

Ian Gibb
Director Sustainable Development
Corangamite Shire Council
181 Manifold Street (PO Box 84)
CAMPERDOWN VIC 3260

Infinergy Australia Limited
44 Quayle Street
Sandy Bay
TAS 7001

By Email

30 August 2018

Dear Ian

RE: Bookaar Solar Farm (PP2018/060) - Request for further clarification

I refer to the letter from Greg Hayes received on the 2nd of August 2018 requesting further clarification with respect to the proposed Bookaar Solar Farm. Each of the points raised have been addressed below with further information attached where necessary.

Point 1:

"Land on the western boundary of the site has been identified for planting a screening vegetation (20 m) as well as for a firebreak (5 meters), however this area is also identified as being for a drainage channel as identified in the Eco-logical report as well as on title (drainage easement E2). Clarification is sought on the appropriate dimensions and use of this area to cater for all of the proposed uses/planting. This may involve a refinement to the Eco-Logical report to consider the identified areas as being for screening, drainage and a firebreak. A typical cross section of the perimeter in the west would be beneficial. Please note however that initial correspondence from the Country Fire Authority indicates a requirement for a six (6 meter (fuel reduced) separation between solar panel banks/rows, and strongly suggest a perimeter road (minimum 4 meters width) within a minimum ten (10) m perimeter fire break;..."

Response to point 1:

The Drainage Easement E2 referred to above is not located within the proposed Site. The location of drainage easement E2 outside the Site Boundary (on the eastern side of the proposed development) is illustrated on the attached map titled 'Clarification Map, Bookaar Solar Farm'.

The order of Infrastructure to illustrate how the proposal is to cater for the proposed uses (including screening) on the boundary of the Site is provided in the two attached insert maps 'Clarification Map, Bookaar Solar Farm, Insert West', and 'Clarification Map, Bookaar Solar Farm, Insert East'. The maps illustrate a typical cross section of the area for clarification. The order of infrastructure moving away from the site boundary towards the solar farm is as follows:

1. Site boundary;
2. Perimeter fence;
3. Planted vegetation screen 20m wide;
4. 10m wide firebreak (within which would be a 4m access track);
5. Array area and other infrastructure.

In summary:

- Drainage easement E2 lies outside the Site boundary of the Proposal; and

- The Proponent would provide a 10m fire break (within which would be a 4m access track subject to CFA approval) around the perimeter of the development as illustrated on the attached map 'Clarification Map, Bookaar Solar Farm'.

Note, the site boundary depicted in the Clarification Map reflects post submission changes to the North East area of the boundary in response to a new area of cultural heritage sensitivity identified post assessment.

Point 2

"An area to the south between lot 51 and lot 52 on LP004677 is also identified for drainage easement on title however this area is nominated for the siting of panels. This should be addressed in the documentation and Eco Logical report;..."

Response to point 2:

No panel infrastructure will be placed over the easement that occurs between lot 51 and lot 52 on LP004677 referred to above. The location of this drainage easement (which is a continuation of drainage easement E1) is illustrated on the map 'Clarification Map, Bookaar Solar Farm'.

Note, while no panel infrastructure will be located over this easement, it will be necessary to construct up to two crossings over the easement to facilitate the movement of vehicles around the site. It may also be necessary to place underground cables across the easement in some locations to ensure that all areas of the solar farm can be connected to the substation. All crossings and cabling will be designed to ensure that the easement is not restricted.

Point 3

"The Eco logical report should also fully address an assessment of the native vegetation to be removed which includes information set out in Table 4 to the Guidelines for the removal, destruction or lopping of native vegetation (DEWLP, December 2017);..."

Response to point 3:

Please see the attached 'Ecology and Heritage Partners support letter clarifying native vegetation removal, Bookaar Solar Farm', which provides the requested information.

Council Comment 4

"The plans should identify the location of the proposed construction compound showing access and measures used to avoid any environmental or amenity impacts;..."

Infinergy Pacific response to Council Comment 4:

The temporary construction compound location is illustrated on the attached map 'Clarification Map showing drainage lines, drainage easements and temporary construction compound'. Measures to avoid any environmental or amenity impacts are detailed below.

Access

The temporary construction compound location and access is illustrated on the attached map 'Clarification Map, Bookaar Solar Farm'. Please see Figure 7 of the main report which illustrates site access.

Measures to avoid environmental or amenity impacts in relation to the construction compound

The construction compound has been located in a position away from the Property boundary on the western side of the Site. The location was selected to ensure that environmental and amenity impacts could be avoided. The temporary construction compound is situated at least 1.7km from the nearest residence and has been located to avoid any environmental constraints identified on Site.

Noise

The location of the temporary construction compound at least 1.7 km from the nearest neighbour will mitigate noise associated with the establishment and operation of the construction compound. In addition, protocols to minimise construction noise; such as, switching off machinery when not in use and ensuring that all equipment is maintained in good working order will be included into a Construction and Environmental Management Plan (CEMP), which will be complied for the construction phase of the development once the final design of the solar farm has been completed.

Visual Amenity Impacts

As stated above, the temporary construction compound has been located at least 1.7 km away from the nearest residence in order to reduce impacts on amenity as far as possible. Furthermore, existing screening in the surrounding area will obscure limited distant views towards the temporary construction compound from neighbouring residences.

Environmental Impacts

With respect to potential environmental impacts, the temporary construction compound has been located to avoid existing drainage lines (or easements), or any environmental constraints identified through the environmental assessments conducted on site. Specific measures to avoid environmental impacts from the temporary construction compound will be described in full in the CEMP, which will be approved by the relevant authority prior to construction. An overview of these measures is provided below by topic.

Soil Erosion

The CEMP would include a requirement for the establishment of erosion and sedimentation controls at the commencement of works and throughout the construction and operation of the construction compound, including for example:

- Construction and/or installation of erosion and sediment control structures shall be in accordance with the relevant legislation and Guidance;
- Management of erosion generated by traffic to and from the construction compound shall include a driving code of practice, installation of appropriate drainage controls, inspection and maintenance of unsealed road surfaces and dust management strategies;
- A Drainage design for the temporary construction compound that can cope with heavy rainfall events that will prevent erosion for the duration of the any wet periods; and
- Works methods within the temporary construction compound shall be modified during high wind conditions if excess dust is generated.

Waste management

Management of waste and sewage would be detailed in the CEMP. Waste produced from toilets and grey water will be stored until it is trucked off site and disposed in accordance with Council requirements.

Control of hazardous materials

All hazardous materials (fuels, lubricants, herbicides, etc.) will be transported to and from site in accordance with relevant legislation and/or guidance. Once onsite, hazardous materials will be classified and stored in an appropriate location within an impervious bunded area within the temporary construction compound in accordance with:

- All relevant Australian Standards;
- A minimum bund volume requirement of 110% of the volume of the largest single stored volume within the bund; and
- Relevant legislation and Guidance.

To avoid the release of hazardous materials to the environment, and contamination of water systems, refuelling would only occur in a designated bunded area within the temporary construction compound. In addition, all machinery would be inspected daily to ensure that there are no oil, fuel or lubricant leaks. Contractors and staff will be appropriately trained to prevent, minimise and manage accidental spills.

Furthermore, a Spill Response Plan (SRP) will be included in the CEMP (and will be applicable to the establishment of the construction compound and activities within it). All contractors and staff will be trained regarding the implementation of the SRP. Should a spill event occur, incident management procedures provided in the SRP will be implemented and the Environmental Protection Agency would be notified of incidents that cause harm to the environment.

Restoration

All land required for the temporary construction compound, if not used as part of the array area for the solar farm, will be restored to its pre-construction condition.

Council Comment 5

Plans/details will also be required for the proposed cellular mast and communications tower.

Infenergy Pacific response to Council Comment 5:

The proposed cellular mast and communications tower is not required for the proposed development. As such, no plans or details are provided.

I trust that the above and attached information clarifies the issues raised in relation to the planning application for the proposed Bookaar Solar Farm. However, should there be any further queries please do not hesitate to contact me.

Yours sincerely,

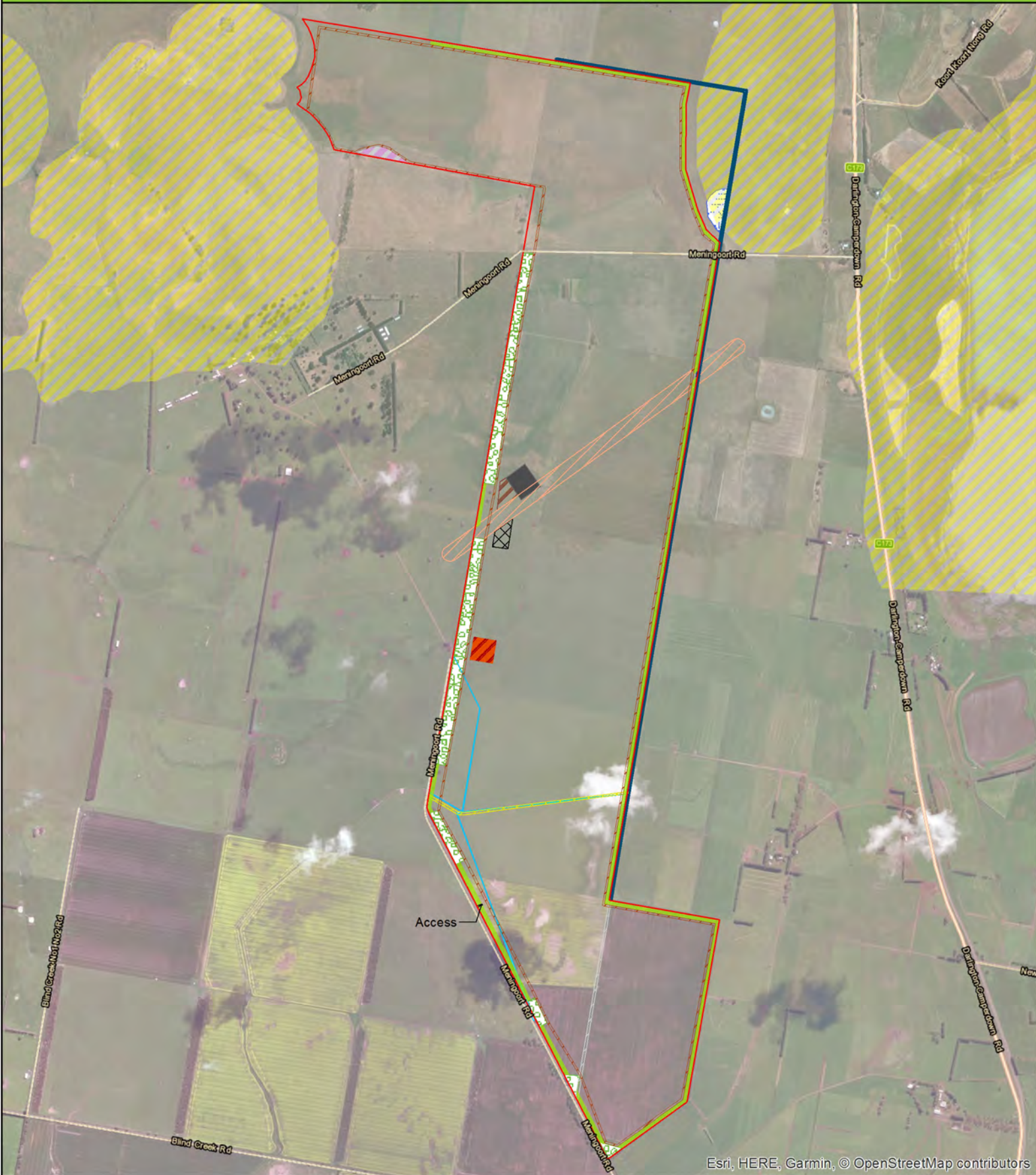
A handwritten signature in blue ink, appearing to read "Richard Seymour".

Richard Seymour

Attachments:

- *Clarification Map, Bookaar Solar Farm*
- *Clarification Map, Bookaar Solar Farm, Insert West*
- *Clarification Map, Bookaar Solar Farm, Insert East*
- *Ecology and Heritage Partners support letter clarifying native vegetation removal, Bookaar Solar Farm*

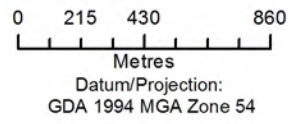
Clarification Map showing drainage lines, drainage easements and temporary construction compound



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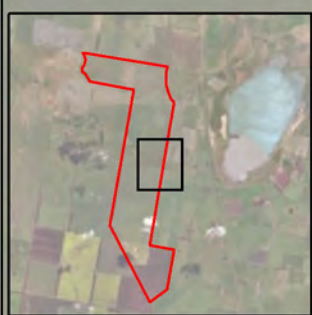
Legend

- | | |
|--|--|
| Site Boundary | Access |
| Fire Break 10m | Operational Buildings |
| Proposed Screen | Substation |
| Trees | Temporary Construction Compound |
| Drainage Line 2m | Battery |
| Drainage Lines E1 AND E2 | Wetlands |
| Drainage easement on site (part of E1) | Cultural Heritage Area of Likeliness |
| Common Spike-Sedge | Areas of Cultural Heritage Sensitivity |
| Grid | |

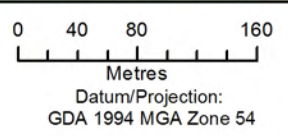


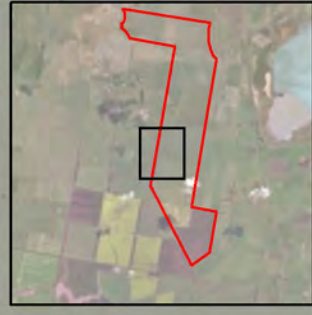
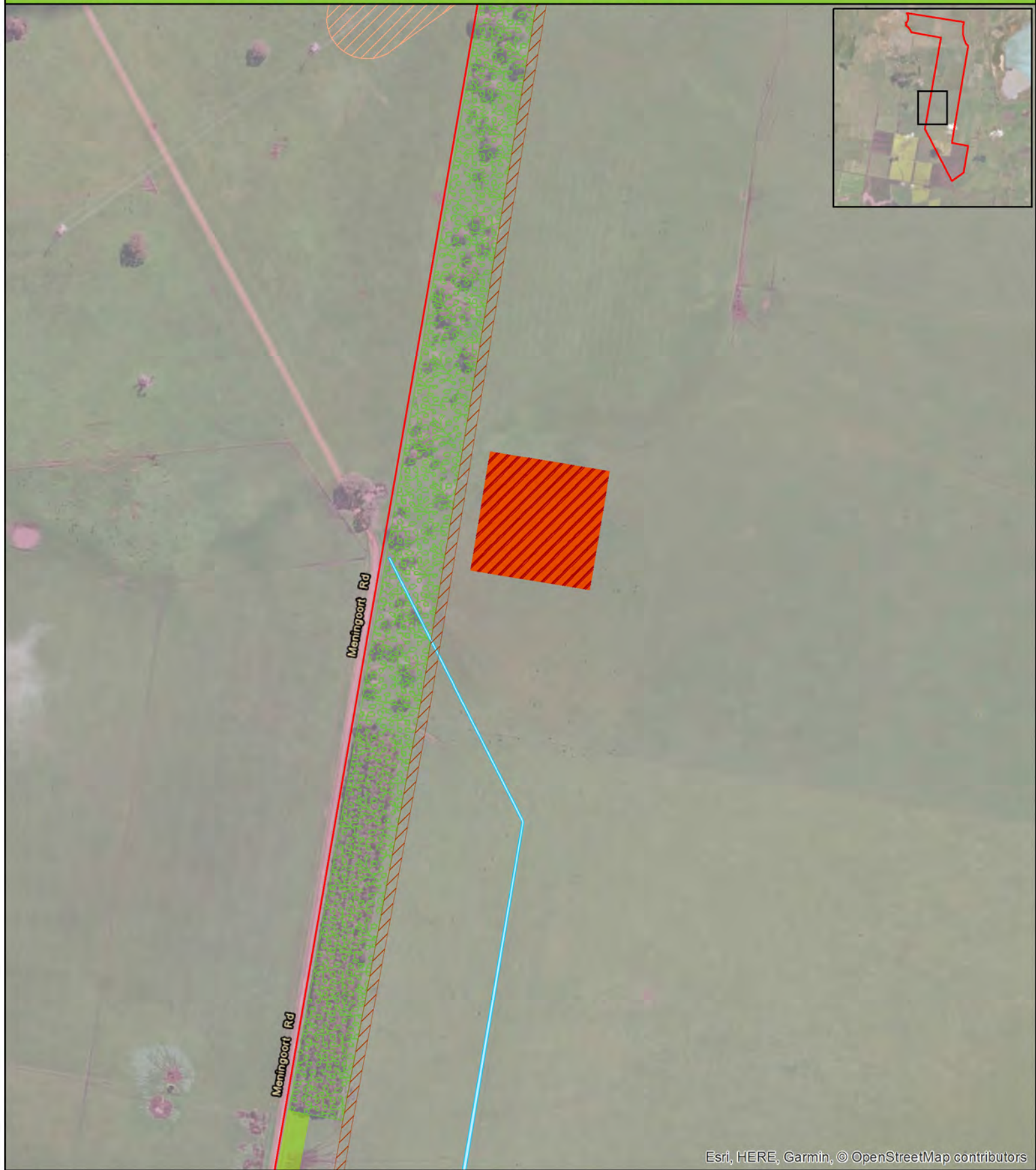


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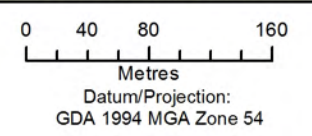
- Legend**
- Site Boundary
 - Fire Break 10m
 - Proposed Screen
 - Drainage Lines
 - Grid





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- Legend**
- Site Boundary
 - Fire Break 10m
 - Proposed Screen
 - Trees
 - Drainage Line 2m
 - Grid
 - Temporary Construction Compound



Richard Seymour
Bookaar Renewables Project
Infinergy Pacific Pty Ltd
rseymour@infinergy.co.uk

Date: 30th August 2018

Our reference: 6188

Dear Richard,

Re: Biodiversity Assessment for construction of Bookaar Solar Farm at 520 Meningoort Road, Bookaar

Following correspondence dated 23/08/2018, Ecology and Heritage Partners Pty Ltd was commissioned by Bookaar Renewables Pty Ltd to complete a Biodiversity Assessment of the proposed construction of culverts for the Bookaar Solar Farm at 520 Meningoort Road, Bookaar. A summary of application requirements for this Biodiversity Assessment can be found in Appendix 1. This report builds upon a previous report, Ecological Due Diligence: 520 Meningoort Road, Bookaar prepared for Bookaar Renewables Pty Ltd (Ecology and Heritage Partners 2018) and received by Bookaar Renewables Pty Ltd in April 2018.

The purpose of this assessment is to identify the presence of any significant ecological values, focussing on the study area within the southern part of the property.

1 Study area

The study area is located at 520 Meningoort Road, Bookaar, Victoria approximately 170 kilometres southwest of Melbourne's CBD and approximately eight kilometres northwest of Camperdown (Figure 1). The study area covers 620 hectares and is bound by paddocks to the north, east and south, and Meningoort Road to the west.

The property is generally flat along the western half and gently slopes downwards towards the east in the eastern half of the study area. There is a drainage line (Blind Creek) running east-west in the lower third of the property. The property and wider landscape are used for agricultural purposes. At the time of the initial assessment, the property's southern 'triangle' was being used for cropping, while the remaining land was being used to graze cattle (Figure 1). According to the Department of Environment, Land, Water and Planning (DELWP) Native Vegetation Information Management (NVIM) Tool (DELWP 2018a), the study area occurs within the Victorian Volcanic Plain bioregion. It is located within the jurisdiction of the Glenelg Hopkins Catchment Management Authority (CMA) and the Corangamite Shire municipality.

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 NVIM Tool (DELWP 2018a) and Biodiversity Interactive Map (DELWP 2018b) for:
 - Modelled data for location risk, remnant vegetation patches, scattered trees and habitat for rare or threatened species; and,
 - The extent of historic and current EVCs.
- EVC benchmarks (DELWP 2018c) 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 2018d);
- The Illustrated Flora Information System of Victoria (IFLISV) (Gullan 2017) for assistance with the distribution and identification of flora species;
- The Commonwealth Department of the Environment (DoEE) Protected Matters Search Tool (PMST) for matters of National Environmental Significance (NES) protected under the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act) (DoEE 2018);
- Relevant listings under the *Victorian Flora and Fauna Guarantee Act 1988* (FFG Act), including the latest Threatened and Protected Lists (DELWP 2017e; DELWP 2016);
- The Planning Maps Online (DELWP 2018f) and Planning Schemes Online (DELWP 2018g) to ascertain current zoning and environmental overlays in the study area;
- Other relevant environmental legislation and policies as required;
- Aerial photography of the study area; and,
- Previous ecological or other relevant assessments of the study area including Ecology and Heritage Partners (2018).

A field assessment was undertaken on 1 November 2018 to obtain information on flora and fauna values within the study area. The study area was walked, with all observed vascular flora and fauna species recorded, any 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 and their published descriptions (DELWP 2017c). All significant flora and fauna species are listed in Ecology and Heritage Partners (2018).

Where remnant vegetation was identified a habitat hectare assessment was undertaken following methodology described in the Vegetation Quality Assessment Manual (DSE 2004).

2.2 Removal of Native Vegetation (Guidelines)

Under the Planning and Environment Act 1987, Clause 52.17 of the Planning Schemes requires a planning permits from the relevant local Council (in this case, Mornington Peninsular Shire Council) 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 (Guidelines) (DELWP 2017h). The ‘Assessor’s handbook – Applications to remove destroy or lop native vegetation’ (Handbook) provided clarification regarding the application of the Guidelines (DELWP 2017i).

2.2.1 Assessment pathway

The Guidelines manage the impacts on biodiversity from native vegetation removal using a risk-based approach. Two factors- extent risk and location risk – 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 of DELWP’s Native Vegetation Information Management (NVIM) Tool (DELWP 2017a). Determination of the assessment pathway is summarised in Table 1 below.

Table 1. Assessment pathways for applications to remove native vegetation (DELWP 2017h)

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

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.

2.2.2 Vegetation assessment

Native vegetation (as defined in Table 2) is assessed using two key parameters: extent (in hectares) and condition. Extent is determined through a field assessment. The condition score for Intermediate and Detailed assessment pathways must be assessed through a habitat hectare¹ assessment conducted by a qualified ecologist. The condition score for Basic assessment pathways may be based on either modelled data available on the NVIM Tool (DELWP 2017a), or through a habitat hectare assessment.

In addition, all mapped wetlands (based on the DELWP ‘Current Wetlands’ layer) must be included as native vegetation, with the modelled condition score assigned to them (DELWP 2017b).

Table 2. Determination of remnant native vegetation (DELWP 2017h)

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 Any area with three or more native canopy trees where the drip line of each tree touches the drip line of at least one other tree, forming a continuous canopy. OR	Measured in hectares. Based on hectare area of the patch.	Vegetation Quality Assessment Manual (DSE 2004).

¹ A ‘habitat hectare’ is a unit of measurement which combines the condition and extent of native vegetation.

	Any mapped wetland included in the <i>Current wetlands map</i> , available in DELWP systems and tools.		
Scattered tree	A native canopy tree that does not form part of a patch.	<p>Measured in hectares.</p> <p>A small tree is assigned an extent of 0.031 hectares (10m radius).</p> <p>A large tree is assigned an extent of 0.071 hectares (15m radius).</p>	Scattered trees are assigned a default condition score of 0.2.

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

2.2.3 Offsets

Offsets are required to compensate for the permitted removal of native vegetation. An offset is required for the impact area because the vegetation to be removed meets the classification of remnant native vegetation as described in Table 1.

3 Results

3.1 Vegetation assessment

The results of ‘Ecological Due Diligence: 520 Meningoort Road, Bookaar’ (Ecology and Heritage Partners 2018) were verified and no change in the extent or character of native vegetation was found to have taken place. As previously indicated in Ecology and Heritage Partners (2018), pre-1750s modelled Ecological Vegetation Class (EVC) mapping indicates that the study area would have been historically dominated by Plains Grassland (EVC 132) (DELWP 2018c). However, the study area was highly modified as a result of historical agricultural use, with native vegetation primarily being restricted to the western boundary of the study area, where remnant River Red-gums *Eucalyptus camaldulensis* (attributed to Plains Grassy Woodland EVC 55) were recorded, and Common Spike Sedge *Eleocharis acuta* was recorded along the Blind Creek drainage line (attributed to Plains Sedgy Wetland EVC 647).



Plate 1. Common Spike-sedge growing within the Blind Creek drainage line within the study area (Ecology and Heritage Partners Ptd Ltd 01/11/2017)

3.2 Vegetation proposed to be removed

Two bottomless culverts are proposed to be installed along the drainage line (Plate 1; Table 3; Figure 2), with each being 2 metres by 6 metres, i.e. 24 square metres (0.002 hectares) of Plains Sedgy Wetland vegetation disturbance in total. The study area is within Location Category 1. As such, the permit application falls under the Basic Assessment Pathway and does not require an accompanying Habitat Hectare assessment. Plains Sedgy Wetland is listed as Endangered in the Victorian Volcanic Plain Bioregion (DELWP 2018c).

Table 3. Permitted Clearing Assessment (the Guidelines)

Assessment pathway	Basic
Total Extent	0.002
Remnant Patch (ha)	0.002
Scattered Trees (no.)	0
Location Risk	1
Strategic Biodiversity Score	0.355

3.3 Avoidance and minimisation

The native vegetation proposed to be removed from the study area does not provide a significant contribution to the state's biodiversity, and the vegetation present is considered to be highly modified. Nevertheless, in order to minimise impacts, the majority of the vegetation within the property is proposed to be retained, and only two small modified patches of native vegetation (low species richness) are proposed to be removed within an artificial substrate (artificial drain).

Recommended measures to further minimise impacts upon ecological values present within the study area and surrounding landscape during the construction phase include:

- The project footprint and adjoining ecological values should be clearly defined and an environmental induction should be delivered to all construction personnel.
- Access tracks should be clearly marked to prevent the establishment of secondary tracks and disturbance to adjacent vegetation. Where applicable, existing roads should be used as a priority. Access ways that will experience heavy traffic should not be allocated next to areas of high ecological sensitivity.
- Appropriate erosion and sediment control strategies should be implemented to prevent the degradation of surrounding land, including adjoining waterbodies. No-go zones should be established around waterbodies adjoining the project footprint to prevent any disturbance (e.g. vehicular traffic, machinery, runoff) to the terrestrial and aquatic values present within these areas.
- Weed and pest monitoring and control should be undertaken over the life of the proposed project within the project footprint, and in adjacent areas, to prevent new weed or pest outbreaks and control existing infestations. Weed infested topsoil should be removed from site and disposed of at an appropriate waste disposal facility and should not be reused on site to minimise the spread of weeds.
- Appropriate speed limits should be implemented within the vicinity of ecological values to limit dust generation and the risk of fauna mortality.

3.4 Offset targets

Offsets are required to compensate for the permitted removal of native vegetation. No previous vegetation clearance has occurred on the property (other than historic clearing for agricultural purposes) or as a part of the previous planning permit application. The offset requirement for native vegetation removal is 0.002 General Habitat Units (GHU). A summary of proposed vegetation losses and associated offset requirements is presented in Table 4 below and further detail regarding the offset obligations is presented in a Native Vegetation Removal (NVR) report in Appendix 2.

Table 4. Offset targets

General Offsets Required	0.002 GHUs
Species Offsets Required	None
Large Trees Required	None
Vicinity (catchment / LGA)	Glenelg Hopkins CMA/ Corangamite Shire Council
Minimum Strategic Biodiversity Value Score*	0.284

Note: GHU = General Habitat Units

3.5 Offset strategy

Ecology and Heritage Partners are a DELWP accredited Over-The-Counter (OTC) offset broker and are able to assist if offsets are required. Ecology and Heritage Partners can confirm that the offset obligations generated by this proposal can be satisfied through existing credits registered in our OTC database. Several landowners registered in our offset database have suitable General Habitat Unit (GHUs) native vegetation credits available within Corangamite Shire Council and the Glenelg Hopkins CMA, and the relevant offset obligations generated by this proposal will be secured through an OTC scheme without any difficulty should a permit be issued for the development.

3.6 Significance assessment

Based on the highly modified agricultural nature of the area, landscape context and the fact that no significant flora or fauna species were recorded within the study area (Ecology and Heritage Partners 2018), no significant state-listed or nationally listed (EPBC Act) flora and fauna are unlikely to occur within the study area (DELWP 2018d, DELWP 2018e, DoEE 2018). Similarly, no threatened ecological communities or state listed vegetation communities are mapped within the study area (DoEE 2018) and are unlikely to occur within the study area due to a lack of indicator species, modified native vegetation cover and species diversity.

4 Legislation and Policy

This section identifies biodiversity policy and legislation relevant to the proposed development, principally:

- *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act) (Commonwealth);
- *Environment Effects Act 1978* (Victoria);
- *Flora and Fauna Guarantee Act 1988* (FFG Act) (Victoria);
- *Planning and Environment Act 1987* (Victoria);

- Local Planning Schemes;
- Victoria's *Guidelines for the removal, destruction or lopping of native vegetation 2017*; and
- *Catchment and Land Protection Act 1994* (CALP Act) (Victoria).

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.

The proposed activity is considered unlikely to significantly impact any EPBC Act listed species (threatened or migratory), ecological communities or any other matters of NES. As such, an EPBC Act referral regarding these matters is considered unwarranted.

4.2 Environment Effects Act 1978 (Victoria)

The *Environment Effects Act 1978* provides for assessment of proposed actions that are capable of having a significant effect on the environment via the preparation of an Environment Effects Statement (EES). A project with potential adverse environmental effects that, individually or in combination, could be significant in a regional or State context should be referred.

The proposed activity is unlikely to significantly impact any regional or State significant ecological values. As such, a referral regarding these matters under the *Environment Effects Act 1978* is considered unwarranted.

4.3 Flora and Fauna Guarantee Act 1988 (Victoria)

The FFG Act is the primary Victorian legislation providing for the conservation of threatened species and ecological communities, and for the management of processes that are threatening to Victoria's native flora and fauna. The FFG Act contains protection procedures such as the listing of threatened species and/or communities, and the preparation of action statements to protect the long-term viability of these values. Proponents are required to apply for an FFG Act Permit to 'take' listed and/or protected² 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.

Given that no flora species or ecological communities listed as threatened or protected under the FFG Act will be affected by the project (on public or private land), an FFG Act permit is not required.

4.4 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

² In addition to 'listed' flora species, the FFG Act identifies 'protected' flora species. This includes any of the Asteraceae (Daisies), all orchids, ferns (excluding *Pteridium esculentum*) and Acacia species (excluding *Acacia dealbata*, *Acacia decurrens*, *Acacia implexa*, *Acacia melanoxylon* and *Acacia paradoxa*), as well as any taxa that may be a component of a listed ecological community. A species may be both listed and protected.

provisions at Clause 52.17 which require a planning permit from the relevant local Council to remove, destroy or lop native vegetation on a site of more than 0.4 hectares, unless an exemption under clause 52.17-7 of the Victorian Planning Schemes applies or a subdivision is proposed with lots less than 0.4 hectares³. Local planning schemes may contain other provisions in relation to the removal of native vegetation (Section 5.3.1).

4.4.1 Local Planning Schemes

The study area is located within the Corangamite Shire municipality. The following zoning and overlays apply (DELWP 2017f, 2017g):

- Farming Zone – Schedule 1 (FZ1)
- Heritage Overlay Schedule (HO80) (coverage around homestead only)
- Significant Landscape Overlay – Schedule 1 (SLO1) (coverage around homestead only).

4.4.2 The Guidelines

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

4.4.3 Implications

A planning permit from Corangamite Shire Council Municipality will be required to remove native vegetation within the project footprint. The clearing proposal will be assessed under the Basic Assessment Pathway, with 0.002 hectares of remnant vegetation proposed to be removed. The offset requirement for native vegetation removal is 0.002 General GHUs.

4.5 Catchment and Land Protection Act 1994 (Victoria)

The CaLP Act contains provisions relating to catchment planning, land management, noxious weeds and pest animals. The Act also provides a legislative framework for the management of private and public land and sets out the responsibilities of land managers, stating that they must take all reasonable steps to:

- Avoid causing or contributing to land degradation which causes or may cause damage to land of another land owner;
- Protect water resources;
- Conserve soil;
- Eradicate regionally prohibited weeds;
- Prevent the growth and spread of regionally controlled weeds; and,
- Prevent the spread of, and as far as possible eradicate, established pest animals.

³ In accordance with the Victorian Civil and Administrative Tribunal's (VCAT) decision *Villawood v Greater Bendigo CC* (2005) VCAT 2703 (20 December 2005) all native vegetation is considered lost where proposed lots are less than 0.4 hectares in area and must be offset at the time of subdivision.

Landowners are responsible for the control of any infestation of noxious weeds and pest fauna species. To meet CaLP Act requirements listed noxious weeds and pests should be appropriately controlled throughout the study area to minimise their spread and impact on ecological values.

4.6 Wildlife Act 1975 and Wildlife Regulations 2013 (Victoria)

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

4.7 Water Act 1989 (Victoria)

The purposes of the *Water Act 1989* are manifold but (in part) relate to the orderly, equitable, efficient and sustainable use of water resources within Victoria. This includes the provision of a formal means of protecting and enhancing environmental qualities of waterways and their in-stream uses as well as catchment conditions that may affect water quality and the ecological environments within them.

The Blind Creek drainage line crosses through the study area, while Lake Bookaar and the associated wetlands (a RAMSAR site) are located approximately one kilometre east of the study area. It is unlikely that any runoff from the study area would enter Lake Bookaar and the wetlands, as the drainage line running parallel to the study area to the east, and the depressions along the study area's eastern boundary would likely intercept any water (Figure 2).

A 'works on waterways' licence from the Glenelg Hopkins CMA will be required where any action that impacts on waterways within the study area, in this case the culvert(s). Additionally, where structures are installed within or across waterways that potentially interfere with the passage of fish or the quality of aquatic habitat, including culverts, these activities should be referred to DELWP with the Glenelg Hopkins CMA included for comment.

The proponent is proposing to drain the seasonally boggy areas generally along the study area's eastern boundary by installing a drainage system with pipes under the ground that divert water away from these areas. The drainage system is not expected to alter the topography of the study area and will not appear to increase or decrease the total flow into the drainage line system that exists in the local area, or adversely impact hydrological flows into the RAMSAR site located one kilometre to the east (Figure 2). A hydrological engineer will be engaged to ensure there are no negative environmental impacts of the installed drainage system. The proponent would address appropriate controls and this will be addressed in the Construction Environmental Management Plan (CEMP).

5 Further Requirements

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

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

Relevant Legislation	Implications	Further Action
<i>Environment Protection and Biodiversity Conservation Act 1999</i>	The proposed development is 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 in the EPBC Act.	No further action required.
<i>Flora and Fauna Guarantee Act 1988</i>	The native vegetation to be removed (i.e. Common Spike-sedge) is located on private land, hence a permit under the FFG Act is not required.	No further action required.
<i>Planning and Environment Act 1987</i>	Remnant patches of native vegetation, as defined by the Guidelines, were identified within the study area. Upon further assessment, it has been determined that offsets are required associated with the removal of Common Spike-sedge. A Planning Permit from Corangamite Shire will be required under Clause 52.17 to remove, destroy or lop any native vegetation, which in this case is Common Spike-sedge. The property is partially covered by a Heritage Overlay and Significant Landscape Overlay.	Prepare and submit a Planning Permit application. Planning Permit conditions area likely to include a requirement for: <ul style="list-style-type: none"> • Demonstration of impact minimisation • A Construction Environment Management Plan Identification of a compliant offset for the removal of Common Spike-sedge is proposed as a condition of the planning permit.
<i>Catchment and Land Protection Act 1994</i>	One weed species listed under the CaLP Act was recorded within the study area (i.e. Spear Thistle). To meet requirements under the CaLP Act, listed noxious weeds should be appropriately controlled throughout the study area.	Planning Permit conditions are likely to include a requirement for a Weed Management Plan.
<i>Water Act 1989</i>	A 'works on waterways' permit may be required from the Glenelg Hopkins CMA where any action impacts on waterways within the study area.	Obtain a 'works on waterways' permit from Glenelg Hopkins CMA.
<i>Wildlife Act 1975</i>	Any persons engaged to conduct salvage and translocation or general handling of terrestrial fauna species must hold a current Management Authorisation.	Ensure wildlife specialists hold a current Management Authorisation.

Kind regards,

Kyra Evanochko

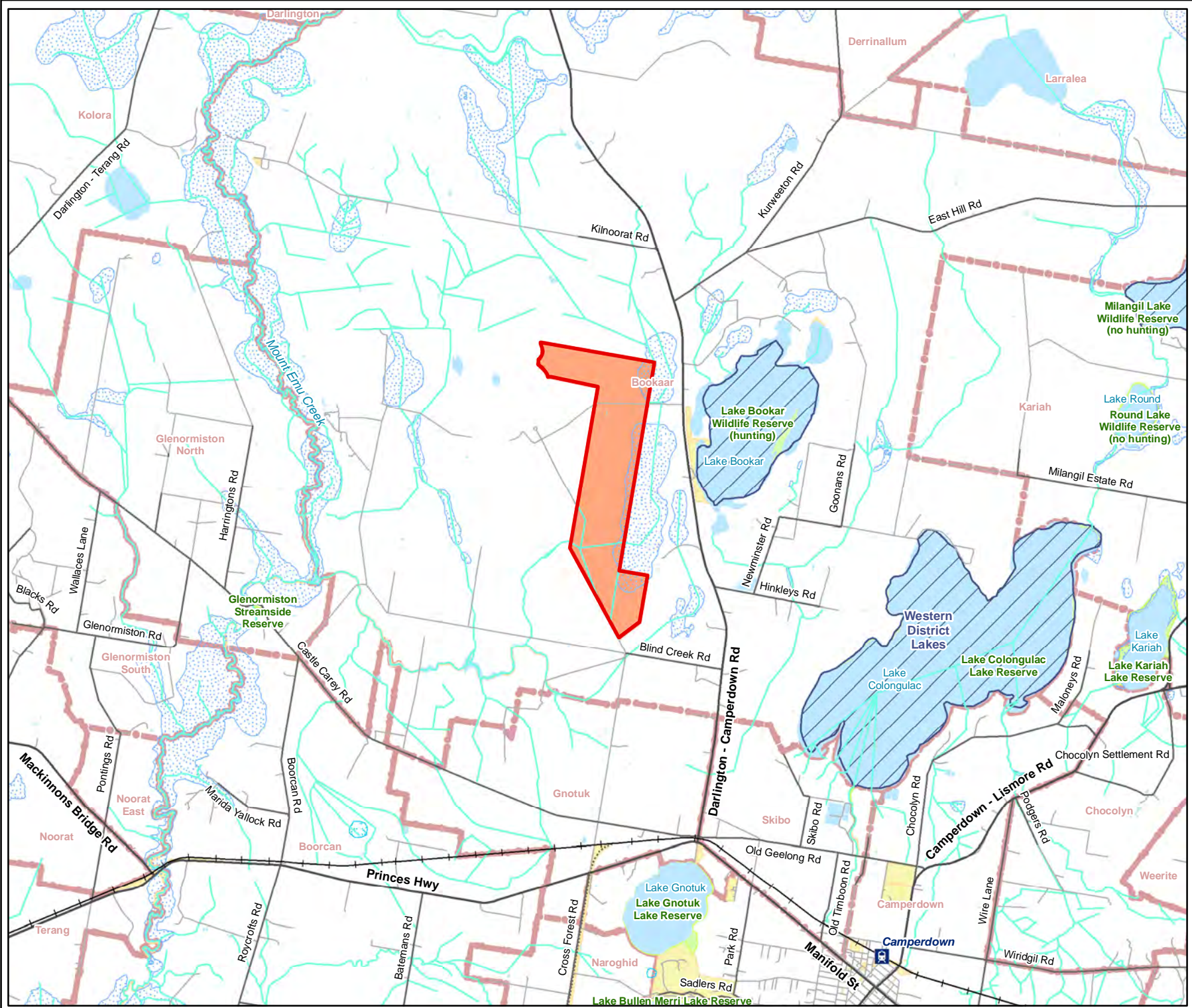
Botanist

Ecology and Heritage Partners Pty Ltd

6 References

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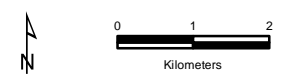
7 Figures



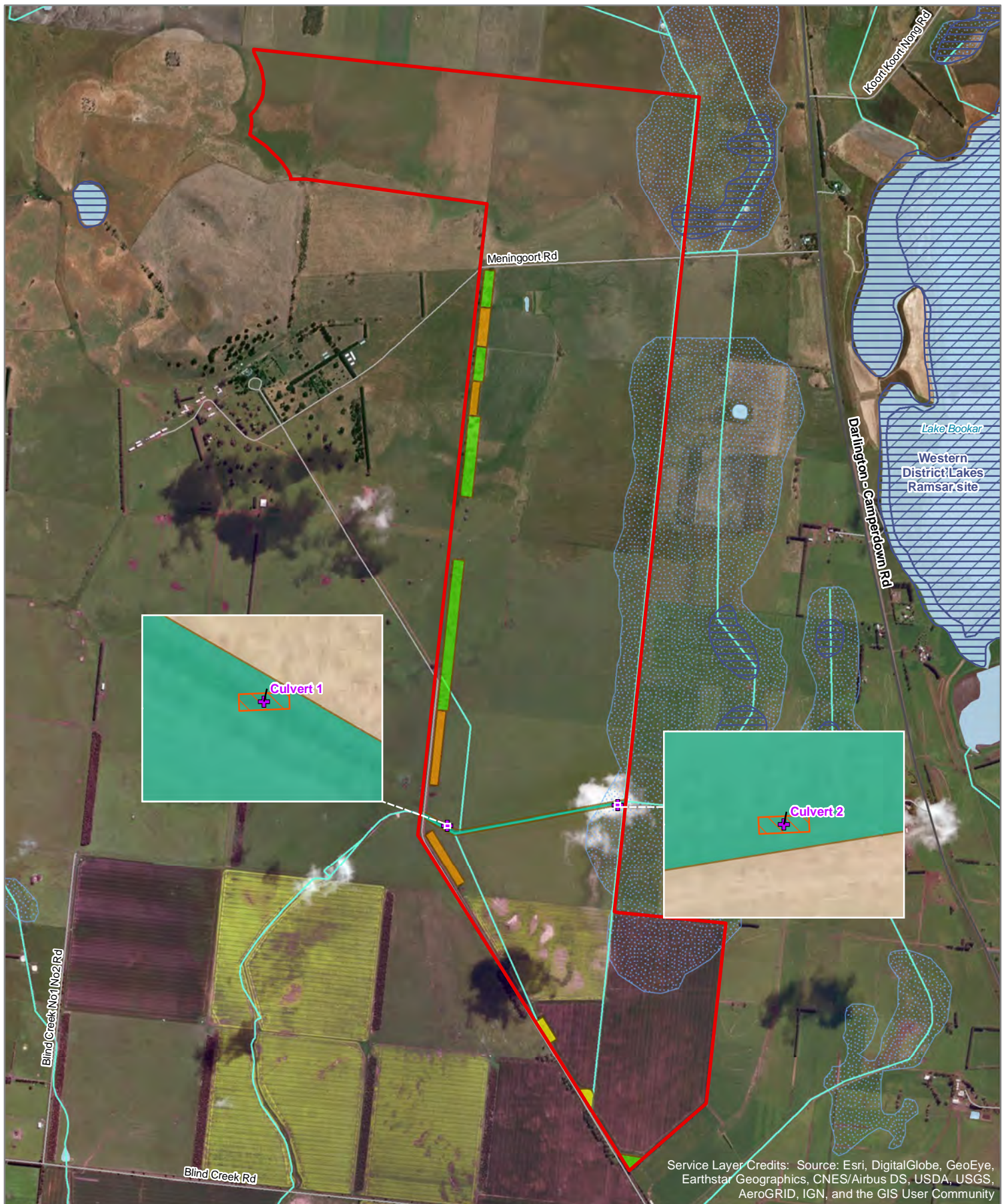
- Legend**
- Study Area
 - Railway
 - Major Road
 - Collector Road
 - Minor Road
 - Walking Track
 - Minor Watercourse
 - Permanent Waterbody
 - Land Subject to Inundation
 - Wetland/Swamp
 - Ramsar wetland
 - Parks and Reserves
 - Crown Land
 - Localities



Figure 1
Location of the study area
Preliminary Ecological Assessment: Camperdown Solar Farm













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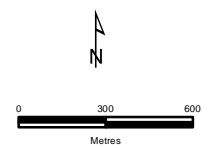


Service Layer Credits: Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

Figure 2
Ecological features
Preliminary Ecological Assessment: Camperdown Solar Farm

Legend

- | | |
|---|---|
|  Study Area | Vegetation |
|  Ramsar wetland |  Remnant River Red Gums |
|  Current Wetlands |  Fenced-off dense revegetation |
|  Culvert locations |  Common Spike-sedge within drainage line |
|  Impact Area |  Planted Sugar Gums |
| |  Mature cypress windrow |



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.

Appendix 1 – Summary of Application Requirements

Table S1. Application requirements for a permit to remove native vegetation under the Low Risk-based pathway (Victoria Planning Provisions Clause 52.17 -3; DEPI 2013)

No.	Application Requirement	Response
1	The location of the site of native vegetation to be removed.	520 Meningoort Road, Bookar, Victoria. Corangamite Shire Council, Glenelg Hopkins CMA.
2	A description of the native vegetation to be removed, including the area of the patch of native vegetation and/or the number of any scattered trees to be removed.	Total extent to be removed is 0.002 hectares (remnant patch and no scattered trees). Details provided in Section 3.
3	Maps or plans containing information set out in the Guidelines, (Department of Environment and Primary Industries, September 2013)	Refer to Figure 2 and NVR report (Appendix 2).
4	Recent dated photographs of the native vegetation to be removed.	Refer to Section 3.
-	Topographic information, highlighting ridges, crests and hilltops, streams and waterways, slopes of more than 20 percent, drainage lines, low lying areas, saline discharge areas, and areas of existing erosion.	Refer to Section 1.
5	The risk-based pathway of the application to remove native vegetation.	Basic
6	Where the purpose of removal, destruction or lopping of native vegetation is to create defensible space, a statement is required that explains why removal, destruction or lopping of native vegetation is necessary.	Not applicable.
7	A copy of any property vegetation plan that applies to the site.	Not applicable.
8	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.	Not applicable.
9	The strategic biodiversity score of the native vegetation to be removed.	0.355
10	The offset requirements should a permit be granted to remove native vegetation.	General: 0.002 GHUs Specific: None Minimum SBV: 0.284 Large Trees: None

Appendix 2 - Native Vegetation Removal (NVR) Report (DELWP 2018)

Native vegetation removal report

A report to support an application to remove, destroy or lop native vegetation in the **Basic Assessment Pathway** using the modelled condition score

This report provides information to support an application to remove native vegetation in accordance with the *Guidelines for the removal, destruction or lopping of native vegetation*. The report is not an assessment by DELWP or local council of the proposed native vegetation removal. Biodiversity information and offset requirements have been calculated using modelled condition scores contained in the *Native vegetation condition map*.

Date and time: 24 August 2018 15:17 PM

Lat./Long.: -38.1557659882498,143.084162175469

Native vegetation report ID:

Address: 520 MENINGOORT ROAD BOOKAAR
3260

315-20180824-011

Assessment pathway

The assessment pathway and reason for the assessment pathway

Assessment pathway	Basic Assessment Pathway
Extent of past plus proposed native vegetation removal	0.003 hectares
No. large trees	0 large tree(s)
Location category	Location 1 The native vegetation is not in an area mapped as an endangered Ecological Vegetation Class, sensitive wetland or coastal area. Removal of less than 0.5 hectares will not have a significant impact on any habitat for a rare or threatened species.

Offset requirement

The offset requirement that will apply if the native vegetation is approved to be removed

Offset type	General offset
Offset amount	0.002 general habitat units
Offset attributes	
Vicinity	Glenelg Hopkins Catchment Management Authority (CMA) or Corangamite Shire Council
Minimum strategic biodiversity value score	0.284
Large trees	0 large tree(s)

Biodiversity information about the native vegetation

Description of any past native vegetation removal

Any native vegetation that was approved to be removed, or was removed without the required approvals, on the same property or on contiguous land in the same ownership, in the five year period before the application to remove native vegetation is lodged is detailed below.

Permit/PIN number	Extent of native vegetation (hectares)
None entered	0 hectares

Description of the native vegetation proposed to be removed

Extent of all mapped native vegetation	0.003 hectares
Condition score of all mapped native vegetation	0.200
Strategic biodiversity value score of all mapped native vegetation	0.355
Extent of patches native vegetation	0.003 hectares
1	0.001 hectares
2	0.001 hectares
Extent of scattered trees	0 hectares
No. large trees within patches	0 large tree(s)
No. large scattered trees	0 large tree(s)
No. small scattered trees	0 small tree(s)

Additional information about trees to be removed, shown in Figure 1

Tree ID	Tree circumference (cm)	Benchmark circumference (cm)	Scattered / Patch	Tree size
N/A				

Other information

Applications to remove, destroy or lop native vegetation must include all the below information. If an appropriate response has not been provided the application is not complete.

Photographs of the native vegetation to be removed

Recent, dated photographs of the native vegetation to be removed must be provided with the application. All photographs must be clear, show whether the vegetation is a patch of native vegetation or scattered trees, and identify any large trees. If the area of native vegetation to be removed is large, provide photos that are indicative of the native vegetation.

Ensure photographs are attached to the application. If appropriate photographs have not been provided the application is not complete.

Topographical and land information

Description of the topographic and land information relating to the native vegetation to be removed, including any 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. This may be represented in a map or plan. **This is an application requirement and your application will be incomplete without it.**

The wider landscape and property are generally flat and contains paddocks with exotic pasture grass. The two patches are within a drainage line that contains Common Spike-sedge.

Avoid and minimise statement

This statement describes what has been done to avoid the removal of, and minimise impacts on the biodiversity and other values of native vegetation. **This is an application requirement and your application will be incomplete without it.**

The drainage line cuts through the entire width of the property and there is no way to go around it within the property boundary, i.e. the proponent has had to exit the farm and use the public road network to access other parts of the farm. The proponent wishes to place two culverts in the drainage line (each totalling 12 sq. m. of native vegetation removal) at the eastern and western end of the property to allow access to its southern end.

Defendable space statement

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 if your application also includes an application under the Bushfire Management Overlay.

Not applicable

Offset statement

An offset statement that demonstrates that an offset is available and describes how the required offset will be secured. **This is an application requirement and your application will be incomplete without it.**

The required GHUs can be sourced from within the Glenelg Hopkins CMA or Corangamite Shire Council through over-the-counter offsets.

Next steps

Applications to remove, destroy or lop native vegetation must address all the application requirements specified in *Guidelines for the removal, destruction or lopping of native vegetation*. If you wish to remove the mapped native vegetation you are required to apply for a permit from your local council. This *Native vegetation removal report* must be submitted with your application and meets most of the application requirements. The following needs to be added as applicable.

Property Vegetation Plan

Landowners can manage native vegetation on their property in the longer term by developing a Property Vegetation Plan (PVP) and entering into an agreement with DELWP.

If an approved PVP applies to the land, ensure the PVP is attached to the application.

Applications under Clause 52.16

An application to remove, destroy or lop native vegetation is under Clause 52.16 if a Native Vegetation Precinct Plan (NVPP) applies to the land, and the proposed native vegetation removal is not in accordance with the relevant NVPP. If this is the case, a statement that explains how the proposal responds to the NVPP considerations must be provided.

If the application is under Clause 52.16, ensure a statement that explains how the proposal responds to the NVPP considerations is attached to the application.

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For more information contact the DELWP Customer Service Centre 136 186

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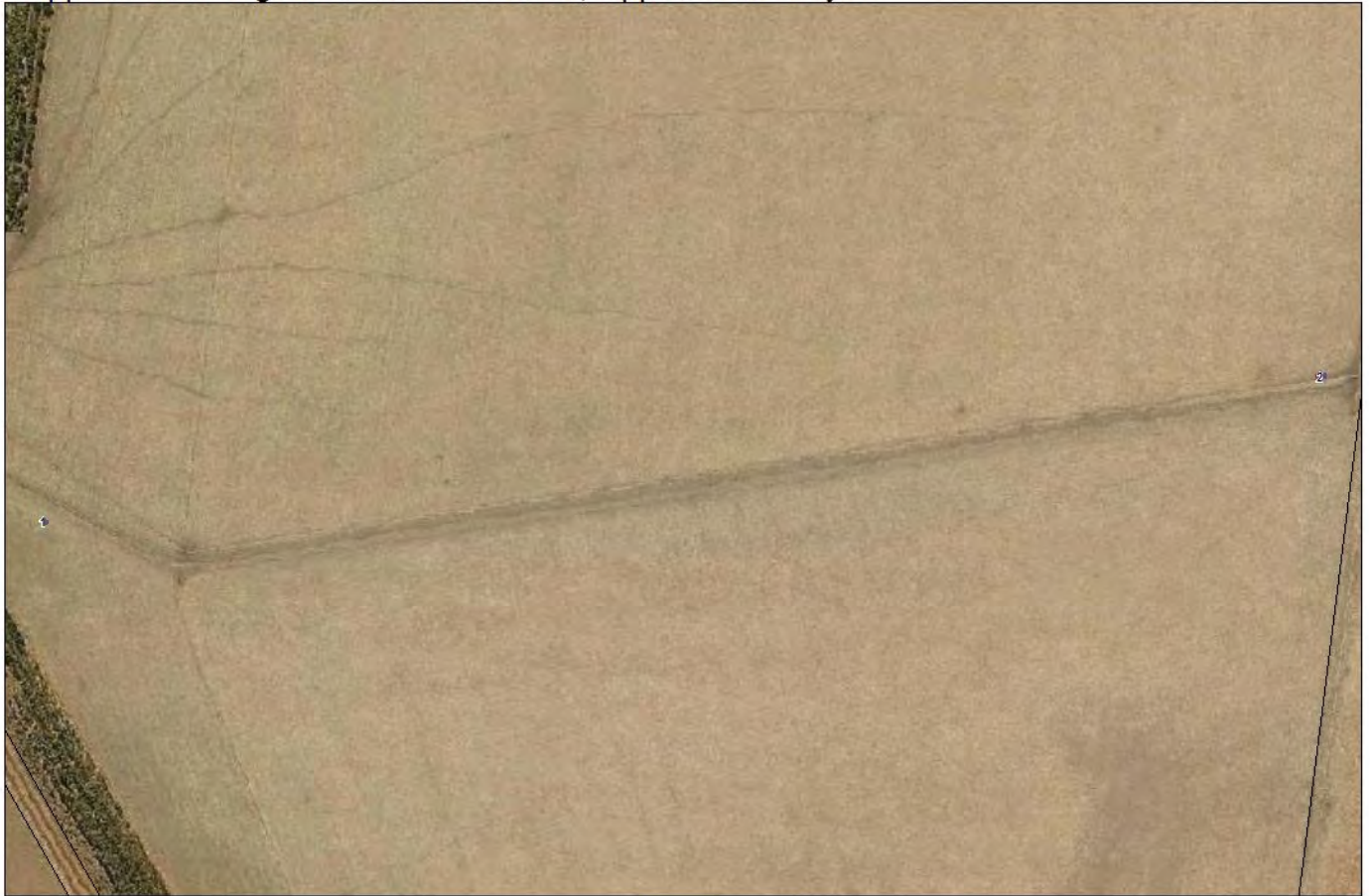
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Obtaining this publication does not guarantee that an application will meet the requirements of Clauses 52.16 or 52.17 of planning schemes in Victoria or that a permit to remove native vegetation will be granted.



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 planning schemes in Victoria.

Figure 1 – Map of native vegetation to be removed, destroyed or lopped

Mapped native vegetation to be removed, lopped or destroyed



Legend

-  Mapped native vegetation
-  Property boundary

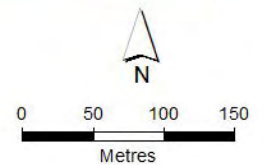


Figure 2 – Map of property in context

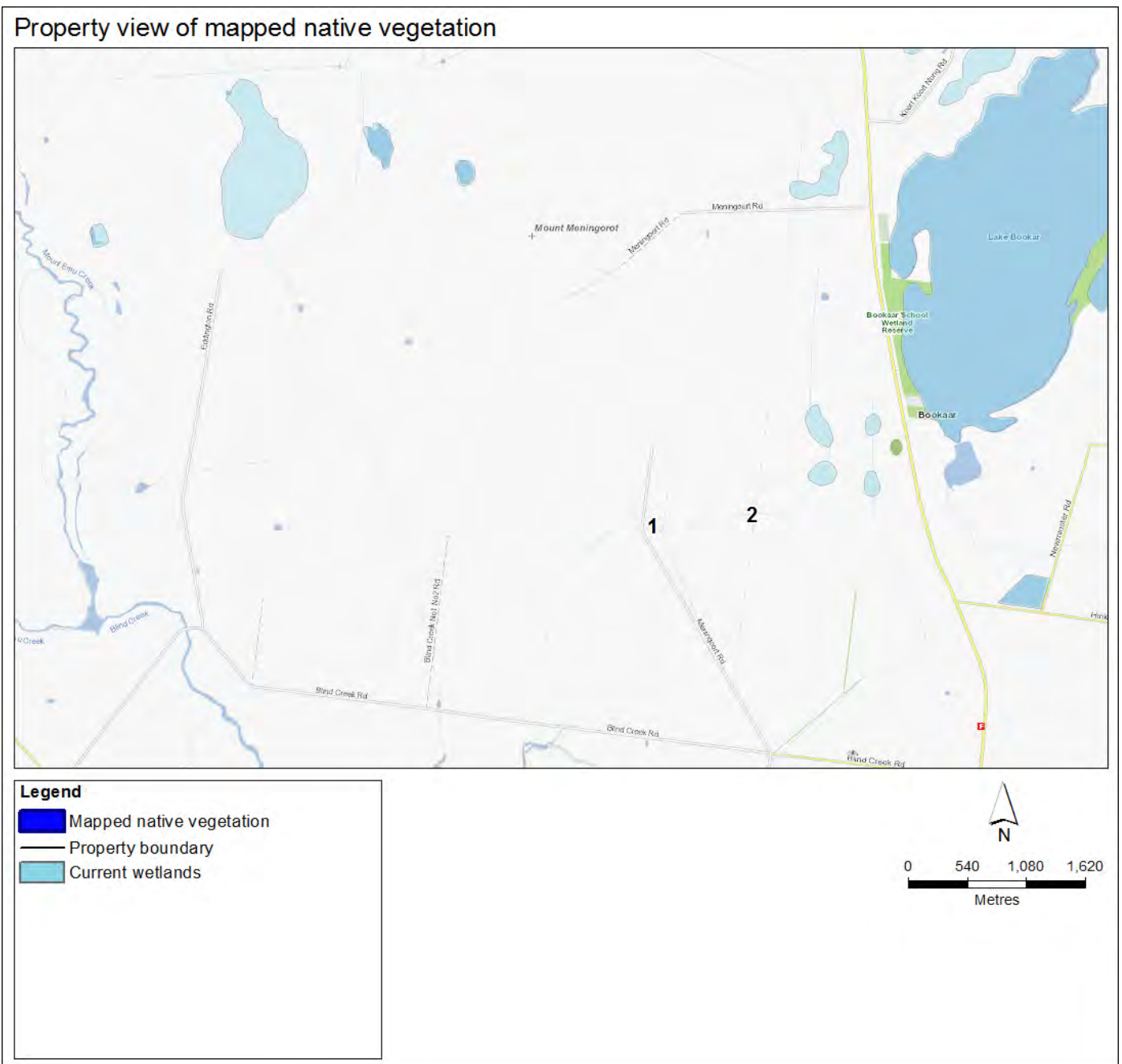




Figure 3 – Biodiversity information maps

Mapped native vegetation and the *Native vegetation location map*

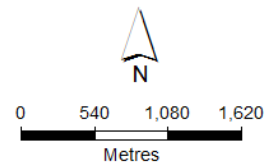


Legend

-  Mapped native vegetation
-  Property boundary

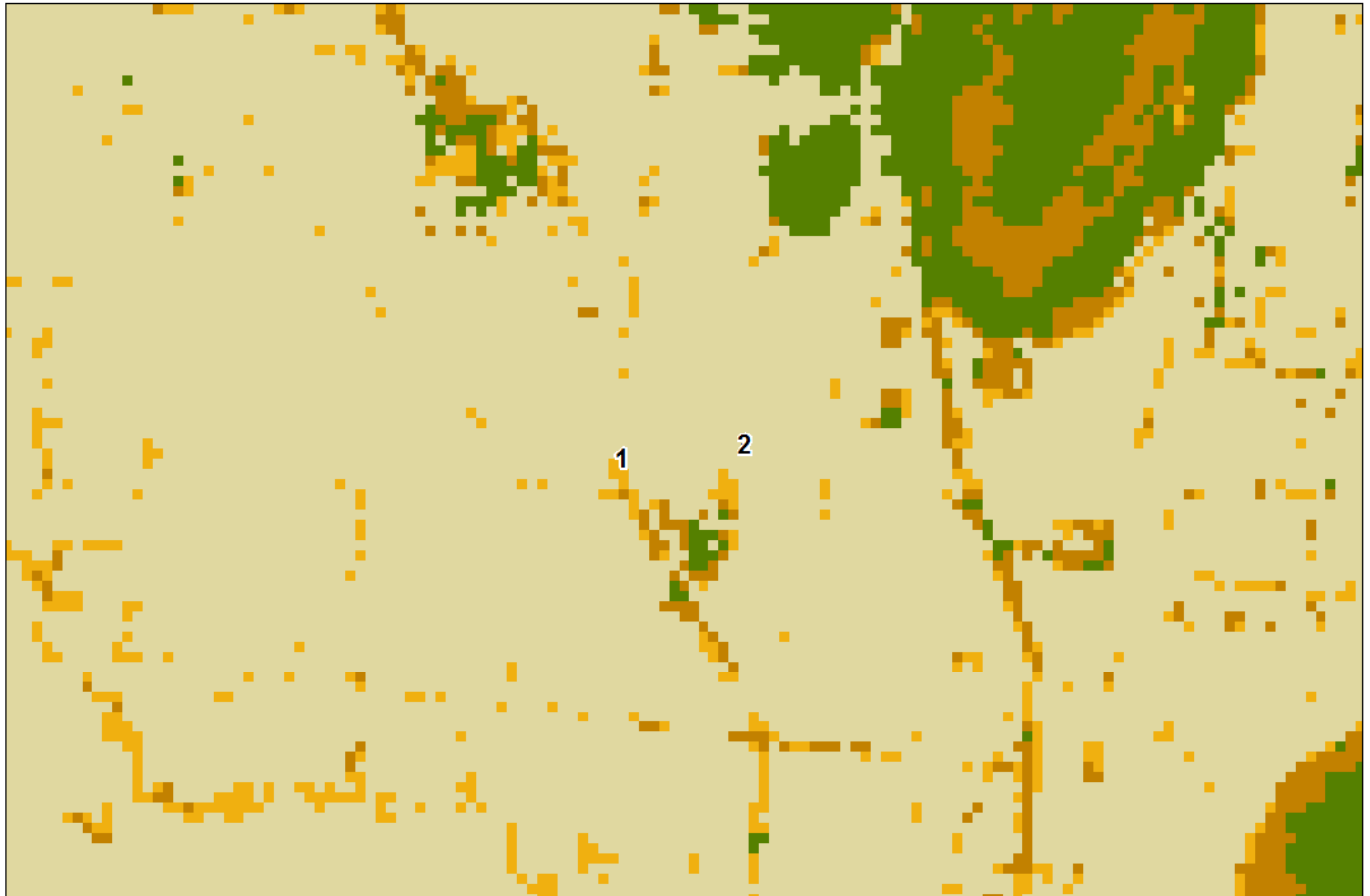
Native vegetation location category

-  Location 3
-  Location 2
-  Location 1





Native vegetation removal report






Mapped native vegetation and the *Native vegetation condition map*



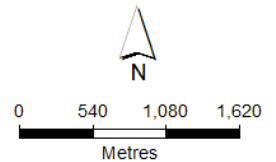
Legend

-  Mapped native vegetation
-  Property boundary

Native vegetation condition*

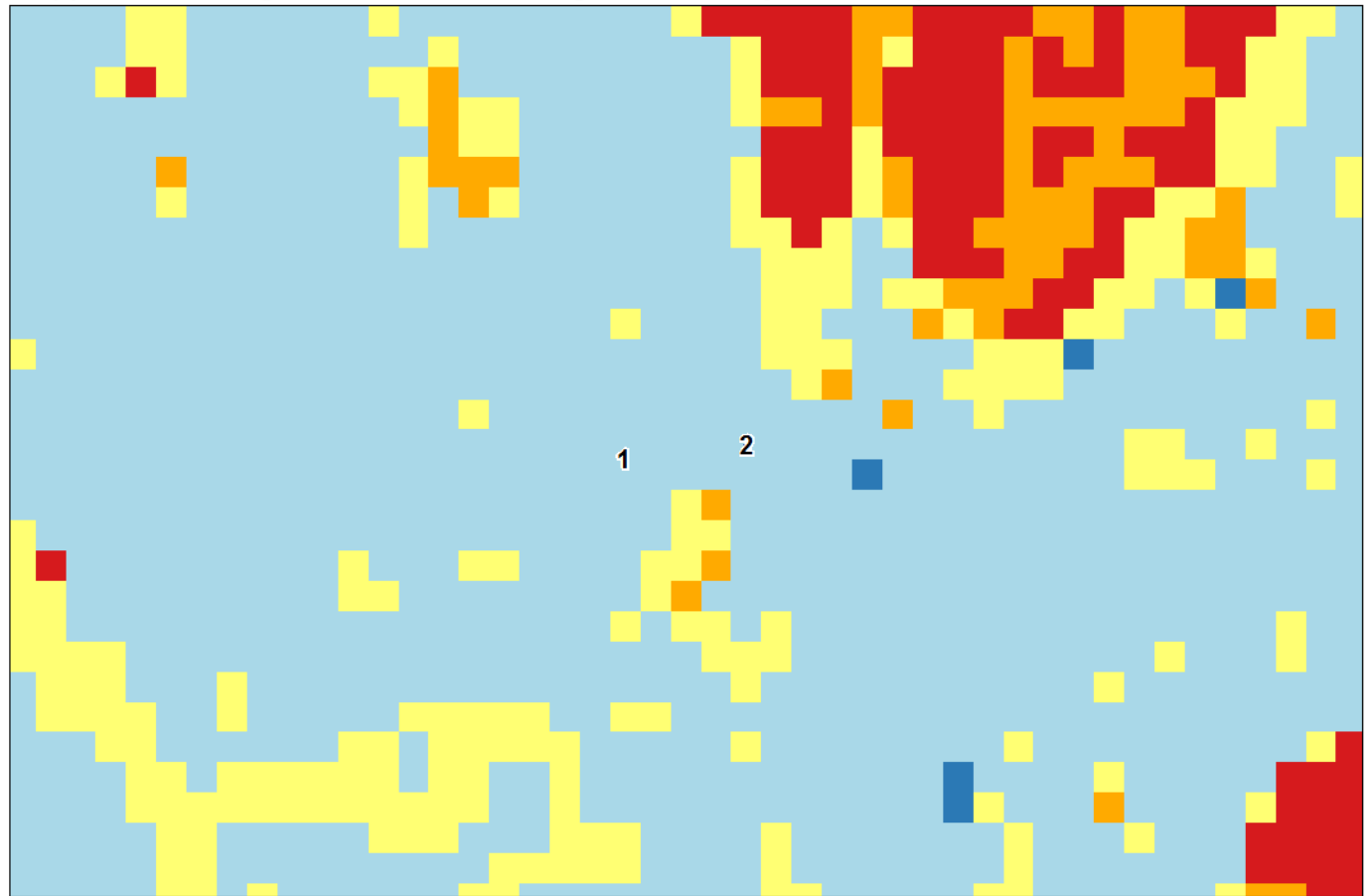
-  0.81 - 1.00
-  0.61 - 0.80
-  0.41 - 0.60
-  0.21 - 0.40
-  0.00 - 0.20

* These classes are for display purposes only





Native vegetation removal report






Mapped native vegetation and the *Strategic biodiversity value map*



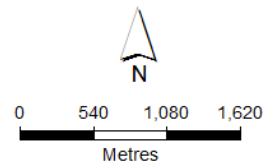
Legend

-  Mapped native vegetation
-  Property boundary

Strategic biodiversity value*

-  0.81 - 1.00
-  0.61 - 0.80
-  0.41 - 0.60
-  0.21 - 0.40
-  0.00 - 0.20

* These classes are for display purposes only



Appendix 1 - Details of offset requirements

Native vegetation to be removed

Extent of all mapped native vegetation (for calculating habitat hectares)	0.003	The area of land covered by a patch of native vegetation and/or a scattered tree, measured in hectares. Where the mapped native vegetation includes scattered trees, each tree is assigned a standard extent and converted to hectares. A small scattered tree is assigned a standard extent defined by a circle with a 10 metre radius and a large scattered tree a circle with a 15 metre radius. The extent of all mapped native vegetation is an input to calculating the habitat hectares.
Condition score*	0.200	The condition score of native vegetation is a site-based measure that describes how close native vegetation is to its mature natural state. The condition score is the weighted average condition score of the mapped native vegetation calculated using the <i>Native vegetation condition map</i> .
Habitat hectares	0.001	Habitat hectares is a site-based measure that combines extent and condition of native vegetation. It is calculated by multiplying the extent of native vegetation by the condition score: Habitat hectares = extent x condition score
Strategic biodiversity value score	0.355	The strategic biodiversity value score represents the complementary contribution to Victoria's biodiversity of a location, relative to other locations across the state. This score is the weighted average strategic biodiversity value score of the mapped native vegetation calculated using the <i>Strategic biodiversity value map</i> .
General landscape factor	0.678	The general landscape factor is an adjusted strategic biodiversity value score. It has been adjusted to reduce the influence of landscape scale information on the general habitat score.
General habitat score	0.001	The general habitat score combines site-based and landscape scale information to obtain an overall measure of the biodiversity value of the native vegetation. The general habitat score is calculated as follows: General habitat score = habitat hectares x general landscape factor

* **Offset requirements for partial removal:** If your proposal is to remove parts of the native vegetation in a patch (for example only understorey plants) the condition score must be adjusted. This will require manual editing of the condition score and an update to the calculations that the native vegetation removal tool has provided: habitat hectares, general habitat score and offset amount.

Offset requirements

Offset type	General offset	A general offset is required when the removal of native vegetation does not have a significant impact on any habitat for rare or threatened species. All proposals in the Basic and Intermediate assessment pathways will only require a general offset.
Offset multiplier	1.5	This multiplier is used to address the risk that the predicted outcomes for gain will not be achieved, and therefore will not adequately compensate the biodiversity loss from the removal of native vegetation.
Offset amount (general habitat units)	0.002	The general habitat units are the amount of offset that must be secured if the application is approved. This offset requirement will be a condition to any permit or approval for the removal of native vegetation. General habitat units required = general habitat score x 1.5
Minimum strategic biodiversity value score	0.284	The offset site must have a strategic biodiversity value score of at least 80 per cent of the strategic biodiversity value score of the native vegetation to be removed. This is to ensure offsets are located in areas with a strategic biodiversity value that is comparable to the native vegetation to be removed.
Vicinity	Glenelg Hopkins CMA or Corangamite Shire Council	The offset site must be located within the same Catchment Management Authority boundary or municipal district as the native vegetation to be removed.
Large trees	0 large tree (s)	The offset site must protect at least one large tree for every large tree removed. A large tree is a native canopy tree with a Diameter at Breast Height greater than or equal to the large tree benchmark for the local Ecological Vegetation Class. A large tree can be either a large scattered tree or a large patch tree.