or, No suitable habitat present.

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

RX Regionally extinct

CR Critically endangered

DD Data deficient (insufficiently or poorly known)

L Listed as threatened under FFG Act

EN Endangered

Common Name	Scientific Name	Last Documented Record (VBA)	# Records (VBA)	EPBC Act	FFG Act	DSE (2013)	Likelihood
NATIONAL SIGNIFICANCE							
Australasian Bittern	<i>Botaurus poiciloptilus</i>	#	1	EN	L	EN	4 – Unlikely due to lack of suitable habitat and low number of previous records
Curlew Sandpiper	<i>Calidris ferruginea</i>	1999	13	CR	-	EN	4 – Unlikely due to lack of waterbodies providing suitable habitat.
Spot-tailed Quoll	<i>Dasyurus maculatus maculatus</i>	#	-	EN	L	EN	4 – Unlikely due to lack of suitable habitat and lack of previous records.
Eastern Quoll	<i>Dasyurus viverrinus</i>	#	-	EN	L	RX	4 – Unlikely due to lack of suitable habitat and lack of previous records.
Striped Legless Lizard	<i>Delma impar</i>	#	-	VU	L	EN	4 – Unlikely due to disturbed nature creating lack of suitable habitat
Corangamite Water Skink	<i>Eulamprus tympanum marnieae</i>	1998	2	EN	L	CR	4 – Unlikely due to lack of suitable habitat
Dwarf Galaxias	<i>Galaxiella pusilla</i>	#	-	VU	L	EN	4 – Unlikely due to lack of suitable waterbodies for habitat
Painted Honeyeater	<i>Grantiella picta</i>	#	-	VU	L	VU	4 – Unlikely due to lack of previous records and suitable habitat.
Southern Brown Bandicoot	<i>Isodon obesulus obesulus</i>	#	-	EN	L	NT	4 – Unlikely due to lack of suitable habitat in form of structural understory vegetation
Swift Parrot	<i>Lathamus discolor</i>	#	-	CR	L	EN	4 – Unlikely due to limited presence of suitable habitat and low number of previous records
Growling Grass Frog	<i>Litoria raniformis</i>	#	-	VU	L	EN	4 – Unlikely due to lack of suitable waterbodies for habitat and lack of previous records
Southern Bent-wing Bat	<i>Miniopterus schreibersii bassanii</i>	2011	1	CR	L	CR	4 – Unlikely due to lack of suitable habitat
Eastern Curlew	<i>Numenius madagascariensis</i>	#	-	CR	-	VU	4 – Unlikely due to lack of waterbodies providing suitable habitat.
Fairy Prion	<i>Pachyptila turtur</i>	1984	1	VU	-	VU	4 – Unlikely due to lack of waterbodies providing suitable habitat.

Common Name	Scientific Name	Last Documented Record (VBA)	# Records (VBA)	EPBC Act	FFG Act	DSE (2013)	Likelihood
Plains-wanderer	<i>Pedionomus torquatus</i>	#	-	CR	L	CR	4 – Unlikely due to lack of suitable habitat
Long-nosed Potoroo	<i>Potorous tridactylus tridactylus</i>	#	-	VU	L	NT	4 – Unlikely due to lack of suitable habitat
Australian Grayling	<i>Prototroctes maraena</i>	#	-	VU	L	VU	4 – Unlikely due to lack of suitable waterbodies for habitat
Grey-headed Flying-fox	<i>Pteropus poliocephalus</i>	#	-	VU	L	VU	4 – Unlikely due to lack of suitable habitat
Australian Painted Snipe	<i>Rostratula australis</i>	#	-	VU	L	CR	4 – Unlikely due to lack of waterbodies providing suitable habitat
Golden Sun Moth	<i>Synemon plana</i>	#	-	CR	L	CR	4 – Unlikely due to lack of suitable habitat
Pectoral Sandpiper	<i>Calidris melanotos</i>	#	1	-	-	NT	4 – Unlikely due to lack of waterbodies providing suitable habitat
Ruddy Turnstone	<i>Arenaria interpres</i>	#	1	-	-	VU	4 – Unlikely due to lack of waterbodies providing suitable habitat
Grey Falcon	<i>Falco hypoleucos</i>	#	1	-	L	EN	4 – Unlikely due to low occurrence of suitable habitat
Pacific Golden Plover	<i>Pluvialis fulva</i>	#	1	-	-	VU	4 – Unlikely due to lack of waterbodies providing suitable habitat
Common Greenshank	<i>Tringa nebularia</i>	#	1	-	-	VU	4 – Unlikely due to lack of waterbodies providing suitable habitat
STATE SIGNIFICANCE							
Grey Goshawk	<i>Accipiter novaehollandiae novaehollandiae</i>	1995	3	-	L	VU	4 – Unlikely due to low occurrence of suitable habitat
Common Sandpiper	<i>Actitis hypoleucos</i>	2000	2	-	-	VU	4 – Unlikely due to lack of waterbodies providing suitable habitat
Australasian Shoveler	<i>Anas rhynchotis</i>	2006	104	-	-	VU	3 – Low likelihood due to lack of waterbodies providing suitable habitat
Magpie Goose	<i>Anseranas semipalmata</i>	2001	1	-	L	NT	4 – Unlikely due to lack of waterbodies providing suitable habitat
Eastern Great Egret	<i>Ardea modesta</i>	2005	38	-	L	VU	3 – Low likelihood due to lack of waterbodies providing suitable habitat
Australian Bustard	<i>Ardeotis australis</i>	1874	1	-	L	CR	4 – Unlikely due to lack of waterbodies providing suitable habitat
Hardhead	<i>Aythya australis</i>	2010	39	-	-	VU	3 – Low likelihood due to lack of waterbodies providing suitable habitat

Common Name	Scientific Name	Last Documented Record (VBA)	# Records (VBA)	EPBC Act	FFG Act	DSE (2013)	Likelihood
Silver Perch	<i>Bidyanus bidyanus</i>	1996	1	-	L	VU	4 – Unlikely due to lack of suitable habitat
Musk Duck	<i>Biziura lobata</i>	2006	90	-	-	VU	3 – Low likelihood due to lack of waterbodies providing suitable habitat. Previous records fall within Lake Bookaar and Lake Corangamite. Species may fly over on occasion, but is unlikely to rely on the study area for foraging or breeding purposes.
Little Egret	<i>Egretta garzetta nigripes</i>	1981	1	-	L	EN	3 – Low likelihood due to lack of waterbodies providing suitable habitat
Black Falcon	<i>Falco subniger</i>	1998	3	-	-	VU	3 – Low likelihood due to lack of waterbodies providing suitable habitat
Gull-billed Tern	<i>Gelochelidon nilotica macrotarsa</i>	1991	2	-	L	EN	3 – Low likelihood due to lack of waterbodies providing suitable habitat
Brolga	<i>Grus rubicunda</i>	2012	228	-	L	VU	3 – Low likelihood due to lack of waterbodies providing suitable habitat. Previous records fall within Lake Bookaar and Lake Corangamite. Species may fly over on occasion, but is unlikely to rely on the study area for foraging or breeding purposes due to lack of suitable breeding and flocking habitat (i.e. wetlands).
White-throated Needletail	<i>Hirundapus caudacutus</i>	2001	4	-	-	VU	3 – Low likelihood due to lack of suitable habitat, but may fly over on occasion.
Caspian Tern	<i>Hydroprogne caspia</i>	1987	2	-	L	NT	3 – Low likelihood due to lack of waterbodies providing suitable habitat.
Blue-billed Duck	<i>Oxyura australis</i>	2002	28	-	L	EN	3 – Low likelihood due to lack of waterbodies providing suitable habitat. Previous records fall within Lake Bookaar and Lake Corangamite. Species may fly over on occasion, but is unlikely to rely on the study area for foraging or breeding purposes.
Tussock Skink	<i>Pseudemoia pagenstecheri</i>	2007	3	-	-	VU	4 – Unlikely due to lack of native grassland habitat and previous habitat disturbance caused by agricultural activity.
Southern Toadlet	<i>Pseudophryne semimarmorata</i>	1998	7	-	-	VU	3 – Unlikely due to lack of suitable habitat.
Yellow-bellied Sheath-tail Bat	<i>Saccolaimus flaviventris</i>	2011	1	-	L	DD	3 – Low likelihood due to lack of suitable habitat.

Common Name	Scientific Name	Last Documented Record (VBA)	# Records (VBA)	EPBC Act	FFG Act	DSE (2013)	Likelihood
Freckled Duck	<i>Stictonetta naevosa</i>	2006	43	-	L	EN	3 – Low likelihood due to lack of waterbodies providing suitable habitat. Previous records fall within Lake Bookaar and Lake Corangamite. Species may fly over on occasion, but is unlikely to rely on the study area for foraging or breeding purposes.
Wood Sandpiper	<i>Tringa glareola</i>	1998	2	-	-	VU	4 – Unlikely due to lack of waterbodies providing suitable habitat.
Marsh Sandpiper	<i>Tringa stagnatilis</i>	1998	1	-	-	VU	4 – Unlikely due to lack of waterbodies providing suitable habitat.
REGIONAL SIGNIFICANCE							
Whiskered Tern	<i>Chlidonias hybridus javanicus</i>	1987	8	-	-	NT	3 – Low likelihood due to lack of waterbodies providing suitable habitat.
Spotted Harrier	<i>Circus assimilis</i>	2000	1	-	-	NT	3 – Low likelihood due to lack of waterbodies providing suitable habitat.
Latham's Snipe	<i>Gallinago hardwickii</i>	1996	4	-	-	NT	3 – Low likelihood due to lack of waterbodies providing suitable habitat.
Golden Perch	<i>Macquaria ambigua</i>	1997	2	-	-	NT	– Unlikely due to lack of waterbodies providing suitable habitat.
Nankeen Night Heron	<i>Nycticorax caledonicus hillii</i>	2000	8	-	-	NT	3 – Low likelihood due to lack of waterbodies providing suitable habitat.
Pied Cormorant	<i>Phalacrocorax varius</i>	2001	5	-	-	NT	4 – Unlikely due to lack of suitable habitat.
Royal Spoonbill	<i>Platalea regia</i>	1997	4	-	-	NT	4 – Low likelihood due to lack of waterbodies providing suitable habitat.
Fat-tailed Dunnart	<i>Sminthopsis crassicaudata</i>	1985	2	-	-	NT	3 – Low likelihood due to lack of suitable habitat.

APPENDIX 3 NATIVE VEGETATION REMOVAL (NVR) 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: 20/07/2020

Report ID: EHP_2020_135

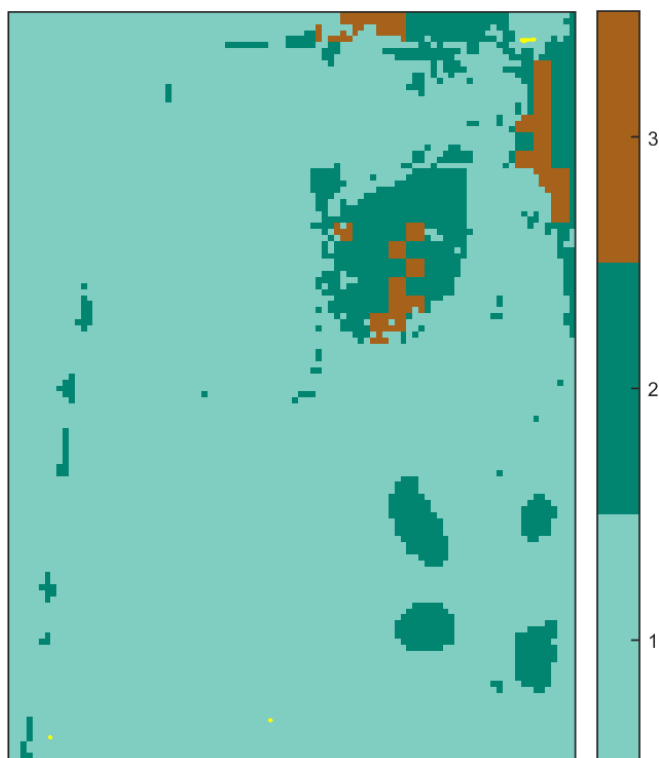
Time of issue: 2:52 pm

Project ID EHP13718_Bookaar

Assessment pathway

Assessment pathway	Basic Assessment Pathway
Extent including past and proposed	0.019 ha
Extent of past removal	0.000 ha
Extent of proposed removal	0.019 ha
No. Large trees proposed to be removed	0
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:

General offset amount¹	0.004 general habitat units
Vicinity	Glenelg Hopkins Catchment Management Authority (CMA) or Corangamite Shire Council
Minimum strategic biodiversity value score ²	0.336
Large trees	0 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

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

² 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 Basic Assessment Pathway and it will be assessed under the Basic 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 (met unless you wish to include a site assessment)
- Maps showing the native vegetation and property
- 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
- An offset statement that explains that an offset has been identified and how it will be secured.

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Melbourne 2020

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Obtaining this publication does not guarantee that an application will meet the requirements of Clauses 52.16 or 52.17 of the Victoria Planning Provisions and Victorian planning schemes or that a permit to remove native vegetation will be granted.

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.

Appendix 1: Description of native vegetation to be removed

All zones require a general offset, the general habitat units each zone is calculated by the following equation in accordance with the Guidelines:

General habitat units = extent x condition x general landscape factor x 1.5, where the general landscape factor = 0.5 + (strategic biodiversity value score/2)

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

Native vegetation to be removed

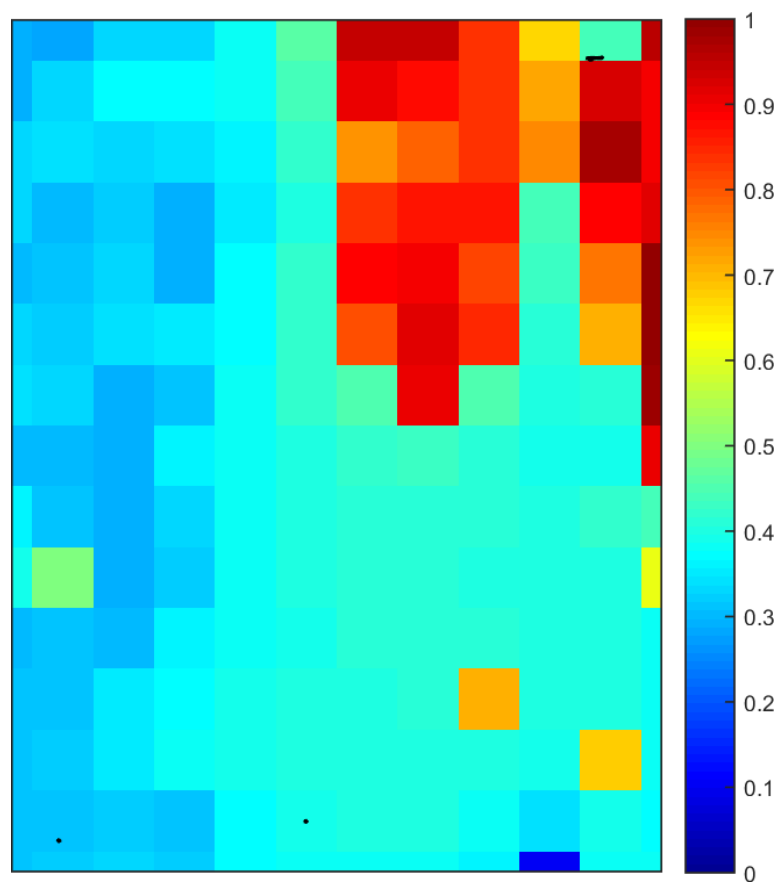
Information provided by or on behalf of the applicant in a GIS file							Information calculated by EnSym					
Zone	Type	BioEVC	BioEVC conservation status	Large tree(s)	Partial removal	Condition score	Polygon Extent	Extent without overlap	SBV score	HI score	Habitat units	Offset type
1-A	Patch	vvp_0055	Endangered	0	no	0.190	0.015	0.015	0.440		0.003	General
1-B	Patch	vvp_0647	Endangered	0	no	0.250	0.002	0.002	0.310		0.001	General
2-B	Patch	vvp_0647	Endangered	0	no	0.250	0.002	0.002	0.390		0.001	General

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

This is not applicable in the Basic Assessment Pathway.

Appendix 3 – Images of mapped native vegetation

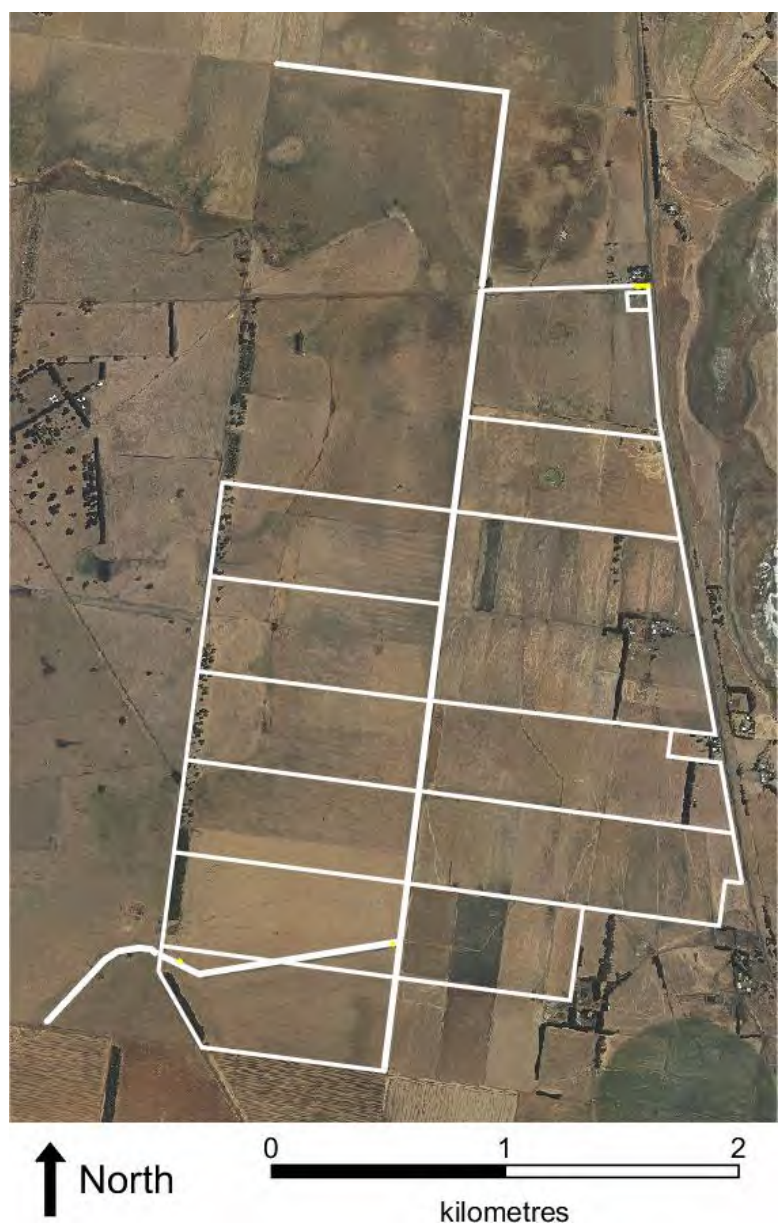
2. Strategic biodiversity values map



3. Aerial photograph showing mapped native vegetation



4. Map of the property in context



Yellow boundaries denote areas of proposed native vegetation removal.

APPENDIX 4 AVAILABLE NATIVE VEGETATION CREDITS

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: 23/07/2020 02:01

Report ID: 5067

What was searched for?

General offset

General habitat units	Strategic biodiversity value	Large trees	Vicinity (Catchment Management Authority or Municipal district)	
0.004	0.336	0	CMA	Glenelg Hopkins
			or LGA	Corangamite Shire

Details of available native vegetation credits on 23 July 2020 02:01

These sites meet your requirements for general offsets.

Credit Site ID	GHU	LT	CMA	LGA	Land owner	Trader	Fixed price	Broker(s)
BBA-0101	0.998	0	Glenelg Hopkins	Southern Grampians Shire	No	Yes	No	VegLink
BBA-0110	0.070	5	Glenelg Hopkins	Ararat Rural City	Yes	Yes	No	Contact NVOR
BBA-0635	0.121	15	Glenelg Hopkins	Southern Grampians Shire	Yes	Yes	No	Contact NVOR
BBA-0639	7.447	0	Glenelg Hopkins	Moyne Shire	Yes	Yes	No	Bio Offsets
BBA-0667	1.582	0	Glenelg Hopkins	Southern Grampians Shire	Yes	Yes	No	Contact NVOR
BBA-0668	0.880	0	Glenelg Hopkins	Southern Grampians Shire	Yes	Yes	No	VegLink
BBA-0924	1.509	0	Glenelg Hopkins	Glenelg Shire	Yes	Yes	No	VegLink
BBA-1139	1.073	0	Glenelg Hopkins	Moyne Shire	Yes	Yes	No	VegLink
BBA-1139_05	3.950	0	Glenelg Hopkins	Moyne Shire	Yes	Yes	No	VegLink
BBA-2088	0.254	5	Glenelg Hopkins	Southern Grampians Shire	Yes	Yes	No	VegLink
BBA-2113	0.007	144	Corangamite	Corangamite Shire	Yes	Yes	No	Bio Offsets
BBA-2467	10.559	95	Glenelg Hopkins	Glenelg Shire	Yes	Yes	No	VegLink
BBA-3027	2.518	267	Glenelg Hopkins	Pyrenees Shire	Yes	Yes	No	VegLink
BBA-3041	15.584	283	Glenelg Hopkins	Moyne Shire	Yes	Yes	No	VegLink
TFN-C0228	2.246	0	Glenelg Hopkins	Glenelg Shire	Yes	Yes	No	VegLink
TFN-C0867	0.103	0	Corangamite	Corangamite Shire	Yes	Yes	No	Ecocentric, Ethos, VegLink
TFN-C0867_2	0.116	0	Corangamite	Corangamite Shire	Yes	Yes	No	Ecocentric, Ethos, VegLink

TFN-C1668	0.121	12	Glenelg Hopkins	Glenelg Shire	Yes	Yes	No	VegLink
TFN-C1967	0.194	0	Glenelg Hopkins	Moyne Shire	Yes	Yes	No	VegLink
VC_CFL-1139_06	0.331	0	Glenelg Hopkins	Moyne Shire	Yes	Yes	No	VegLink

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

Credit Site ID	GHU	LT	CMA	LGA	Land owner	Trader	Fixed price	Broker(s)
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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) 5470 5232	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

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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