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# Flora and Fauna Assessment Report

Kennedys Creek Solar Farm

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24-Feb-2023  
Commercial-in-Confidence



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## Flora and Fauna Assessment Report

Kennedys Creek Solar Farm

Client: 433 Link Development Pty Ltd.

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Acronym / Term	Explanation
BCS	Bioregional Conservation Status
CaLP Act	<i>Catchment and Land Protection Act 1994</i>
DBH	Diameter at Breast Height
DCCEEW	Department of Climate Change, Energy, the Environment and Water
DEDJTR	Department of Economic Development, Jobs, Transport and Resources
DEECA	Department of Energy, Environment and Climate action
EE Act	<i>Environment Effects Act 1978</i>
EPBC Act	<i>Environment Protection and Biodiversity Conservation Act 1999</i>
EVC	Ecological Vegetation Class
FFG Act	<i>Flora and Fauna Guarantee Act 1988</i>
FIS	Flora Information System
HHa	Habitat Hectare
HZ	Habitat Zone
Km	Kilometre
MW	Megawatts
NVIM	Native Vegetation Information Management
P&E Act	<i>Planning and Environment Act 1987</i>
PMST	Protected Matters Search Tool
SPFF	State Planning Policy Framework
VQA	Vegetation Quality Assessment
VBA	Victorian Biodiversity Atlas
VROTS	Advisory list of threatened species in Victoria (flora and fauna)
WoNS	Weeds of national significance

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## Executive Summary

In September 2019, AECOM Australia Pty Ltd prepared a planning permit application on behalf of the Applicant, 433 Link Development Pty Ltd (then owned by South Energy) for the construction of a solar farm facility on land adjacent to Murray Road, Nelson Road, and Benalla-Yarrawonga Road, Benalla, Victoria. On 22 September 2021, ownership of the Project Applicant (433 Link Development Pty Ltd) was transferred from South Energy to Lightsource bp. Previous iterations of this report refer to South Energy, however all new information within this report refers to Lightsource bp to reflect current ownership of the Project Application.

Lightsource bp subsequently proposed changes to the concept designs for the project, therefore this Flora and Fauna Assessment Report has been updated to support an application under Section 72 of the *Planning and Environment Act 1987* (P&E Act) to amend the planning permit for the Project (the amendment). The amendment seeks to:

- Rearrange the layout of Kennedys Creek Solar Farm to:
  - Relocate the substation to the north-east of the site and connection to new transmission infrastructure
  - Make minor updates and design changes as a result of the above.
- Include a new transmission line from the Kennedys Creek Solar Farm to the network connection point at West Mokoan Solar Farm.

This flora and fauna assessment has been amended to reflect Revision 15 of the concept design and include additional land associated with the approximately 1.2-kilometre transmission line connecting the West Mokoan and Kennedys Creek Solar Farms.

The purpose of this assessment was to identify and quantify ecological values in line with Victorian and Commonwealth policy and legislation. To meet this objective a desktop assessment, field survey, and review of relevant legislation was conducted. The desktop assessment identified a number of flora and fauna species and communities of conservation significance that may potentially occur within the study area. The desktop results were verified during the original field survey undertaken in February and March 2019. Additional areas associated with the electricity infrastructure upgrade and included in the project were subject to an updated desktop assessment and field verification surveys in April and December 2022.

The field surveys verified that the study area consisted predominantly of scattered trees and patches of woodland vegetation with a degraded, predominately exotic understorey. A total of 28 patches of native vegetation covering 11.25 ha of the study area and 269 scattered trees were recorded; this includes 20 patches and 268 scattered trees within Kennedys Creek Solar Farm, and eight patches and one scattered tree within the transmission line investigation area. The concept design may therefore result in the removal of 20 trees and up to two hectares of native vegetation in patches. This includes 19 scattered trees within Kennedys Creek Solar Farm and one tree and eight patches (up to two hectares) of native vegetation within the transmission line investigation area.

Due to the lack of complex habitat and floristic biodiversity, the area is not considered ecologically significant habitat for any threatened flora or fauna species and does not represent any federally listed Threatened Ecological Communities. All patches of native vegetation are considered to represent habitat for the Victorian Temperate Woodland Bird Community listed under the *Flora and Fauna Guarantee Act 1988*.

Relevant environmental legislation and policy taking into account the results of the ecological assessment are detailed in Section 4.0.

**Table 1 Overview of relevant legislation / policy and recommendations for the project**

Legislation / Policy	Relevant on site finding	Permit requirement	Recommendations
Commonwealth <i>Environment Protection and</i>	No listed flora species, or threatened	Threatened fauna species with some potential to occur in	To reduce the potential to have a significant impact on these species



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Legislation / Policy	Relevant on site finding	Permit requirement	Recommendations
<i>Biodiversity Conservation Act 1999</i>	<p>ecological communities recorded or likely to occur.</p> <p>Possible occurrence of Swift Parrot, Regent Honeyeater, Painted Honeyeater, Grey-headed Flying-fox occasionally and/or seasonally utilising woodland resources (trees).</p> <p>Plains-wanderer may also use the site on occasion.</p> <p><i>Drafting note: Striped Legless Lizard habitat is currently being considered</i></p>	<p>the study area are unlikely to be significantly impacted by the project, particularly if loss of patches and scattered trees is minimised.</p>	<p>avoid loss of hollow-bearing habitat trees where practicable</p> <p><i>Drafting note: Striped Legless Lizard memo currently being prepared (Appendix H)</i></p>
<i>Flora and Fauna Guarantee Act 1988</i>	<p>Potential habitat for several FFG Act-listed woodland fauna species observed.</p> <p>One listed ecological community present: Victorian Temperate Woodland Bird Community</p> <p>Potential for an FFG Act threatening process to occur - 'loss of hollow-bearing trees from Victorian native forests and woodlands'</p>	<p>A permit will be required if listed and protected flora species are to be removed from public land.</p> <p>A permit is not required under the FFG Act for private land, unless listed species are present and the land is declared 'critical habitat' for the species. No critical habitat has been identified in Victoria to date.</p>	<p>Avoid loss of listed and protected flora and fauna species and ecological communities where practicable. If avoidance is not possible, seek permit under the FFG Act to remove listed or protected species or ecological communities.</p> <p>Liaise with the Department of Energy, Environment and Climate Action (DEECA) to determine permit requirements and any additional permit conditions that may apply.</p> <p>Liaise with DEECA to determine what extent of hollow-bearing tree loss is required to be considered a threatening process.</p>
<i>Planning and Environment Act 1987</i>	Native vegetation present.	Permit to remove native vegetation including scattered trees.	Seek planning permit under the Victorian <i>Planning and Environment Act 1987</i> (Clause 52.17).
Guidelines for the removal, destruction or	Patches of native vegetation totalling 11.25 ha	Biodiversity offsets required to be	A permit to remove native vegetation under Clause 52.17 of the Victorian

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Legislation / Policy	Relevant on site finding	Permit requirement	Recommendations
lopping of native vegetation (DELWP 2017)	<p>(6.3 Habitat Hectares), 269 scattered trees and 152 large trees in patches were recorded in the study area. All remnant patches consisted of EVC 55_62 and EVC 125 both of which are listed as endangered in the Victorian Riverina bioregion.</p> <p>Design revision 15 requires the removal of 1.963 ha of native vegetation (EVC 55_62 and 125) and 20 large scattered trees.</p> <p>The NVR report states that the biodiversity offsets requirement for the project is 0.640 general habitat units and 20 Large trees.</p>	achieved and secured.	<p>Planning Provisions is required (Appendix J).</p> <p>A permit application should be accompanied with an NVR Report, an avoid and minimise statement and an offset statement (providing evidence that the offsets for the project are available and can be secured).</p>
<i>Catchment and Land Protection Act 1994</i>	Declared Noxious Weeds present (Controlled).	No permit required.	The proponent must comply with requirements to limit the spread and growth of declared noxious weeds within and outside of the project area, via vehicle hygiene procedures listed in an Environmental Management Plan (EMP).
<i>Wildlife Act 1975</i>	Potential for construction-related impacts on fauna species, particularly through the removal of hollow-bearing trees	<p>Habitat clearance may require a permit from DEECA to wilfully disturb or destroy protected wildlife. Management Authorisation from DEECA if salvage of wildlife is required.</p> <p>Provided the project secures a planning permit to remove,</p>	Liaise with DEECA to determine expectations in relation to permit requirements and salvage of wildlife.

Legislation / Policy	Relevant on site finding	Permit requirement	Recommendations
		destroy or lop native vegetation, approval to wilfully damage, disturb or destroy wildlife habitat or protected wildlife under the Wildlife Act is adequately addressed.	
<i>Environment Effects Act 1978</i>	<p>Native vegetation present.</p> <p>A total 10.98 ha of EVC 55_62 was recorded, a total of 0.25 ha of EVC 125 was recorded. Both these EVC's are listed as Endangered within the Victorian Riverina bioregion.</p> <p>As above, a total of 3.369 ha is proposed to be impacted which includes 1.963 ha of native vegetation that is endangered within the Victorian Riverina Bioregion. Total losses also include 20 large trees.</p>	Should greater than 10 hectares of remnant vegetation be lost, the requirement for an EES referral will be triggered.	The concept design and impacts associated with the transmission line are not finalised. However, based on the current native vegetation loss scenario the project does not exceed the 10 ha threshold to remove an endangered EVC and does not trigger an EES referral in accordance with the Ministerial Guidelines for the assessment of the EES Act.

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## 1.0 Introduction

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### 1.1 Site context

In September 2019, AECOM Australia Pty Ltd (AECOM) prepared a planning permit application on behalf of the Applicant, 433 Link Development Pty Ltd (then owned by South Energy) for the construction of a solar farm facility on land adjacent to Murray Road, Nelson Road, and Benalla-Yarrawonga Road, Benalla, Victoria. The site addresses were:

- 226 Murray Road, Benalla
- 51 Nelson Road, Benalla
- 67 Nelson Road, Benalla
- 127 Nelson Road, Benalla
- 284 Benalla-Yarrawonga Road, Benalla.

On 22 September 2021, ownership of the Project Applicant (433 Link Development Pty Ltd) was transferred from South Energy to Lightsource bp. Previous iterations of this report refer to South Energy, however all new information within this report refers to Lightsource bp to reflect current ownership of the Project Application.

Lightsource bp subsequently proposed changes to the concept designs for the Project, therefore this Flora and Fauna Assessment Report has been updated to support an application under Section 72 of the *Planning and Environment Act 1987* (P&E Act) to amend the planning permit for the Project (the amendment). The amendment seeks to:

- Rearrange the layout of Kennedys Creek Solar Farm to:
  - Relocate the substation to the north-east of the site and connection to new transmission infrastructure
  - Make minor updates and design changes as a result of the above.
- Include a new transmission line from the Kennedys Creek Solar Farm to the network connection point at West Mokoan Solar Farm.

In addition to the site addresses listed above, the transmission line investigation area also affects the following additional properties:

- Lake Mokoan Road, Winton North (Allotment 2020 Parish of Winton PP3843)
- 368 Benalla-Yarrawonga Road, Benalla (Lot 2 PS627741)
- 370 Benalla-Yarrawonga Road, Benalla (Lot 1 PS627741)
- 82 Snowy Lane, Benalla (Lot 2 LP123365)
- Benalla-Yarrawonga Road, Benalla (Lot 1 PS717978)
- 524 Benalla-Yarrawonga Road, Benalla (Lot 6 LP206524)
- 572-616 Benalla-Yarrawonga Road, Benalla (Lot 5 LP206524; Lot 4 LP206524 Lot 3 LP206524)
- Allotment 2019 Parish of Goorambat PP2704
- Snowy Lane, Benalla road reserve.

The design layout for the solar farm is presented in Appendix A – Figure 5.

### 1.2 Assessment objectives

The objective of the ecological assessment was to identify and quantify ecological values including flora, fauna and vegetation communities in line with Victorian and Commonwealth

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policy and legislation; and advise Lightsource bp on the next steps in progressing the proposed development. As an overview, this report aims to:

- Present a review of existing reports relating to the study area
- Assess the likelihood of Commonwealth and State-listed threatened flora and fauna species and communities occurring within the study area
- Consider other significant biodiversity values (e.g. environmental and vegetation overlays)
- Document the flora and fauna values present within the study area as identified during the initial and detailed ecological surveys including identifying and mapping the vegetation quality (applying the Habitat Hectares method) and fauna habitat present. The conservation significance of any flora and fauna present will also be determined.
- Determine ecological impacts resulting from development within the study area, in the context of relevant Victorian and Commonwealth policy and legislation, and provide recommendations for avoiding, minimising or mitigating such impacts
- Outline the offset quantum for the removal of native vegetation based on the current concept design and transmission line loss scenario
- Identify next steps and/or further survey requirements (if necessary).

### 1.3 Study area

The study area is located approximately 5.5 kms north-east of Benalla, Victoria and 4.1 kms west of Winton. The study area is located within the Victorian Riverina bioregion, and is situated within the Benalla Local Government Area and the Goulburn Broken Catchment Management Authority area.

The project area as it relates to the Kennedys Creek Solar Farm site flora and fauna assessment does not include the roadsides of public road reserves (sealed or unsealed) adjacent to the study area. It does include gazetted (paper) road reserves that are located within the boundary of the study area. Although a detailed flora and fauna assessment was not undertaken on roadsides of public road reserves (sealed or unsealed) adjacent to the study area, the location of patches of vegetation, scattered trees and other ecological values were noted during the field assessment in order to inform the location of site access and transmission line placement.

Excluded from the Kennedys Creek Solar Farm study area are some parcels along Murray Road and Nelson road including PFI 5348268 and PFI 428361895.

The project area also includes the transmission infrastructure which comprises the existing powerline easement (a 40 meter-wide easement) and a 15 m buffer on the eastern side of the existing easement. The existing powerline infrastructure runs in a north-south direction through West Mokoan and Kennedys Creek solar farm sites. As part of the infrastructure the roadside reserve along Snowy Lane will be used to facilitate construction, and thus the public road reserve is included in the current assessment.

The locations of the study area is present in Figure 1 Appendix A.

### 1.4 Relevant State and National Policy and Legislation

Throughout the assessment process consideration has been given to the following biodiversity legislation and policies:

- *Commonwealth Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act);
- *Victorian Flora and Fauna Guarantee Act 1988* (FFG Act);
- *Victorian Catchment and Land Protection Act 1994* (CaLP Act);
- *Victorian Wildlife Act 1975*;
- *Victorian Planning and Environment Act 1987* (P and E Act);

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- Victoria's *Guidelines for the removal, destruction and lopping of native vegetation* (DELWP, 2017a) (the 'Guidelines') and related policy documents;

An introduction to the above biodiversity legislation and policy and the implications on the project development is provided in Section 3.3.2 of this report.

### 1.5 Summary of updates

This report has been updated to reflect the changes to the project that have occurred since the revision E of the report was prepared and submitted as part of the planning application in August 2019. These changes include;

- Revised project boundary
- Revised project design
- Updated references to legislation, best practice guidelines and standards
- Updated key biodiversity legislation and listing criteria for threatened flora and fauna
- Updated field survey results
- Additional assessment of habitat for the EPBC Act-listed Striped Legless Lizard *Delma impar* (transmission line study area only)
- Additional assessment of Tree Habitat Value for trees proposed to be impacted as per the current solar farm concept design
- Flora and fauna summary
- Updated figures and maps

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## 2.0 Methods

### 2.1 Desktop assessment

#### 2.1.1 Literature

Ecological reports that cover sections of the study area reviewed as part of the desktop assessment included:

- Benalla Rural City Environment Strategy 2016 – 2020 (Benalla Rural City 2016)
- Benalla Rural City Council Roadside Vegetation Management Plan (Benalla Rural City 2014)

#### 2.1.2 Database searches

The following State and Commonwealth-curated biodiversity datasets were reviewed and synthesised for the desktop study:

- EPBC Act Protected Matters Search Tool (PMST) administered by the Australian Government Department of Climate Change, Energy, the Environment and Water (DCCEEW)
- Databases administer by the Victorian Government department of Environment, Energy and Climate Action (DEECA):
  - Victorian Biodiversity Atlas (VBA) for records of flora and fauna species. The review of the VBA included a 5 km buffer around the study area to capture records of highly mobile fauna species, and to account for the possible lack of historic survey effort for threatened species in the study area
  - Native Vegetation Information Management (NVIM) tool;
  - NatureKit biodiversity mapping tool;
  - MapShare Victoria for environmental datasets including VicPlan inline for information on planning zones and overlays
- i. Aerial photographs and topographic maps.

### 2.2 Likelihood of occurrence of threatened species

An assessment was undertaken of the likelihood of threatened and/or migratory species occurring within the study area. This included species:

- Listed as threatened under the EPBC Act
- Listed as migratory under the EPBC Act
- Listed as threatened in Victoria under the FFG Act (DELWP, 2022)

This assessment was completed for species recorded on the VBA and/or predicted to occur by the PMST, within 10 kilometres of the study area.

A number of species were eliminated from the VBA list and are not considered further in this report on the basis of:

- Records older than 30 years (pre-1989)
- Species listed under the FFG Act as 'Extinct'
- Some threatened flora species which are outside their natural range but are commonly used for landscaping and amenity, including Spotted Gum *Corymbia maculata* and Giant Honey-myrtle *Melaleuca armillaris*.

The likelihood of occurrence assessment was based on the number of ALA/VBA records, year of most recent ALA/VBA record, species ecology and the habitat values observed during the field assessment. The likelihood assessment is presented in Appendix B and Appendix C.



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The following likelihood categories were used to rate each species' likelihood of occurrence:

- **Unlikely:** No preferred habitat in the study area. No recent records of the species within 10 km of the study area. Species unlikely to be present on the site at any time or during any season.
- **Possible:** Habitat is available in the study area which partially meets the requirements of the species. A recent record/s of the species within proximity to the study area. In the case of fauna, the species may infrequently visit for foraging but would not reside, roost or otherwise depend on habitats in the study area for their survival. Migratory and aerial foraging birds may overfly the site.
- **Likely:** Species has historically been recorded in the study area (or within very close proximity). The study area contains habitat that meets their habitat requirements and is likely to support a population of the species.
- **Present:** Species confirmed to be present within the study area during site assessment or has regularly been observed in recent times.

This process was used to short-list species that have the potential to be impacted by the proposed works and therefore, prioritise field survey effort. The desk-based assessment was updated following the field assessment.

### 2.3 Field-based assessment

The objective of the field survey was to validate the findings from the desktop assessment and assess the ecological value of vegetation, flora and habitat present within the study area. A broad ecological constraints assessment was conducted on 13-14 February 2019 and detailed ecological surveys to assess the extent and quality of all native vegetation on site, using the Habitat Hectare method was undertaken on the 20-21 March 2019. The assessment was conducted by a DEECA-accredited Habitat Hectares ecologists.

Additional detailed field surveys were undertaken on 6-8 April and 12-13 December 2022 to assess the ecological values and map the extent and quality of native vegetation associated with the transmission line. In addition, a tree habitat value assessment for trees proposed for removal within Kennedys Creek Solar Farm site was also completed in April 2022.

#### 2.3.1 General flora and fauna survey

The Random Meander Method (Cropper 1993) was adopted to search for the presence of native flora. Where flora identification was difficult in the field, a sample of the species was taken to aid in later identification. Relevant authoritative texts and databases were utilized to identify flora samples. Each of these is documented in the reference section of this report. The conservation significance of flora species identified within the study area was determined in accordance with Victorian and Commonwealth legislation and the Victoria Framework.

The assessment for vertebrate fauna at the site involved recording incidental records of all vertebrate fauna observed during the field survey. This included identifying and examining habitat resources available within the study area.

#### 2.3.2 Native Vegetation (Vegetation Quality Assessment)

Where present, native vegetation within the study area was mapped according to the prescriptions of the Guidelines (DELWP, 2017a). The definition of native vegetation is provided below.

A vegetation quality assessment (VQA) was undertaken for all patches of native vegetation using the Habitat Hectares methodology as described in the *Vegetation Quality Assessment Manual – guidelines for applying the habitat hectare scoring method* (DSE 2004). Native vegetation was assessed using version 1.3 of the 'Vegetation Quality Field Assessment Sheet' provided by DEECA and Ecological Vegetation Class (EVC) benchmarks for the Victorian Riverina Bioregion. Vegetation was classified based on the biophysical characteristics outlined in the EVC benchmarks such as geology, vegetation structure and species composition. A total of 28 VQAs were completed.

Scattered trees were assessed using the criteria outlined in the Guidelines (DELWP, 2017a). The Diameter at Breast Height (DBH) was measured for all scattered trees and large trees in patches to determine whether they meet the EVC benchmark of a large tree or small tree.

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Native vegetation within the study area was assessed according to the prescriptions of Victoria's *Guidelines for the removal, destruction or lopping of native vegetation* (DELWP, 2017). Under the Guidelines, native vegetation is considered to be either a patch or scattered tree, where:

A patch is defined as:

*'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 Current wetlands map, available in DELWP systems and tools' (DELWP 2017, pg. 6).*

And a scattered tree is defined as:

*'a native canopy tree that does not form part of a patch', where a native canopy tree is defined as "a mature tree that is greater than 3 metres in height and is normally found in the upper layer of the relevant vegetation type' (DELWP 2017, pg. 6).*

Native vegetation in Victoria is classified into types known as Ecological Vegetation Classes (EVC). Each EVC has been assigned a benchmark for assessing vegetation quality through a Vegetation Quality Assessment (VQA). The EVC benchmarks have been prepared for each of the Victorian bioregions. Bioregions are a landscape-scale approach to classifying the environment in Victoria.

Scattered trees can be classified as large or small so long as they consist of a canopy species for the relevant EVC. Large scattered tree Diameter at Breast Height (DBH) is specified in the relevant EVC benchmark description. Small scattered trees are those less than the EVC benchmark for a large tree but greater than 3 meters in height.

A VQA was undertaken using the Habitat Hectares method as described in the *Vegetation Quality Assessment Manual – guidelines for applying the habitat hectare scoring method* (DSE, 2004) for all patches of native vegetation. Individual patches are termed Habitat Zones (HZ) in accordance with DEECA terminology. Scattered trees were assessed using the criteria outlined in the Guidelines (DELWP, 2017).

The location of native vegetation patches, large trees in patches and scattered trees was mapped using a Samsung tablet which has a spatial accuracy of approximately  $\pm 7$  metres depending on access to satellites. In the most recent field survey a GPS receiver was used to improve the accuracy of native vegetation and tree location data ( $\pm 2$  metres depending on access to satellites).

The conservation significance of native vegetation patches was determined in accordance with Victorian and Commonwealth policy and legislation.

### **2.3.3 Current Mapped Wetlands**

Mapped wetlands are identified in DEECA's Current Wetlands Map in MapShareVic and are included in Location 2 of the Location risk map in NVIM. The Current Wetlands Map and is used to identify wetlands which can be difficult to identify onsite due to their dynamic nature. The map has been generated by DEECA using a combination of aerial photo interpretation and field validation. Areas mapped as wetlands on NVIM need to be considered in efforts to avoid and minimise impacts on biodiversity.

Under the Guidelines (DELWP, 2017a), mapped wetlands are regarded as a patch of native vegetation when mapping native vegetation to be removed or offset (DELWP, 2018b). These wetlands are not assigned an EVC in MapShare. Presence of mapped wetlands within the study area was assessed during the desktop assessment, and confirmed during the field assessment.

### **2.3.4 Tree habitat value assessment**

A tree habitat value assessment was completed to document the habitat value of Scattered Trees proposed to be removed within the study area. The assessments were undertaken by a DEECA-qualified VQA-assessor accompanied by a zoologist. The purpose of the survey was to document hollows that may provide habitat for fauna (den and/or nesting resources) to guide further refinements with regards to the loss of Scattered Trees and therefore potential fauna habitat. More broadly, this assessment was also required to review the loss of trees from the study area in the context of the wider landscape. As at Revision E (Option 6: 13/12/2019), 16 trees were designated for removal; these trees

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were therefore included in the habitat value assessment. Three additional trees were included in the assessment due to the trees not being recorded in previous iterations of the report and the assumption that these trees would be removed. A single scattered tree was recorded within the transmission line study area was also included in the assessment based on the current project design.

The 20 trees were assessed according to their size, canopy health (foraging resource) and presence of hollows which were categorised by type (trunk or spout hollow), size and number as viewed from the ground with binoculars. Tree hollow categories are listed in Table 2. Any other habitat features such as nests were also noted during the assessment. Habitat features were scored and assigned an overall habitat ranking to provide further guidance on prioritising Scattered Trees for retention within the study area. The habitat ranking matrix is shown in Table 3.

**Table 2 Tree hollow categories**

Hollow size category	Arbitrary species that hollow feature may provide habitat for
Large	Larger possums or owls
Medium	Possums, gliders, parrots, lorikeets
Small	Microbats, antechinus, pardalotes

**Table 3 Tree habitat value rating matrix**

Hollows	Tree size and health			
	Large, healthy	Large, unhealthy	Small, healthy	Small, unhealthy
≥5 hollows, range of sizes, evidence of fauna usage	High	High	High	Medium
3-4 hollows, similar size	High	Medium	Medium	Low
2-3 hollows	High	Medium	Low	Low
≤1 hollow	Medium	Low	Low	Low

\*Large and small tree classes as described in Table 3 align with EVC large tree benchmark.

**2.3.5 Striped Legless Lizard assessment**

Drafting note: the Striped Legless Lizard targeted habitat assessment only included assessment of the transmission line study area. The potential for Striped Legless Lizard habitat within the Kennedys Creek Solar Farm site is acknowledged as a gap in the current flora and fauna assessment. AECOM are currently preparing a standalone memo that considers the potential for Striped Legless Lizard to occur within the entire study area.

**2.3.5.1 Targeted habitat assessment**

A targeted habitat assessment for Striped Legless Lizard (SLL) was completed to identify areas of potential suitable habitat for the species within the transmission line study area. Targeted habitat assessments were undertaken by a DEECA-qualified VQA-assessor accompanied by a zoologist with extensive experience with SLL habitat assessments.

Striped Legless Lizard is a grassland specialist. The species is generally known to inhabit native grasslands and grassy woodlands that contain native tussock-forming grasses, but it can also persist in degraded grasslands and non-native grasslands that have been historically grazed or subject to pasture improvement (DSEWPac, 2011). As a semi-fossorial species, Striped Legless Lizards use burrows and cracks as retreats and shelter in tussocks and under rocks and fallen timber on the surface (Smith and Robertson, 2019). Striped Legless Lizard are less likely to occupy sites that have the incorrect soil type or sites that have been subject to major disturbance such as ploughing.

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The primary feature used to identify potential Striped Legless Lizard habitat at Kennedys Creek was the presence of lowland native grassland and grassy woodland EVCs which support scattered eucalypts and a complex structure of grass tussocks (native or introduced). Other features which informed the assessment included the presence of soil cracks, rock, fallen timber, and sources of soil disturbance such as grazing or ploughing.

### 2.3.5.2 Detailed analysis

Following the targeted habitat assessment, a detailed analysis was undertaken to evaluate the potential for Striped Legless Lizard to occur in the study area. The detailed analysis considered historical records of the species on the VBA and DELWP's Habitat Importance Model for Striped Legless Lizards in north-east Victoria from NatureKit. GIS analysis was undertaken to identify any discernible patterns for occurrence of historical species records in association with topography, geology, bioregion and soils.

## 2.4 Habitat connectivity assessment (tree proximity analysis)

A tree proximity analysis was undertaken to prioritise trees for retention. The distance of trees from one another defined the 'habitat complexity' and the assumption that fauna species favour high habitat complexity was adopted.

A set of retention rules as defined by a review of available literature were applied to identify trees to prioritise for retention when developing the solar grid layout (Table 4). Large trees in Patches and more connected large Scattered Trees provide increased habitat complexity and are desirable to a range of fauna species.

All large Scattered Trees and Large Trees in Patches were afforded the same 'value' in terms of fauna habitat potential as they generally all contained various habitat features including multiple hollows of varying sizes, loose bark and cracks. There was no differentiation between dead and living trees due to being given the same habitat value and offset requirement in the Guidelines (DELWP, 2017). Other habitat features considered in the tree proximity spatial analysis included dams, waterways and remnant patches of vegetation.

A GIS spatial analysis study was undertaken to implement the retention rules outlined in Table 4.

**Table 4 Tree retention value**

Cat.	Description	Implementation	Retention rules	Rationale
1	All remnant patches containing a canopy component within Habitat Hectare Assessment.	Identify all patches that have a value in the tree canopy component as informed by the Habitat Hectare score sheet.	Retain Category 1 trees.	Suitable habitat for bat species. Increased habitat complexity desirable for a range of fauna species.
2	Large Scattered Trees (LST) within 75 m of a remnant patch, two or more LST or other habitat feature(s).	Identify all patches that have a value in the tree canopy component as informed by the Habitat Hectare score sheet. Also identify other habitat features that occur within the assessment area including waterways and waterbodies. Use this to conduct proximity analysis of LST within 75m of habitat features and other LSTs.	Retain Category 2 trees.	75 m is the threshold for gliding marsupials.

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Cat.	Description	Implementation	Retention rules	Rationale
3	LST >75 m from other LST or habitat feature and, is not in Category 2.	Identify all patches that have a value in the tree canopy component (Habitat Hectare score sheet). Also identify other habitat features that occur within the assessment area including waterways and waterbodies. Use this to conduct proximity analysis of LST greater than 75m of habitat features and other LSTs.	Retain up to 30% of trees >75 m from other LST or habitat features.	Suitable for woodland bird species. Less than 10% foliage cover in a landscape would result in a significant reduction in species richness.

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### 2.5 Nomenclature

#### 2.5.1 Flora species

Common and scientific names for plants follow the VBA database (2018 version).

Flora conservation significance was determined in accordance with the EPBC Act and FFG Act.

#### 2.5.2 Vegetation communities

Native vegetation in Victoria is classified into units known as EVCs, which are described according to a combination of floristic, life form and ecological characteristics, and through an inferred fidelity to particular environmental attributes. Each EVC occurs under a common regime of ecological processes within a given biogeographic range and may contain multiple floristic communities (DELWP, 2017a).

Other vegetation types that may occur in Victoria include flora communities listed as threatened under the Commonwealth EPBC Act and/or the Victorian FFG Act. These two Acts have vegetation classification systems that are separate to each other and separate to the EVC classification system. As such, any single patch of native vegetation would be classifiable as a particular EVC, and it may also be separately classified as a different vegetation community under the EPBC Act, and/or as another vegetation community under the FFG Act.

#### 2.5.3 Fauna species

Unless otherwise noted, common and scientific names for fauna follow the VBA database.

Fauna conservation significance was determined in accordance with the EPBC Act and FFG Act

#### 2.5.4 Fauna communities

Unlike flora and the use of EVCs, there is no official widespread classification system for fauna communities in Victoria. Both the EPBC Act and the FFG Act list a small number of fauna communities that are considered to be threatened at a national or state scale, respectively. Fauna communities known, or potentially occurring within the study area or surrounds, are only considered in this report if they are listed under either of these two Acts.

### 2.6 Limitations

This assessment has been undertaken to provide a broad overview of biodiversity assets within the study area. The study effort, combined with information available from other sources, is considered suitable to assess the ecological values within the study area. The following limitations have been identified that may influence this assessment:

- No targeted flora or fauna surveys were completed.
- This ecological assessment is restricted to terrestrial vascular plant species (ferns, conifers and flowering plants) and terrestrial vertebrate fauna (mammals, birds, reptiles and frogs). Non-vascular flora (e.g. mosses, liverworts, lichens), fungi and terrestrial invertebrates have not been considered as part of this assessment, except where listed threatened species are known or suspected to occur, or where bryophytes comprise part of the EVC benchmark used for the habitat hectare assessment (e.g. cover of bryophytes).
- No targeted fauna survey was undertaken for this study, as comprehensive fauna surveys can take longer than most projects of this nature allow. They are also labour intensive, and costs can be prohibitive. Threatened fauna habitat assessments were based on the professional judgements on the suitability of habitat present within the study site for any significant species detected on existing databases or raised through consultation with DELWP.
- The spatial analysis of biodiversity attributes is complex and has significant limitations when it is driven by historical record data such as the Victorian Biodiversity Atlas. The timing of surveys and incidental observations may not correspond with ideal sampling periods; there may be limited survey effort in the area if it is extensively private land; and some species have naturally low detectability rates.

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- Mapping was conducted using Samsung tablets and aerial photo interpretation. The accuracy of the GPS is subject to the ability to access satellite information (generally <7 metres). As such, these points should not be relied on for detailed design purposes.
- Vegetation mapping was undertaken outside of the ideal identification period for most flora species.
- The existing conditions and impact analysis is based on concept design Revision 15.

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The Protected Matters Search Tool (PMST) identified a number of Matters of National Environmental Significance (MNES) that may occur, or for which suitable habitat may occur within the study area.

Results of the PMST search as requested on the 02 April 2019, encompassing a 10 km search area are summarised in Table 5.

**Table 5 Summary of PMST results**

MNES	Number of occurrences
World Heritage Properties	None
National Heritage Places	None
Wetlands of International Significance (Ramsar Sites)	7 Ramsar sites: <ul style="list-style-type: none"> <li>Banrock station wetland complex 500 – 600 km upstream</li> <li>Barmah forest 50 – 100 km upstream</li> <li>Gunbower forest 100 – 150 km upstream</li> <li>Hattah-kulkyne lakes 300 – 400 km upstream</li> <li>NSW central Murray state forests 50 – 100 km upstream</li> <li>Riverland 500 – 600 km upstream</li> <li>The Coorong, and lakes alexandrina and albert wetland 500 – 600 km upstream</li> </ul>
Listed threatened ecological communities	4 threatened ecological communities: <ul style="list-style-type: none"> <li>Buloke Woodlands of the Riverina and Murray-Darling Depressions Bioregions</li> <li>Grey Box (<i>Eucalyptus microcarpa</i>) Grassy Woodlands and Derived Native Grasslands of South-eastern Australia</li> <li>Natural Grasslands of the Murray Valley Plains</li> <li>White Box-Yellow Box-Blakely's Red Gum Grassy Woodland and Derived Native Grassland</li> </ul>
Listed threatened species	31 listed threatened species made up of: <ul style="list-style-type: none"> <li>25 listed fauna species</li> <li>6 listed flora species</li> </ul>
Listed migratory species	11
Commonwealth Marine Areas	None

The full PMST results are provided in Appendix B and Appendix C. A list of the threatened and migratory species identified by the PMST is provided in Appendix C, along with their conservation status, likelihood of occurrence, habitat descriptions, and information on any records within close proximity to the study area.

**3.1.2 Victorian Biodiversity Atlas**

The VBA database search for records within 10 km of the study area identified:

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- 29 EBPC Act listed threatened species (6 flora and 23 fauna)
- 12 EPBC Act listed migratory (but not threatened) bird species;
- 57 FFG Act listed threatened species (18 flora and 39 fauna)

For the location of VBA species records refer to Figure 2 – Appendix A.

### 3.1.3 NatureKit

The study area, and 5 km buffer, falls within the Victorian Riverina bioregion. Based on DELWP EVC modelling, there is potential for three EVCs to occur within 5 km of the study area (Table 6). These EVCs and their Biodiversity Conservation Status (BCS) in the Victorian Riverina bioregion are listed in Table 6.

**Table 6 EVC mapping within 5 km of study area derived from NatureKit**

EVC No.	EVC Name	Bioregion BCS
55_62	Plains Grassy Woodland	Endangered
74	Wetland Formation	-
235	Plains Woodland/Herb-rich Gilgai Wetland Mosaic	Endangered

### 3.1.4 Literature relevant to the study area

A brief outline of documents relevant to the study area is provided below.

#### **Benalla Rural City Environment Strategy 2016 – 2020**

The Environment Strategy aims to provide a proactive and strategic approach to environmental matters and identifies priorities for management for the municipality within the strategies timeframe.

#### **Benalla Rural City Council Roadside Vegetation Management Plan 2014**

The Roadside Vegetation Management Plan seeks to identify roadside vegetation values across the municipality and provide a tool to assist the community, landholders, Council staff and contractors to manage roadside vegetation. The conservation values of Council roadsides have been assessed; the Roadside Vegetation Conservation Values Map is held at the Benalla Rural City offices.

### 3.1.5 Current Mapped Wetlands

No mapped wetlands were present in the study area.

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### 3.2 Field assessment

#### 3.2.1 Site description

In general, the study area has been significantly modified by agricultural land uses including dryland cropping and grazing. The study area has predominantly been cleared of native vegetation with the exception of 269 scattered large and small native trees (scattered trees (Appendix E) and approximately 11.25 ha of native vegetation in 28 discrete patches (Appendix A - Figure 3)

The scattered trees are characterised by the following species:

- Grey Box *Eucalyptus microcarpa* (84 large, 1 small)
- River Red Gum *Eucalyptus camaldulensis* (129 large, 3 small)
- White Box *Eucalyptus albens* (15 large)
- Yellow Box *Eucalyptus melliodora* (3 large)
- Red Box, *Eucalyptus polyanthemos* (1 large)
- Stags (unknown species) (33 large).

Scattered trees are shown in Figure 4 Appendix A. These species are in general, reflective of EVC 55\_62 Riverina Plains Grassy Woodland (*syn.* Plains Woodland). Large scattered trees ranged in size from 70 to 247 cm DBH while small scattered trees ranged in size from 45 to 66 cm DBH. Scattered trees, particularly large trees, are an important landscape feature as they offer a range of fauna habitat values such as shelter and foraging resources in otherwise barren landscapes. In addition, they are critical in agricultural landscapes for their ability to provide connectivity with more densely vegetated areas.

Patches of native woodland vegetation identified within the study area were generally low quality and tended to reflect patches of three or more large canopy trees with a cropped or highly modified understorey; with the exception of HZ 28 which contained a mixture of exotic pasture and native species and numerous large trees. The capacity for these patches to provide habitat for native species is limited; however, the presence of large trees within these patches and their proximity to one another enhances the habitat values of the patches.

No current DEECA wetlands have been identified within the study area. Two unnamed ephemeral watercourses are mapped within the study area (see Appendix A –Figure 1). The unnamed watercourses reflect current agricultural practices draining the paddocks into a series of dams. A table drain runs along the western side of Dam Wall Road which supports native aquatic and semi-aquatic vegetation and one small depression on the eastern edge of Kennedys Creek Solar Farm also supports a similar composition of native vegetation. Directly east of the study area (800 m) lies the Winton Wetlands, also known as Lake Mokoan. Lake Mokoan is an artificial lake created from the diversion of Broken River and Hollands Creek into Winton Swamp in the 1970s. The lake was decommissioned in 2009, with the aim of returning several thousand megalitres of water per year to the Broken, Goulburn and Murray Rivers and restoration of the area's original ephemeral wetland state. This wetland provides habitat and resources for a range of fauna species.

Roadsides of public road reserves containing modified woodland vegetation surround and traverse the study area (see Figure 1 Appendix A). A number of nature conservation reserves are located between 10 – 12 kilometres from the study area including, Mt Meg Nature Conservation Reserve, Reef Hillis State Park and Goomalibee Nature Conservation Reserve. Extensive woodlands areas are located on private land a similar distance away, south east of the study area at Glenrowan West. Remnant woodlands throughout the region are generally inter-connected through linear easements including roadsides and waterways. A detailed vegetation assessment of roadsides within and adjacent to the study area was not undertaken as access routes have not yet been identified for the project. Gazetted (paper) road reserves that traverse the study area were included in this flora and fauna assessment.

A number of easements are present within the study area including:

- a gas pipeline (traversing east to west)

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- underground telecommunications cables (traversing east to west parallel to gas pipeline, and in the southeast portion of the site)
- overhead line easements (one cuts the corner of Benalla-Yarrawonga and Nelson Road, and the other runs along the eastern boundary of the site).
- easements for the purpose of water supply in the eastern portion of the site.

Representative photos of the study area are provided below. A consolidated list of flora and fauna species recorded during the site assessment is provided in Appendix D. The ecological values mapped during the site assessment are presented in Figure 3 and Figure 4 (Appendix A)



**Plate 1** Kennedys Creek Solar Farm supporting grazed paddocks with scattered trees in the background



**Plate 2** Representative photo of scattered trees to be removed



**Plate 3** Looking north along the powerline easement, Dam Wall Road



**Plate 4** Private property supporting Plains Woodland EVC understorey patch

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**DRAFT****ADVERTISED PLAN****Plate 5** Plains Grassy Woodland along Snowy Lane**Plate 6** Planted non-native vegetation within private property adjacent to Snowy Lane.**Plate 6** Plains Grassy Wetland within table drain, Dam Wall Road**Plate 6** Large mature trees within the old road reserve immediately east of the Kennedys Creek Solar Farm site**3.2.2 Ecological Vegetation Class**

Two EVCs, EVC 55\_62 Riverina Plains Grassy Woodland (*syn.* Plains Woodland) and EVC 125 Plains Grassy Wetland, were recorded within the study area. These all have a bioregional conservation status of Endangered.

No DEECA mapped wetlands occur within the study area.

**Table 7** Ecological Vegetation Classes recorded within the study area

EVC No.	EVC Name	Bioregion BCS	Description
55_62	Plains Grassy Woodland	Endangered	EVC represented by patches of Eucalypt canopy trees over exotic understorey, with patch size ranging from 0.01 to 4.29 ha.
125	Plains Grassy Wetland	Endangered	EVC represented by aquatic and semi-aquatic grass and sedge species. EVC located within low-lying

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EVC No.	EVC Name	Bioregion BCS	Description
			areas (e.g. drainage lines) that are periodically inundated with water.

**3.2.3 Vegetation Quality Assessment (Habitat Hectares)**

28 Habitat Zones (EVC 55\_62 and EVC 125) were mapped across the site during the Vegetation Quality Assessment. The Habitat Hectare scores of each zone are presented in Table 8. These patches represent a total of 11.25 hectares of native vegetation, equivalent to 6.298 habitat hectares. A total of 152 Large Trees in Patches, 113 Large Scattered Trees, and four Small Scattered Trees were identified during the site assessment, with details of each tree listed in Table 20, Appendix E.

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**DRAFT****Table 8 Vegetation Quality Assessment of the study area**

Habitat Zone			HZ15	HZ16	HZ17	HZ18	HZ19	HZ20	HZ21	HZ22	HZ23	HZ25
EVC			55_62	55_62	55_62	55_62	55_62	55_62	55_62	55_62	55_62	55_62
Bioregion			Victorian Riverina	Victorian Riverina	Victorian Riverina	Victorian Riverina	Victorian Riverina	Victorian Riverina	Victorian Riverina	Victorian Riverina	Victorian Riverina	Victorian Riverina
Bioregional Conservation Status (BCS)			Endangered	Endangered	Endangered	Endangered	Endangered	Endangered	Endangered	Endangered	Endangered	Endangered
Site Condition	Large Old Trees	10	8	10	0	10	0	10	10	10	8	9
	Tree Canopy Cover	5	5	5	5	5	3	5	3	5	5	4
	Lack of Weeds	15	11	11	11	4	7	0	11	7	7	11
	Understorey	25	0	0	0	0	0	0	0	0	0	0
	Recruitment	10	0	0	0	0	0	0	0	0	0	0
	Organic Litter	5	3	3	5	3	3	3	4	3	2	5
	Logs	5	4	5	0	2	0	2	4	5	4	5
	Total Site Score	75	31	0	5	5	3	5	8	8	6	10
Standardiser		-	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Standardised Site Score		-	31	0	5	5	3	5	8	8	6	10
Landscape Context	Patch Size	10	1	1	1	1	1	1	1	1	1	1
	Distance to Core Area	5	0	0	0	0	0	0	0	0	0	0
	Neighbourhood	10	0	0	0	0	0	0	0	0	0	0
	Total Landscape Score	25	1	1	1	1	1	1	1	1	1	1
Habitat Score		100	32	1	6	6	4	6	9	9	7	11
Habitat Points = Score/100		1	0.32	0.01	0.06	0.06	0.04	0.06	0.09	0.09	0.07	0.11
Total area of Habitat Zone (ha)			0.2199	0.2199	0.1821	0.0383	1.1490	0.0992	0.8442	0.1246	0.0502	0.1346
Habitat Hectares (Hha)			0.0704	0.0704	0.0018	0.0023	0.0689	0.0040	0.0507	0.0112	0.0045	0.0094

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Habitat Zone			HZ26	HZ27	HZ28	HZ29	HZ30	HZ31	HZ32	HZ33	HZ34	HZ35
EVC			55_62	55_62	55_62	55_62	55_62	55_62	55_62	55_62	55_62	125
Bioregion			Victorian Riverina	Victorian Riverina	Victorian Riverina	Victorian Riverina	Victorian Riverina	Victorian Riverina	Victorian Riverina	Victorian Riverina	Victorian Riverina	Victorian Riverina
Bioregional Conservation Status (BCS)			Endangered	Endangered	Endangered	Endangered	Endangered	Endangered	Endangered	Endangered	Endangered	Endangered
Site Condition	Large Old Trees	10	9	8	10	8	10	10	9	9	10	0
	Tree Canopy Cover	5	2	5	5	5	5	5	4	2	3	0
	Lack of Weeds	15	11	15	6	15	11	11	11	11	15	9
	Understorey	25	0	0	5	0	0	0	0	0	0	5
	Recruitment	10	0	0	5	0	0	0	0	0	0	3
	Organic Litter	5	5	5	4	5	5	5	5	3	3	3
	Logs	5	5	0	5	5	0	4	0	5	5	0
	Total Site Score	75	10	5	9	10	5	9	5	8	8	20
Standardiser		-	NA	NA	NA	NA	NA	NA	NA	NA	NA	1.36
Standardised Site Score		-	10	5	9	10	5	9	5	8	8	27.2
Landscape Context	Patch Size	10	1	1	1	1	1	1	1	1	1	1
	Distance to Core Area	5	0	0	0	0	0	0	0	0	0	0
	Neighbourhood	10	0	0	0	0	0	0	0	0	0	0
	Total Landscape Score	25	1	1	1	1	1	1	1	1	1	1
Habitat Score		100	11	6	10	11	6	10	6	9	9	28.2
Habitat Points = Score/100		1	0.11	0.06	0.1	0.11	0.06	0.1	0.06	0.09	0.09	0.282
Total area of Habitat Zone (ha)			0.2199	0.0631	0.4103	4.9705	0.1564	0.1798	0.1479	0.0430	0.1543	0.1881
Habitat Hectares (Hha)			0.0704	0.0069	0.0246	0.4971	0.0172	0.0108	0.0148	0.0026	0.0139	0.0169

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Habitat Zone			HZ36	HZ37	HZ38	HZ39	HZ40	HZ41	HZ42	HZ43
EVC			55_62	55_62	125	55_62	55_62	55_62	55_62	55_62
Bioregion			Victorian Riverina	Victorian Riverina	Victorian Riverina	Victorian Riverina	Victorian Riverina	Victorian Riverina	Victorian Riverina	Victorian Riverina
Bioregional Conservation Status (BCS)			Endangered	Endangered	Endangered	Endangered	Endangered	Endangered	Endangered	Endangered
Site Condition	Large Old Trees	10	0	0	0	0	0	0	0	0
	Tree Canopy Cover	5	0	0	0	0	0	0	0	0
	Lack of Weeds	15	13	7	9	7	7	7	7	7
	Understorey	25	5	5	5	5	5	5	5	5
	Recruitment	10	0	0	3	0	0	0	0	0
	Organic Litter	5	0	3	5	3	4	4	4	4
	Logs	5	0	0	0	0	0	0	0	0
	Total Site Score	75	18	15	22	15	16	16	16	16
Standardiser		-	NA	NA	1.36	NA	NA	NA	NA	NA
Standardised Site Score		-	18	15	29.92	15	16	16	16	16
Landscape Context	Patch Size	10	1	1	1	1	1	1	1	1
	Distance to Core Area	5	0	0	0	0	0	0	0	0
	Neighbourhood	10	0	0	0	0	0	0	0	0
	Total Landscape Score	25	1	1	1	1	1	1	1	1
Habitat Score		100	19	16	30.92	16	17	17	17	17
Habitat Points = Score/100		1	0.19	0.16	0.3092	0.16	0.17	0.17	0.17	0.17
Total area of Habitat Zone (ha)			1.4183	0.1827	0.2292	0.0798	0.0219	0.0167	0.0089	0.0043
Habitat Hectares (Hha)			0.2695	0.0292	0.0709	0.0128	0.0037	0.0028	0.0015	0.0007

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## 3.2.4 Trees

The dominant tree species across the study area (including large trees within patches) was River Red Gum. Sub-dominant species was Grey Box. Size classes relevant for EVC 55\_62 (Victorian Riverina bioregion) include:

- *Eucalyptus* spp. 70 cm
- *Eucalyptus largiflorens* 50 cm
- *Allocasuarina* spp. 40cm.

A total of 269 scattered trees, comprising four small and 113 large trees were recorded within the study area (Table 9). Another 152 large trees were recorded in patches. Scattered Trees and Large Trees in Patches are shown in Figure 4 Appendix A.

**Table 9 Summary of trees within the study area**

Species	Small Scattered Tree	Tree Categorisation	
		Large Scattered Tree	Large Trees in Patches
River Red Gum <i>Eucalyptus camaldulensis</i>	3	29	100
Yellow Box <i>Eucalyptus melliodora</i>		3	
Grey Box <i>Eucalyptus microcarpa</i>	1	47	37
Red Box <i>Eucalyptus polyanthemos</i>		1	
White Box <i>Eucalyptus albens</i>		8	7
Stag (unidentifiable dead trees)		25	8
<b>Total</b>	<b>4</b>	<b>113</b>	<b>152</b>

## 3.2.5 Tree habitat values

Tree habitat values of each of the 20 trees assessed are detailed in Appendix F and shown in Figure 9-Appendix A. Of the 20 trees assessed for habitat features (hollows) for fauna, 10 trees had high habitat value and were identified as high priority trees for retention. A further five trees had medium habitat value and five trees had a low number of habitat features. The tree most represented in the tree habitat value survey was Grey Box. A small number of White Box and *Eucalyptus* spp (stags), were also represented. Trees within the study area (particularly Grey Box and White Box) are likely to provide food resources for a number of rare and threatened birds as part of a wide foraging range. This includes Swift Parrot which is discussed further in Section 0. In addition, the high and moderate-ranked trees contained a variety of habitat (hollow) sizes that provide important habitat for common fauna.

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### 3.3 Likelihood of occurrence

#### 3.3.1 Threatened species

A likelihood of presence rating has been assigned to each threatened species identified during the desktop assessment. The rating has been assigned based on the current assessment, number of records within proximity to the study area, appraisal of the species' habitat requirements, and availability of suitable habitat as recorded during the field assessment. An assessment of the likelihood of threatened species is presented in Appendix B (flora) and Appendix C (fauna), with those species assigned likelihood of 'likely' or above discussed below.

##### 3.3.1.1 Fauna

###### 3.3.1.1.1 EPBC Act

Several EPBC Act listed fauna species were considered to possibly utilise habitat within the study area. These species are:

- Painted Honeyeater *Grantiella picta* (vulnerable), Swift Parrot *Lathamus discolor* (critically endangered) and Regent Honeyeater *Anthochaera phrygia* (critically endangered) which are woodland birds that could forage in the trees within the study area and use those trees to move through the landscape. The study area is not an area of core breeding or foraging habitat for these species but may be utilised at varying regularity or intensity over time.
- Plains-wanderer *Pedionomus torquatus* (critically endangered) which has some potential to occur in areas of open pasture or stubble within the study area. The species is unlikely to regularly use the area; there are no records of Plains-wanderer within 10 km of the study area and the habitat is sub-optimal.
- Grey-headed Flying-fox *Pteropus poliocephalus* (vulnerable) which is a wide roaming species and could forage in the trees of the study area during movements from their camp at Cussen Park in Tatura.
- Fork-tailed Swift *Apus pacificus* and White-throated Needletail *Hirundapus caudacutus* which are listed as migratory under the EPBC Act. These species are aerial foragers that utilise a range of habitats when in Australia and could therefore forage over the study area on occasion.
- Striped Legless Lizard *Delma impar* (vulnerable) which has been historically recorded around Benalla and recent records from north-east Victoria suggest this species could occur in grassland and grassy woodlands in the area. This species is discussed further below.

No threatened fauna species were recorded during the field assessment. A list of the fauna species recorded during the site assessment is provided in Appendix D.

#### Striped Legless Lizard

*Drafting note: A standalone Striped Legless Lizard memo is currently being developed and will be included in Appendix H. This section will be updated with the relevant findings.*

The potential for Striped Legless Lizard to occur within the study area (the transmission line easement) was also considered during the most recent site assessment in December 2022.

Two deceased Olive Legless Lizard *Delma inornata* were recorded along Dam Wall Road/Boundary Road which highlights the potential habitat for legless lizard species in disturbed and low-quality grassland habitat within the study area.

#### Threatened woodland birds

In the region, the closest important or critical habitat for threatened birds including Swift Parrot, Regent Honeyeater and Painted Honeyeater is the Warby-Chiltern Box-Ironbark Region which includes a total area of 25,280 hectares of Box-Ironbark woodland that extends from south of Benalla to Chiltern (BirdLife International, 2021). The closest sites to West Mokoan include areas of remnant woodland vegetation around Goorambat and Winton Wetlands (Mount Meg Nature Conservation Reserve) and the Warby-Ovens National Park. Other areas of woodland around Chesney Vale including the Lurg Hills are less suitable for the species like Swift Parrot but are still considered important for other woodland birds (BirdLife International, 2021).

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### 3.3.1.1.2 FFG Act

FFG Act-listed woodland species which could utilise the scattered woodland tree habitat of the study area are identified in Appendix C. Woodland species are likely to use the trees as stepping-stones when moving between larger areas of woodland habitat. Some species may forage within the study area whilst others such as Eastern Great Egret *Ardea modesta* and Intermediate Egret *Ardea intermedia* could forage within farm dams and irrigation drainage lines and table drains which are found within and surrounding the study area.

No threatened fauna were recorded during the field assessment

### 3.3.1.2 Flora

A total of 16 conservation significant flora species were identified in the original desktop assessment. Of these, eight flora species were considered to 'potentially' occur within the study area. This included two species listed under the EPBC Act as threatened and six species listed under the FFG Act (two of which are also listed under EPBC Act) (Appendix B).

Following the field survey, the likelihood of occurrence of these species was reviewed and it was determined that all are considered unlikely to occur. This assessment reflects the absence of native understorey strata, the degraded condition of the vegetation in the study area, and lack of connectivity between remnant patches.

No threatened flora species were recorded during the field assessment. A list of the flora species recorded during the site assessment is provided in Appendix D.

### 3.3.2 Threatened ecological communities

#### 3.3.2.1 Nationally threatened ecological communities

Four EPBC Act listed Threatened Ecological Communities were identified in the PMST search of the assessment area including Buloke Woodlands of the Riverina and Murray-Darling, Grey Box (*Eucalyptus microcarpa*) Grassy Woodlands and Derived Native Grasslands of South-eastern Australia, Natural Grasslands of the Murray Valley Plains, White Box-Yellow Box-Blakely's Red Gum Grassy Woodland and Derived Native Grassland.

No threatened ecological communities were identified in the study area during the field survey. The listing criteria for each were considered as well as the pre-1750 and 2005 EVC mapping available on NatureKit. The remnant patches investigated in the study area support largely exotic grasses, have low species richness and/or were outside the known range of the ecological community.

#### 3.3.2.2 State threatened ecological communities

Historically it is considered likely that two FFG Act listed ecological communities would have been present within the study area including Grey Box - Buloke Grassy Woodland Community, and Victorian Temperate Woodland Bird Community.

Grey Box trees are present; however, the study area is highly modified and lacks native understorey species. The Grey Box trees occur largely as isolated scattered trees. Therefore, the study area is not considered to contain the Grey Box - Buloke Grassy Woodland Community.

The Victorian Temperate Woodland Bird Community is defined as a suite of bird species associated with drier woodlands on the slopes and plains north of the Great Dividing Range. All patches containing a canopy component (19 patches) are considered synonymous with the FFG Act listed Victorian Temperate Woodland Bird Community (DELWP undated) adding additional significance to these areas.

## 3.4 Tree proximity analysis

The tree proximity analysis for the 269 trees recorded within the solar farm site is detailed in Appendix G and shown in Figure 8(Appendix A). Table 10 provides a summary of the tree type and retention category for the Kennedy Creek Solar Farm Project. To note, five trees were assigned a category of '0' as they didn't fall into any of the categories for retention.

**Table 10 Summary of trees per tree retention category, Kennedys Creek**



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Category	Large Scattered Tree	Large Tree in Patch	Small Scattered Tree	Total
<b>Kennedys Creek</b>				
1	2	152	0	154
2	85	0	0	85
3	25	0	0	25
Total*	112	152	0	264

\*Quantities of trees align with study area at the time of conducting the spatial analysis

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## 4.0 Design process to retain ecological values

The Kennedys Creek Solar Farm project has undergone several study area and design iterations. The design iterations have sought to avoid and minimise impacts to native vegetation where possible, while also maximising solar design and electricity generation performance.

During the detailed ecological assessment, 11.25 ha of native vegetation was mapped over 28 habitat zones (Figure 3– Appendix A) and 152 Large Trees in Patches and 117 Scattered Trees (113 large and four small) were also mapped (Figure 4– Appendix A). Additional studies were undertaken to obtain more detailed information on ecological values and inform refinement of the concept design. Those studies included a GIS-based landscape connectivity assessment based on the method outlined in Appendix G and a tree habitat value assessment (Appendix F).

### 4.1 Prioritisation approach

AECOM design engineers and Lightsource bp worked closely with ecologists to review the ecological values within the project area and refine the concept plan to avoid and minimise impacts to native vegetation. Tree retention was a large component of the concept plan refinement process owing to the number of Large Trees in Patches and large Scattered Trees within the study area.

Areas prioritised for retention in development of the concept plan for the solar farm were:

- Patches of native vegetation (Figure 3– Appendix A)
- Areas with a Strategic Biodiversity Value of >0.4 in NatureKit (Figure 7– Appendix A).
- Trees assigned higher proximity ratings via a habitat connectivity / tree proximity analysis (Figure 8– Appendix A).
- Trees with a high or medium habitat value (Figure 9– Appendix A) (where practicable).

### 4.2 Outcome

Through an iterative design process, AECOM design engineers and Lightsource bp have achieved a design which:

- Avoids all patches of native vegetation
- Minimises tree losses to 20 Large Scattered Trees. The reduction in tree losses has resulted in trees with important fauna habitat value being retained. This includes retaining all Category 1 and Category 2 trees and 30% of Category 3 trees as per the landscape connectivity analysis (Appendix G).
- All areas of SBV >0.4 have been retained (Figure 7-Appendix A)

The key design and engineering constraint relevant to tree retention is the specific layout of trackers and solar array panels which come in set lengths specified by the manufacturer. The trackers are orientated in a north-south direction to track the sun throughout the day; thus, given the length and orientation of tracker rows, avoiding all trees is not possible. The project also acquired the development with an approved layout/development footprint and associated constraints. The project has maintained a similar design to Revision E in order to retain the highest number of trees possible, however the inclusion of the transmission line study area and the additional trees not previously recorded within the solar farm study area has resulted in the loss of four additional trees.

The revision history of the project is presented in Table 11 to demonstrate how the project has avoided and minimised native vegetation loss over the life of the project.

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**DRAFT****Table 11 Design iterations and associated native vegetation losses**

Design iteration	Extent of proposed vegetation removal (ha)	Number of Large Trees in Patches and large Scattered Trees (proposed to be removed)	Number of small Scattered Trees proposed to be removed
Option 1 (19/06/2019)	10.268 ha	81	0
Option 2 (15/07/2019)	2.877 ha	42	0
Option 3 (13/08/2019)	2.838 ha	42	1
Option 4 (23/08/2019)	3.119 ha	45	1
Option 5 (03/09/2019)	2.838 ha	41	1
Option 6 (13/12/2019)	1.125 ha	16	0
Option 7 (current option)	1.396	20	0

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**DRAFT****ADVERTISED PLAN****5.0 Legislation and policy implications****5.1 Commonwealth****5.1.1 *Environment Protection and Biodiversity Conservation Act 1999***

One of the main aims of the EPBC Act is to provide for the conservation of biodiversity and the protection of the environment, particularly those aspects that are considered to be MNES. The EPBC Act defines nine MNES as follows:

World heritage properties

National heritage places

Wetlands of international importance (listed under the Ramsar Convention)

Listed threatened species and ecological communities

Migratory species protected under international agreements (JAMBA, CAMBA, ROKAMBA)

Commonwealth marine environment

Great Barrier Reef Marine Park

Nuclear actions (including uranium mines)

A water resource, in relation to coal seam gas development and large coal mining development.

Under the EPBC Act, actions<sup>1</sup> that are likely<sup>2</sup> to have a significant impact upon MNES are required to be referred to the Environment Minister for approval.

Of these MNES, listed threatened species are potentially relevant to this project. Under the EPBC Act, actions that are likely to have a significant impact upon MNES are required to be referred to the Commonwealth Environment Minister for approval.

Species identified by the PMST that are not considered relevant to this study (e.g. marine species records returned for land-based enquiries) have been omitted from further discussion.

**Implications:**

MNES of relevance to the project are wetlands of international importance, listed threatened species and ecological communities and migratory species.

Wetlands of international importance are located more than 50 km from the study area and are unlikely to be impacted, particularly if impacts to waterways within the study area are avoided.

No listed Threatened Ecological Communities or threatened flora species are likely to occur in the study area

Threatened fauna species which have some potential to occur in the study area are unlikely to be significantly impacted by the project, particularly if loss of large scattered trees, Large Trees in Patches and those trees supporting fauna habitat are minimised.

*Drafting note [consideration of impacts to Striped Legless Lizard to be updated]*

**5.1.2 Weeds of National Significance**

Currently there are 32 species classified as Weeds of National Significance (WoNS). These have been agreed by Australian governments based on an assessment process that prioritised these weeds based on their invasiveness, potential for spread, and environmental, social, and economic impacts. Consideration was also given to their ability to be successfully managed.

Under the CaLP Act certain plants are declared as noxious weeds in Victoria. These plants cause environmental or economic harm, or have the potential to cause such harm, and in some cases can

<sup>1</sup> Under the EPBC Act an 'action' includes any project, development, undertaking, activity or series of activities.

<sup>2</sup> Under the EPBC Act 'likely' refers to when the potential for a significant impact on the environment to be real or not a remote chance or possibility.

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also present risks to human health (DEDJTR 2016). The CaLP Act defines four categories of noxious weeds in Victoria. These include; State Prohibited Weeds (listed under Schedule 1), Regionally Prohibited Weeds (listed under Schedule 2); Regionally Controlled Weeds (listed under Schedule 2); Restricted Weeds (listed under Schedule 2). Other than State Prohibited weeds, the level of noxious weed declaration varies according to the Catchment Management Authority (CMA).

## Implications

Two high threat environmental weeds were observed within the study area, Sweet Briar *Rosa rubiginosa* and Bathurst Burr *Xanthium spinosum*. These species are listed as a Regionally Controlled within the Goulburn Broken CMA region.

No WoNS were recorded within the study area.

## 5.2 Victorian

### 5.2.1 Planning and Environment Act 1987

The *Planning and Environment Act 1987* (P and E Act) establishes the framework for the use, development and protection of land in Victoria. The P and E Act provides for the preparation of standard provisions for planning schemes which are administered by local government.

All Victorian planning schemes contain standard provisions requiring a permit to remove, destroy or lop native vegetation (collectively referred to as 'remove native vegetation') unless an exemption to Clause 52.16 or Clause 52.17 applies (DELWP, 2017b). These regulations are known as the 'native vegetation removal regulations'.

#### 5.2.1.1 Native vegetation removal regulations

Clause 52.17 of the relevant council planning scheme enacts the *Guidelines for the removal, destruction or lopping of native vegetation* (DELWP, 2017a). The Guidelines provide instructions on how an application for a permit to remove native vegetation is to be assessed under the P and E Act. This includes requirements to undertake a site assessment, the assessment method, and specific conditions that may form part of a granted permit, such as offsetting.

In addition to the above, under the Guidelines, if native vegetation has been planted or grown with public funding for the primary purposes of enhancing biodiversity or protection of land the funding agency or its successor must provide written agreement to remove the native vegetation.

## Approval pathways

Under the Guidelines, there are three pathways under which an application to remove native vegetation can be assessed as - Basic, Intermediate or Detailed assessment pathways. The assessment pathway determines the types of offsets that are required to be implemented for the removals. This is determined via an assessment of location, whether any large trees are to be removed and the extent risk to biodiversity by a particular project:

- Location risk is determined by assessing the likelihood that the removal of a small amount of native vegetation may impact the persistence of a rare or threatened species. Location risk has been determined for all of Victoria with areas being categorised as Location 1, Location 2 or Location 3. The location risk of a particular site is determined using the native vegetation location risk map available from the NVIM tool found on the DELWP website.
- Extent risk is determined by the extent of the native vegetation including the presence or absence of large trees that is proposed to be removed.

Together, these two types of risk are used to determine the assessment pathway for a permit application to remove native vegetation (DELWP, 2017a).

Table 12 presents the risk-based pathways for patches of native vegetation and scattered trees.

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**DRAFT****ADVERTISED PLAN****Table 12 Native vegetation patch risk-based pathways**

Extent	Location		
	Location 1	Location 2	Location 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

The assessment based pathway determines the process to be followed when applying to remove native vegetation:

- Basic or Intermediate assessment pathway: A habitat hectare assessment is not required and modelled site condition scores can be used to assess basic and intermediate pathway applications. However, if a habitat hectare assessment report is available, then this can be used in place of modelled data for determining general offset requirements if a permit is granted.
- Detailed assessment pathway applications: A habitat-hectare assessment report must be included and accompanied by a statement outlining the steps that have been taken to ensure that impacts on biodiversity from the removal of native vegetation has been minimised. Offsets required for detailed assessment pathway applications may trigger a *species offset requirement* (if the native vegetation is habitat for rare or threatened taxa).

**Implications:**

Clause 52.17 of the relevant council planning scheme enacts the Guidelines (DELWP, 2017). Any removal of native vegetation associated with the project is required to satisfy Clause 52.17 by submitting an application to the relevant planning authority for a permit to remove native vegetation (Appendix J).

The study area contains location categories 1 and 2, and greater than 0.5 hectares of native vegetation, therefore the application to remove native vegetation was assessed under the *detailed* pathway of assessment.

- Design concept revision 15 will result in the removal of up to 3.369 of native vegetation (including native vegetation patches and scattered trees). An application to remove this native vegetation will be required. Information to address the requirements of an application to remove native vegetation is provided in Appendix J. This includes a Native Vegetation Removal Report (NVR) obtained from DEECA following the submission of spatial data identifying native vegetation proposed to be removed. The NVR report will state the biodiversity offset requirements and standards.
- An avoid and minimise statement that clearly demonstrates why native vegetation must be removed, and that all options to retain native vegetation including Scattered Trees have been considered.
- An offset statement that provides evidence that the offsets for the project are available and can be secured

The NVR report provided in Appendix I states that an offset requirement of 0.640 General Habitat Units and 20 Large Trees will be required within the Goulburn Broken CMA region or Benalla Rural City Council. A summary of the offset requirements is presented in Table 13.

**Table 13 Offset requirements (Drafting note: table to be updated)**



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Unit type	Offset amount	Minimum Strategic Biodiversity Score	Large trees	Credit location
General Habitat Unit	0.640	0.218	20	Goulburn Broken Catchment Management Authority (CMA) or Benalla Rura City Council

**5.2.1.2 Planning Overlays**

Planning overlays are part of municipal planning schemes and are applied to areas of land to control development. Overlays may be applied to protect areas from adverse impacts or to allow easy identification of constraints in developments on that area. One or more overlays may be applied to an area. For example, Vegetation Protection Overlays (VPOs) are applied to areas where vegetation of significance exists. Most overlays also have schedules which specify municipal objectives and requirements.

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For the purpose of this report, consideration of planning overlays is limited to those of particular relevance to environmental and landscape values, which include:

- Environmental Significance Overlays (ESOs). The broad intent of an ESO is to identify areas where the development of land may be affected by environmental constraints, and to ensure that if development does happen, it is compatible with the values that are highlighted in any schedule to the identified ESO;
- Vegetation Protection Overlays (VPOs). A VPO is specific to the removal of vegetation that has been deemed to be significant, and protects this vegetation against inappropriate development; and
- Significant Landscape Overlay (SLOs). A SLO identifies significant landscapes and conserves and enhances the character of significant landscapes.

A schedule to these overlays contains a statement of the significance of the environmental, vegetation or landscape value that is protected by the overlay, and the objective to be achieved. Approval is typically required to remove native vegetation within an ESO, VPO or SLO, and the application for an approval for vegetation removal must show that the proponent has been cognisant of the intent of each overlay.

**Implications:**

The study area is located within the Farming Zone under the Benalla Planning Scheme.

No planning overlays relevant to environmental and landscape values are located within the study area.

**5.2.2 Flora and Fauna Guarantee Act 1988**

The *Victorian Flora and Fauna Guarantee Act 1988* (FFG Act) was established to provide a legal framework for enabling and promoting the conservation of all Victoria's native flora and fauna, and to enable management of potentially threatening processes. One of the main features of the Act is the listing process, whereby native species and communities of flora and fauna, and the processes that threaten native flora and fauna, are listed in the schedules of the Act. This assists in identifying those species and communities that require management to survive and identifies the processes that require management to minimise the threat to native flora and fauna species and communities within Victoria.

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A permit from DELWP is required to 'take' listed flora species that are members of listed communities or 'Protected' flora from public land. A permit is not required under the FFG Act for private land, unless listed species are present and the land is declared 'critical habitat' for the species. No critical habitat has been identified in Victoria to date. A permit under the FFG Act is also required for activities relating to protected fish.

### Implications:

No FFG Act listed flora species were recorded during the field assessment.

A single FFG Act listed ecological community was recorded in the study area - the Victorian Temperate Woodland Bird Community. This community has been defined as a suite of bird species primarily associated with drier woodlands north of the Great Dividing Range. Many of the species have been recorded in the vicinity of the study area on the VBA. All patches of woodland are considered synonymous with habitat for the FFG Act listed Victorian Temperate Woodland Bird Community and are shown in (Figure 3). No specific approvals are required under the FFG Act in relation to this community, but consideration should be given to avoiding and minimising loss of habitat during the design phase.

The presence of hollow-bearing trees within the study area means the project has the potential to exacerbate a potentially threatening process listed under the FFG Act. This process - *loss of hollow-bearing trees from Victorian native forests and woodlands* – identifies the loss of scattered live or dead hollow-bearing trees on farms as one of the factors influencing the loss of hollow-bearing trees in Victoria (DSE 2003). An Action Statement has been prepared which set out the actions to conserve and manage hollow-bearing trees (DSE 2003). The objectives include significantly reducing the loss of hollow-bearing trees from private land. No specific approvals are required under the FFG Act but consideration should be given to avoiding and minimising loss of hollow-bearing trees during the design phase which is consistent with the requirements under the P&E Act in relation to loss of native vegetation. The avoid and minimisation statement provided in Appendix J demonstrates the project commitments to reducing the removal of native vegetation and hollow-bearing trees.

A permit from DEECA is required to 'take' listed flora species that are members of listed communities or protected flora from public land. A permit is not required under the FFG Act for private land, unless listed species are present and the land is declared 'critical habitat' for the species. No critical habitat has been identified in Victoria to date.

### 5.2.3 Environment Effects Act 1978

Under Victoria's *Environmental Effects Act 1978* (EE Act), projects that could have a 'significant effect' on Victoria's environment can require an Environmental Effect Statement (EES). This Act applies to any public works 'reasonably considered to have or be capable of having a significant effect on the environment'.

The EES referral criteria for impacts to ecological values are listed in Table 14 were considered as part of this assessment. If either any single mandatory referral criterion, or combination of two or more referral criteria are met, then the proponent is required to submit a referral to the Minister for Planning who will then determine whether or not an EES is required.

### Implications:

The potential ecological impacts of the project have been considered against the relevant EES referral criteria (refer to Table 14). A referral is unlikely to be required as the project does not propose to clear >10 ha of an endangered EVC within the Victorian Riverina Bioregion, nor is it likely to result in the long-term loss of a significant portion of a species population.

**Table 14 EES referral criteria for ecological matters considered in this assessment**

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Criteria type	Criteria	Criteria met
Individual mandatory referral criteria for ecological matters	Potential clearing of 10 ha or more of native vegetation from an area that: <ul style="list-style-type: none"> <li>Is of an Ecological Vegetation Class identified as endangered by the Department of Environment, Land, Water and Planning (now DEECA), or Is, or is likely to be, of very high conservation significance (as defined in accordance with Appendix 3 of Victoria's Native Vegetation Management Framework)</li> </ul>	No – design revision 14 proposes to clear up to 2 hectares of EVC 55_62 (Riverina Plains Grassy Woodland) and EVC 125 (Plains Grassy Wetland) listed as endangered within the Victorian Riverina Bioregion.  Vegetation clearance proposed for the project does not meet the 10 ha threshold.
	Potential long-term loss of a significant proportion (e.g. 1 to 5 percent depending on the conservation status of the species) or known remaining habitat or population of a threatened species within Victoria	No – the project is not considered to result in the long-term loss of a significant portion of a species population
	Potential long-term change to the ecological character of a wetland listed under the Ramsar Convention or in 'A Directory of Important Wetlands in Australia'	Not applicable

**5.2.4 Catchment and Land Protection Act 1994**

The *Catchment and Land Protection Act 1994* (CaLP Act) establishes a framework for management and protection of catchments through the management of land and water resources. The CaLP Act is the principal legislation relating to the management of pest plants and animals in Victoria.

Under the CaLP Act, landowners have a number of responsibilities including:

- Avoiding causing or contributing to land degradation
- Taking all reasonable steps to conserve soil
- Protecting water resources
- Eradicating regionally prohibited weeds
- Preventing the growth and spread of regionally controlled weeds
- Where possible eradicating established pest animals declared under the CaLP Act.

Invasive species can cause environmental and economic harm, or are considered to have the potential to cause such harm. They can also present risks to human health. Weed categories are described in Table 15. Other than State Prohibited weeds, the level of noxious weed declaration varies according to the respective CMA.

**Table 15 Noxious weed classification under the CaLO Act (DEDJTR, 2016)**

Noxious weed category	Definition	Requirement under the CaLP Act
State Prohibited Weeds (listed under Schedule 1)	State prohibited weeds are the highest category of declared noxious weeds in Victoria. By definition they are either not yet in Victoria, or are here in small	The Victorian Government (DEDJTR) is responsible for their eradication, but under Section 70(1) of the CaLP Act, it may direct land owners to

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Noxious weed category	Definition	Requirement under the CaLP Act
	numbers, where their eradication is still possible. The Department of Economic Development, Jobs, Transport and Resources (DEDJTR) aims to prevent the introduction of State prohibited weeds into Victoria, and to detect and eradicate any infestations before they become widespread.	prevent their growth and spread. It is an offence to buy, sell, display or transport a State prohibited weed within Victoria.
Regionally Prohibited Weeds (listed under Schedule 2)	Regionally prohibited weeds are not widely distributed in a region but are capable of spreading further. It is reasonable to expect that they can be eradicated from a region and they must be managed with that goal.	Land owners, including public authorities responsible for crown land management, must take all reasonable steps to eradicate regionally prohibited weeds on their land.
Regionally Controlled Weeds (listed under Schedule 2)	These invasive plants are usually widespread in a region. To prevent their spread, ongoing control measures are required.	Land owners have the responsibility to take all reasonable steps to prevent the growth and spread of Regionally controlled weeds on their land.
Restricted Weeds (listed under Schedule 2)	This category includes plants that pose an unacceptable risk of spreading in this State and are a serious threat to another State or Territory of Australia.	Trade in these weeds and their propagules, either as plants, seeds or contaminants in other materials is prohibited.

**Implications:**

Two high threat environmental weeds were observed within the study area (Sweet Briar and Bathurst Burr) which are listed as Regionally Controlled within the Goulburn – Broken CMA region. Measures should be put in place during and post construction of this development to prevent further spread and growth of this weed.

**5.2.5 Wildlife Act 1975**

The *Wildlife Act 1975* (Wildlife Act) forms the procedural, administrative and operational basis for the protection and conservation of native wildlife within Victoria. The purposes of the Act are to establish procedures in order to promote:

- the protection and conservation of wildlife
- the prevention of taxa of wildlife from becoming extinct
- the sustainable use of and access to wildlife

Under the Wildlife Act, it is an offence to wilfully damage, disturb or destroy wildlife habitat, disturb protected wildlife or take or destroy threatened or protected wildlife (including listed fish) without authorisation. However, under the Wildlife Regulations 2013 (Regulation 42(2)a) a person does not commit an offence if the person is authorised to damage, disturb or destroy wildlife habitat under any other Act. This includes holding a planning permit to remove, destroy or lop native vegetation. With the exception of pest animals declared under the CaLP Act or wildlife declared to be unprotected

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wildlife, all fauna species native to Victoria are listed as protected under the Wildlife Act. Threatened wildlife means protected wildlife that are listed under the FFG Act.

Translocation of wildlife requires approval under the Wildlife Act. Salvage and translocation of non-threatened native wildlife from an area to be disturbed to an area reserved or protected from future development is generally not supported by DEECA for wildlife welfare reasons (DELWP, 2020).

Translocation of threatened species requires authorisation. Applicants must apply for a scientific permit under the Wildlife Act which will not be issued unless a Translocation Plan is approved by the Threatened Fauna Translocation Evaluation Panel (TEP).

### Implications:

As all native species are protected under the Wildlife Act, any potential impacts should be discussed with DEECA to ascertain their expectations in relation to the Wildlife Act.

Although translocation of non-threatened and threatened wildlife is generally not supported by DEECA, salvage and relocation of individuals from the construction area to adjacent habitat may be permitted. If so, then a suitably qualified wildlife handler holding a relevant and current management authorisation under the Wildlife Act would need to be engaged prior to construction to salvage any wildlife encountered during the construction program.

Provided the project secures a planning permit to remove, destroy or lop native vegetation, approval to wilfully damage, disturb or destroy wildlife habitat or protected wildlife under the Wildlife Act is adequately addressed.

### 5.2.6 Other standards and guidelines

#### 5.2.6.1 DELWP Victorian Advisory Lists

The presence, or likely presence, of a species listed on the DELWP Victorian Advisory Lists (superseded by the FFG Act Threatened List) is used to determine whether species-specific habitat is required to be offset, rather than statutory lists of species for which conservation management is recommended. As such, any advisory listed species will be offset following the process described in Section 5.2.1.

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# DRAFT

## ADVERTISED PLAN

### 6.0 Summary

#### 6.1 Summary of values and impacts on flora, fauna and ecological communities

The flora and fauna assessment identified key ecological features within the study area and provides information required to inform the planning and environmental approvals process. The assessment involved both desktop and field assessments and included consideration of the presence of EPBC and FFG Act-listed species and threatened ecological communities.

Ecological values identified within the study area include:

- 26 'Habitat Zones' of EVC 55\_62 Plains Grassy Woodland and two 'Habitat Zones' of EVC 125 Plains Grassy Wetland were recorded within the study area and are endangered in the Victorian Riverina bioregion. The extent of the Habitat Zones equates 11.25 ha containing 6.3 habitat hectares.
- 152 large trees were recorded within patches and included the species White Box, Grey Box, River Red Gum and stags.
- 117 scattered trees of White Box, Grey Box, Yellow Box, Red Box, River Red-gum and stags were recorded including 113 large and four small trees.
- An FFG Act listed ecological community was considered present - Victorian Temperate Woodland Bird Community on the basis of the presence of 26 patches of woodland EVCs which are considered synonymous with the Victorian Temperate Woodland Bird Community.
- Several EPBC Act listed fauna species have the potential to occur within the study area. This includes five threatened species, two migratory species and three marine species. Marginal suitable habitat is present for these species however the study area is unlikely to provide foraging or breeding habitat, or represent significant habitat for any of these species.
- Hollow-bearing trees are present within the project area. Loss of hollow-bearing trees may be required to implement the project. Such loss may exacerbate the potentially threatening process 'loss of hollow-bearing trees from Victorian native forests and woodlands' listed under the FFG Act.
- Design revision 15 of the Kennedys Creek Solar Farm has avoided and minimised loss of native vegetation where possible and will result in the loss of 19 large scattered trees. All recorded habitat zones will be retained. Within the transmission line investigation area one large scattered tree and 1.963 ha of native vegetation (Riverina Plains Grassy Woodland and Plains Grassy Wetland) will possibly be lost.

#### 6.2 Summary of legislation and permit and approval requirements

The points below highlight legislative implications of the project.

##### Commonwealth

- *Environment Protection and Biodiversity Conservation Act 1999*

No listed Threatened Ecological Communities were recorded in the study area

Threatened fauna species which have some potential to occur in the study area are unlikely to be significantly impacted by the project, particularly if loss of large scattered trees are minimised.

Drafting note: implications for Striped Legless Lizard to be updated following finalisation of the Striped Legless Lizard memo.

##### Victorian

- *Planning and Environment Act 1987*

No planning overlays relevant to environmental and landscape values are located within the study area.



## DRAFT

A planning permit from the relevant authority to remove native vegetation will be required. A planning submission seeking a permit to remove native vegetation will need to be accompanied by the information provided in Appendix H which includes the following;

- a Native Vegetation Removal (NVR) report which can be gained from DEECA following the submission of spatial data identifying vegetation proposed to be removed (spatial data is to be formatted to DEECA data standards). The NVR report will state the biodiversity offset requirements and standards;
- an avoid and minimise statement that clearly demonstrates why vegetation must be removed, and that all options to retain vegetation including scattered trees have been explored and exhausted;
- an offset statement that provides evidence that the offsets for the project are available and can be secured;

Prior to project commencement, the proponent will then need to supply DEECA with a credit extract identifying that biodiversity offsets have been achieved and secured.

- *Flora and Fauna Guarantee Act 1988*

No FFG Act listed flora species were recorded during the field assessment.

A single FFG Act listed ecological community was recorded in the study area - the Victorian Temperate Woodland Bird Community. No specific approvals are required under the FFG Act in relation to this community, but consideration should be given to avoiding and minimising loss of habitat during the design phase.

The presence of hollow-bearing trees within the study area means the project has the potential to exacerbate a potentially threatening process listed under the FFG Act. The avoid and minimisation statement provided in Appendix J demonstrates the project commitments to reducing the removal of native vegetation and hollow-bearing trees.

- *Environment Effects Act 1978*

The potential ecological impacts of the project have been considered against the relevant EES referral criteria (refer to Table 14). A referral is unlikely to be required as the project does not exceed the 10 ha threshold for impacts to an endangered EVC, nor is it likely to result in the long-term loss of a significant portion of a species population. Ramsar wetlands are not relevant to the project.

- *Catchment and Land Protection Act 1994*

Two high threat environmental weeds were observed within the study area (Sweet Briar and Bathurst Burr) which are listed as Regionally Controlled within the Goulburn – Broken CMA region. Measures should be put in place during and post construction of this development to prevent further spread and growth of this weed.

- *Wildlife Act 1975*

The field assessments have identified large trees with hollow features. Where possible, these habitat values should be avoided during design of the final construction footprint.

As all native species are protected under the Wildlife Act, any potential impacts should be discussed with DEECA to ascertain their expectations in relation to activities requiring authorisation under the Wildlife Act.

Provided the project secures a planning permit to remove, destroy or lop native vegetation, approval to wilfully damage, disturb or destroy wildlife habitat or protected wildlife under the Wildlife Act is adequately addressed.

## ADVERTISED PLAN

# DRAFT

## 7.0 Recommendations

The following recommendations are made and should be considered through the entire life cycle of the project:

### Project construction:

- Liaise with DEECA to ascertain their expectations in relation to activities requiring authorisation under the Wildlife Act.
- Implement appropriate mitigation measures prior to construction to avoid adverse consequential impact to retained scattered trees and vegetation patches. This may include preparing a Tree Management Plan which identifies measures to be taken to avoid impacts to retained scattered trees or trees in patches.
- Implement appropriate measures to avoid the spread of high threat environmental weeds including those identified in this report. Measures can be captured in an Environmental Management Plan.
- Implement measures to reduce impacts on wildlife during construction. These measures should be outlined in a Wildlife Management Plan and should consider:
  - Design of fencing to allow for the safe passage of wildlife through the landscape. For example:
    - fence construction should not use barbed wire to reduce the risk of injury or entanglement and should prevent populations of wildlife from becoming trapped within the solar farm area.
  - Potential for collisions if birds and bats mistake photovoltaic solar farms for water or are attracted to the site by insect species that are attracted to the panels.
  - How wildlife will affect the infrastructure and operation of the site e.g. 'white' cockatoos (long- and short-billed corellas, sulphur-crested cockatoos and galahs) are well documented for their behaviour in damaging infrastructure, particularly rubber seals, timber structures and cables, as well as flocking and roosting in large numbers. The plan should focus on design and operational strategies to minimise reliance on lethal control methods via Authority to Control Wildlife sought under the Wildlife Act 1975. Consider mitigation such as the armouring of cables, covering and protection of rubber seals), and monitoring the impacts to enable adaptive management offsite.
  - Species-specific management controls for any threatened species present or located during works developed in consultation with DEECA.

## ADVERTISED PLAN

**DRAFT****ADVERTISED PLAN****8.0 References**

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## ADVERTISED PLAN

DRAFT

# Appendix A

ADVERTISED PLAN

Figures

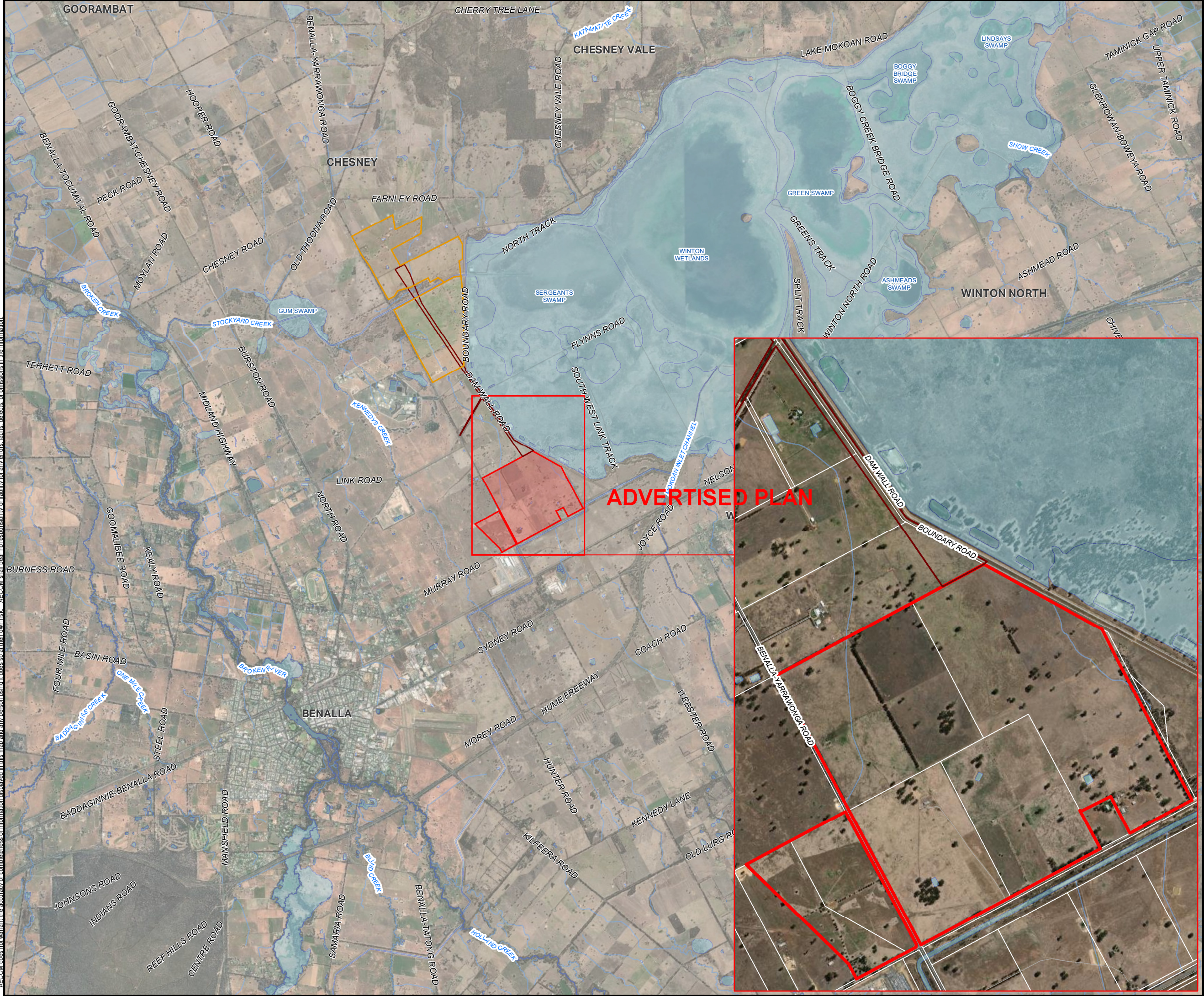
# DRAFT

## Appendix A Figures

- Figure 1 Site location, Kennedys Creek Solar Farm
- Figure 2 VBA flora and fauna records within 10 km of the study area
- Figure 3 Mapped ecological values within the study area – Habitat Zones
- Figure 4 Mapped ecological values within the study area – Trees
- Figure 5 Revision 15 Concept Plan
- Figure 6 Flora and fauna assessment results – Impacted native vegetation
- Figure 7 Strategic Biodiversity Value
- Figure 8 Tree Proximity Analysis
- Figure 9 Tree Habitat Value

**ADVERTISED PLAN**





PROJECT ID60597829

CREATED BYMcMahonJ5

LAST MODIFIEDMcMahonJ5 06 FEB 2023

N

Coordinate System: GDA 1994 MGA Zone 55

07501,5003,000

metres

1:75,000 (when printed at A3)

LEGEND

Kennedys Creek Site

West Mokoan Site

Transmission Line Investigation Area

Roadways

Watercourses

Waterbodies

Albury

Melbourne

Geelong

Site

Alpine National Park

Site Location

Lightsource bp

Solar Farm Planning Application

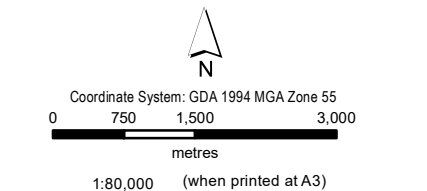
Kennedys Creek

Figure

F1

Map Document: (\\na.aecomnet.com\\lfs\\APAC\\Melbourne-AUMEL\\Legacy\\Projects\\605X\\60585632\\4\_Tech Work Area\\4.99\_GIS\\02\_Maps\\2023\\01\\KennedysCrk\\F1\_Site\_Location\_Kennedy\_Creek.mxd)





- LEGEND
- Kennedys Creek Site Boundary

Transmission Line Investigation Area

10km VBA search area

Threatened Fauna Records

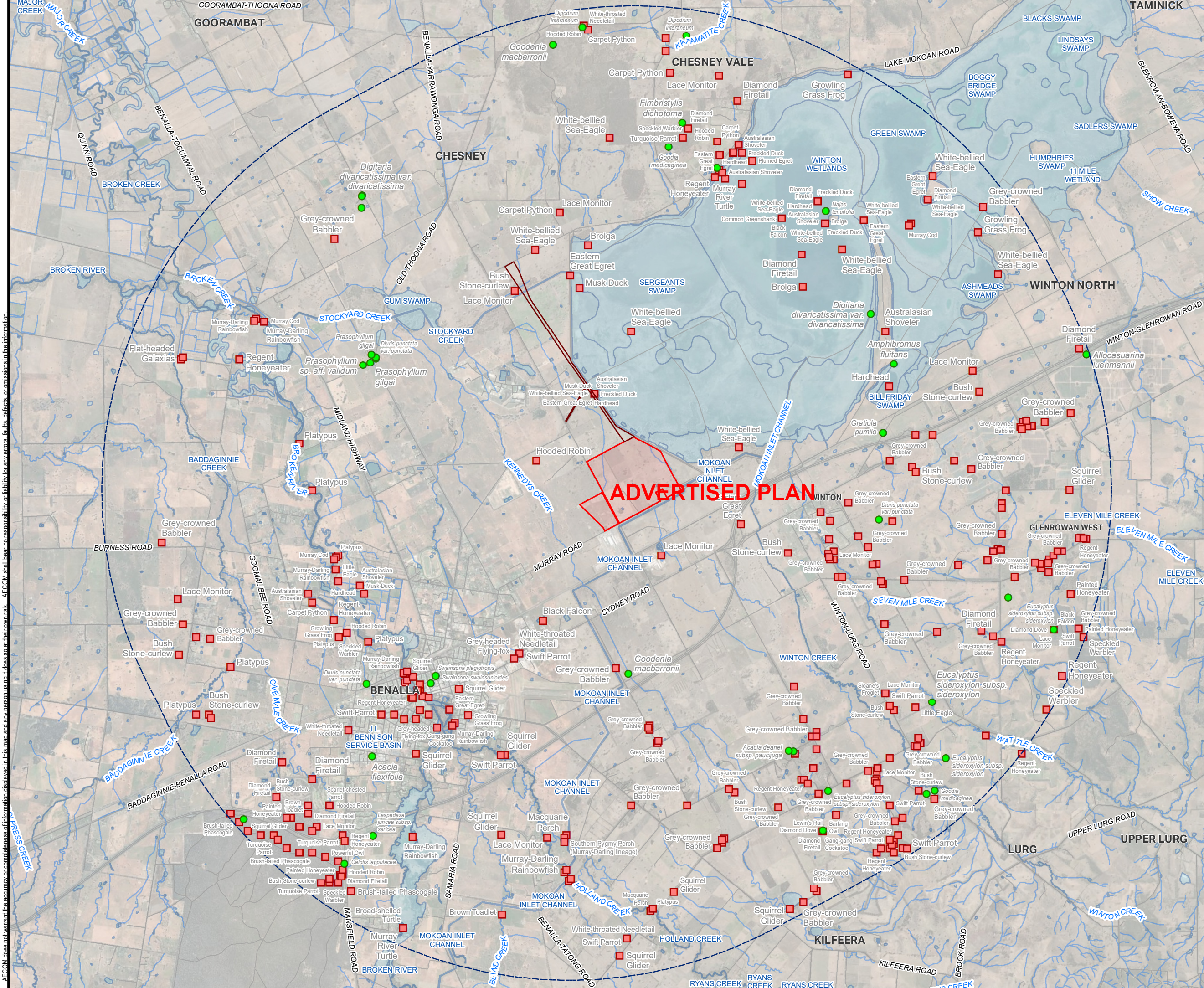
Threatened Flora Records

Roadways

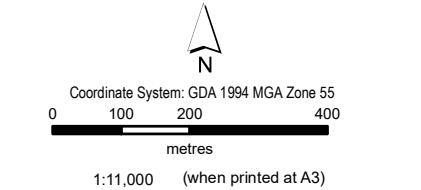
Watercourses

Waterbodies

VBA Threatened Flora and Fauna Records







LEGEND

Kennedys Creek Site Boundary

Transmission Line Investigation Area

Roadways

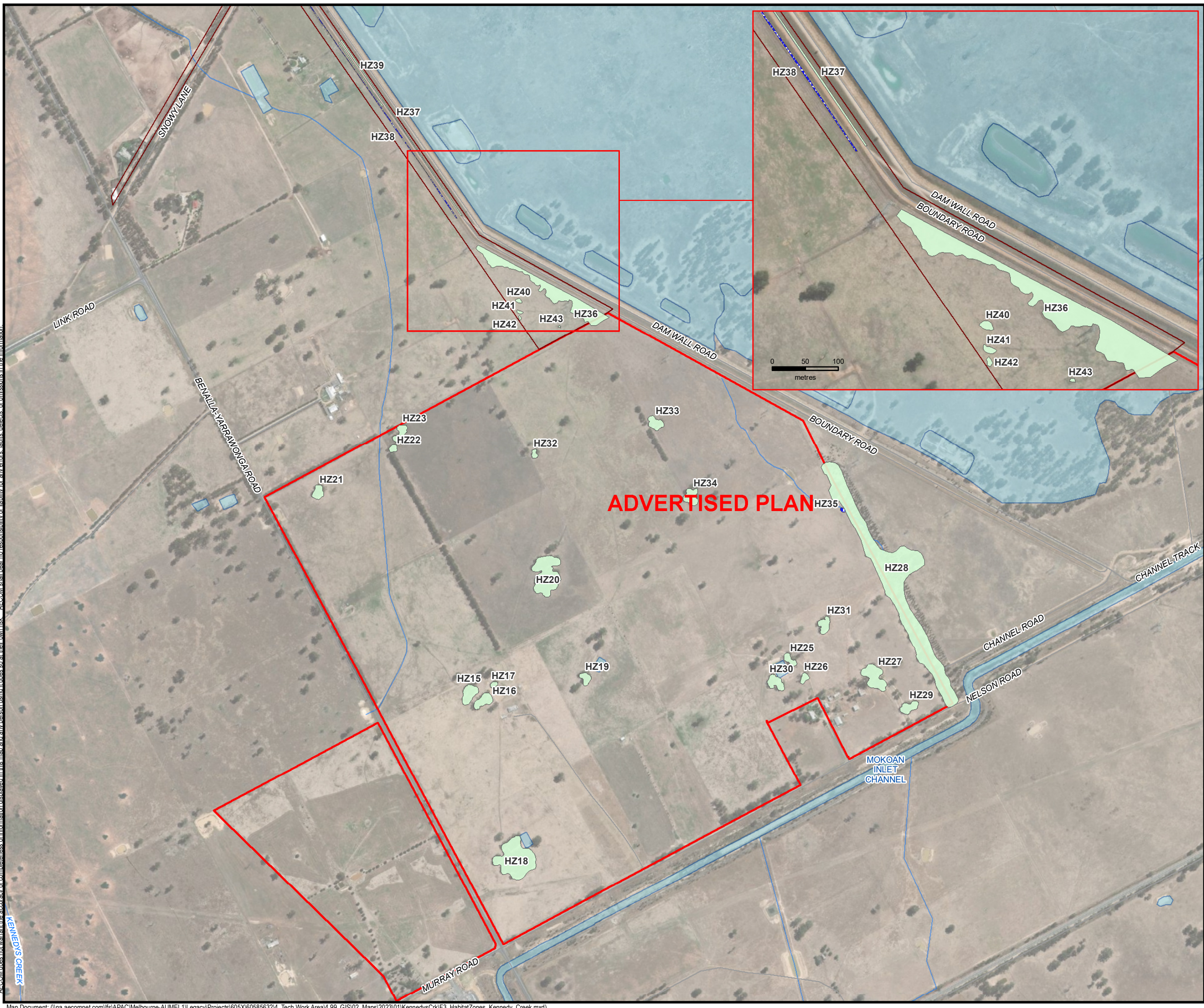
Watercourses

Waterbodies

Habitat Zone / Ecological Vegetation Class

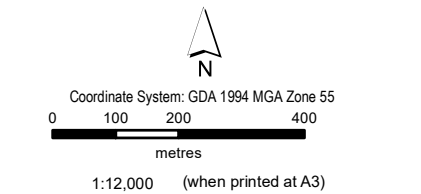
125 Plains Grassy Wetland

55\_62 Riverina Plains Grassy Woodland



Mapped ecological values within the study area – Habitat Zones





- LEGEND**
- Kennedys Creek Site Boundary

Transmission Line Investigation Area

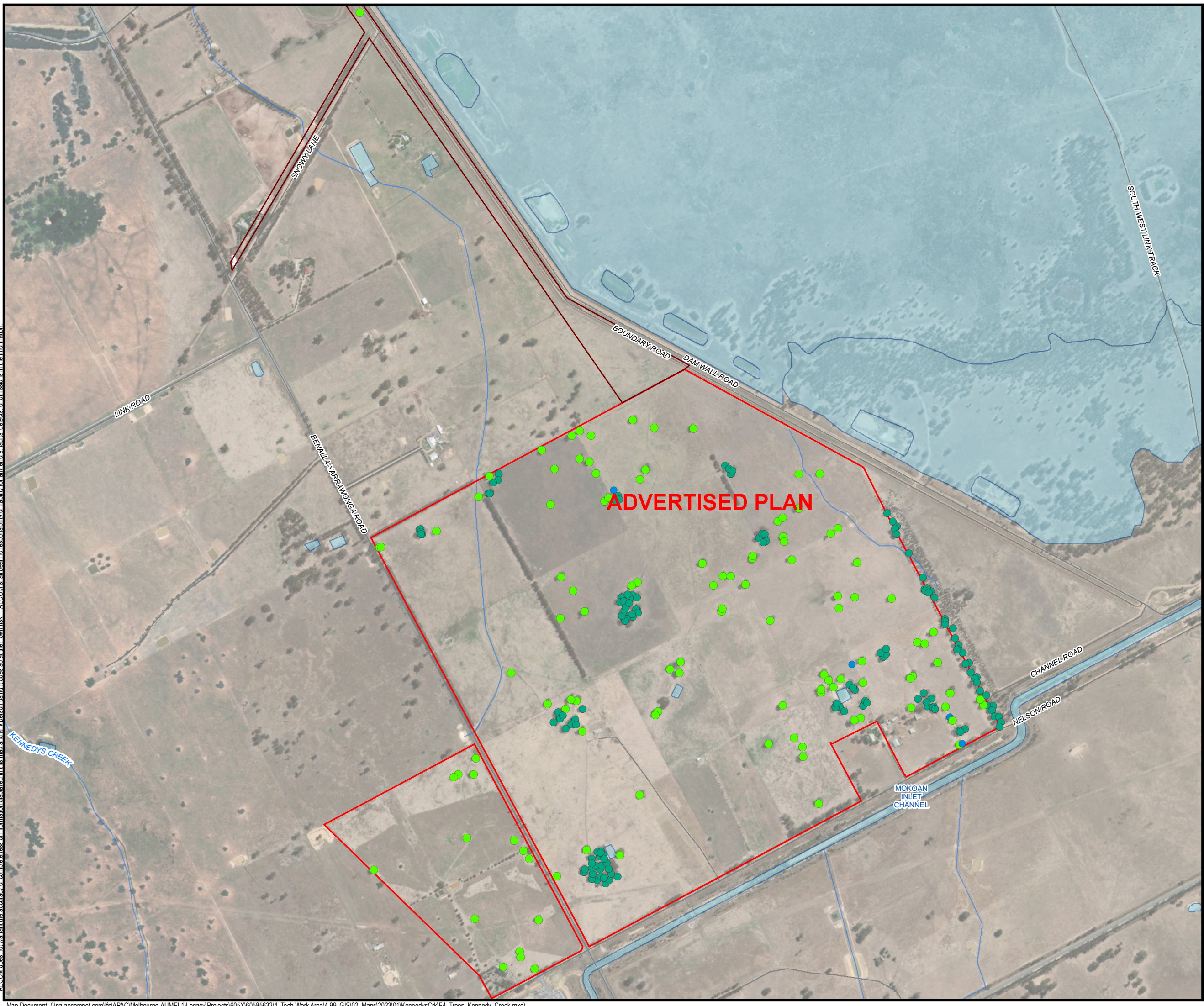
Watercourses

Waterbodies

Large Scattered Tree

Large Tree in Patch

Small Scattered Tree



Mapped ecological values within the study area – Trees



ADVERTISED PLAN

	Site Boundary
	Site Entrance
	Danger signage
	Security Fence
	Single Axis Tracker 84
	Single Axis Tracker 56
	PCUs (2 inverters)
	4m solar farm access road with 20m long & 6m wide passing bays every 600 m
	Proposed 10 m wide planting zone
	Proposed 5 m wide planting zone
	Infill planting to existing boundary vegetation
	Existing Environmental Values to be retained
	Existing Overhead line Easement
	Existing Overhead line Easement to be removed
	Proposed Easement Realignment
	Gas Pipeline
	Watercourse
	Water Supply Pipeline
	Underground telecommunication cable
	Fire Break
	Trees to be retained
	Trees to be removed
	Existing Transmission Line Easement
	45,000l Water tanks
	Area of cultural heritage sensitivity
	220kV Transmission line investigation area

PV SYSTEM SPECIFICATIONS	
Capacity - DC	159.12 MW <sub>p</sub>
Capacity - AC	125.00 MW <sub>AC</sub>
DC/AC Ratio	1.27
Modules	(279160) 570 W Bifacial
Mods. per string	28
Pitch	5.0 m
GCR	45.50 %
Mounting structure	(3584) Single Axis Trackers
• Full	2802
• Partial	782
• Half	
Inverters	(48) Central Inverter 3430KVA
• Nominal Power	3575 kVA
Access roads	14846 m
Fenced area	(2504355 m <sup>2</sup> ) 618.840 Acres
• Perimeter	8769 m

Revisions:			
13	30.09.22	Layout update	AG
12	14.09.22	Layout update	AGV
11	30.08.22	Module and Substation location update	AGV
10	04.02.22	Updated trees to be retained	AG
09	28.01.22	Legend update	AG
08	18.01.22	Substation, presentation and table update	MG
15	23.02.23	Planning updates	AG GK
14	19.01.23	Legend updated	AG
Rev	Date	Comments	Dwn Chkd

AGV	CHECKED	APPROVED	30.09.2022
DRAWN	CHECKED	APPROVED	DATE

PROJECT NAME & ADDRESS:  
Location: Benalla, Victoria  
Australia

NOTES:  
- Inverter / Plant Capacity (MVA/MWac): 1.32  
- Mod. dimensions (mm): 2279 x 1134  
- DC System Voltage (V): 1500  
- Azimuth: 0°

Paper Size:	Scale:	Sheet:
A3	1:10000	1

CAPACITY:  
279160 Modules 159.12 MWp

DRAWING TITLE:  
AUS\_Kennedys\_LP1-Initial Design Layout\_15

DRAWING NUMBER:  
LP1-IDL

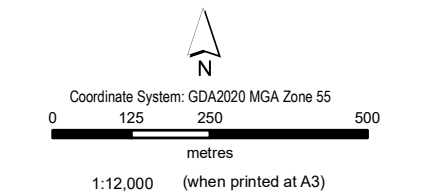
STATUS:  
Preliminary

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- LEGEND
- Kennedys Creek Site Boundary

Transmission Line Investigation Area

Transmission Line Investigation Area Buffer (15m)

Design Layout

Contours (10m)

Roadways

Watercourses

Waterbodies
- Habitat Zone / Ecological Vegetation Class
- 125 Plains Grassy Wetland

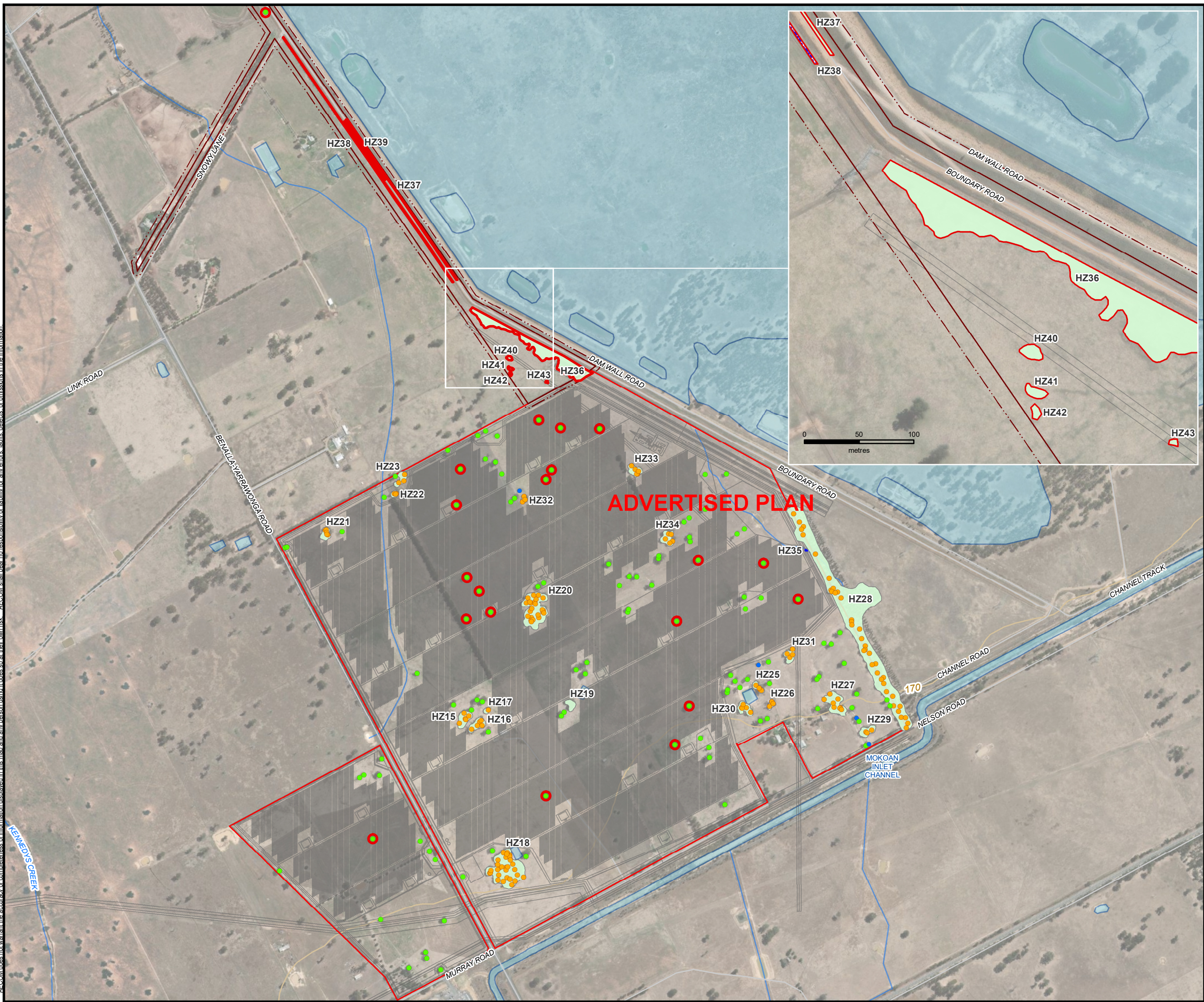
55\_62 Riverina Plains Grassy Woodland

Large Scattered Tree

Large Tree in Patch

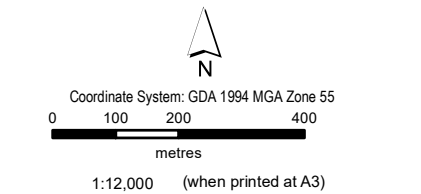
Small Scattered Tree

Impacted Vegetation



Impacted Ecological values within the study area





**LEGEND**

Kennedys Creek Site Boundary

Transmission Line Investigation Area

Contours (10m)

Roadways

Watercourses

Waterbodies

Large Scattered Tree

Large Tree in Patch

Small Scattered Tree

**Habitat Zone / Ecological Vegetation Class**

125 Plains Grassy Wetland

55\_62 Riverina Plains Grassy Woodland

Impacted Vegetation

**Strategic Biodiversity Values**

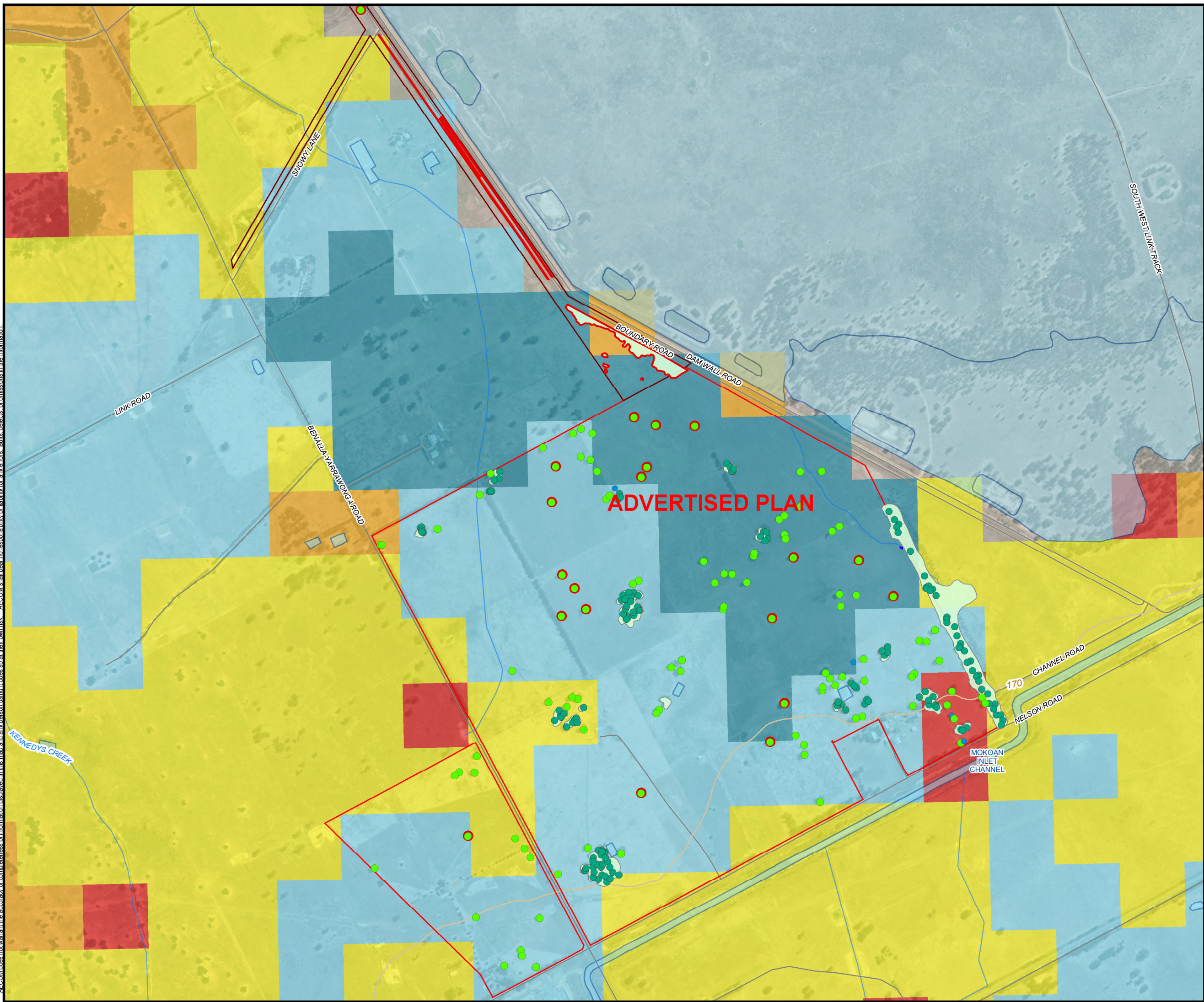
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0.21 - 0.40

0.41 - 0.60

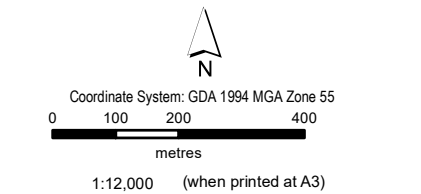
0.61 - 0.80

0.80 - 1.00



Strategic Biodiversity Value





- LEGEND
- Kennedys Creek Site Boundary

Transmission Line Investigation Area

Contours (10m)

Roadways

Watercourses

Waterbodies

Tree Proximity Category

1

2
- Tree Proximity Analysis
- Lightsource bp

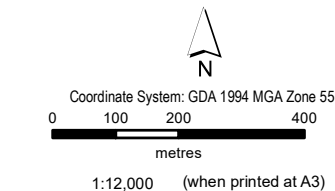
Solar Farm Planning Application

Kennedys Creek

Figure

F8
- An aerial photograph of a rural landscape near a large body of water. A red line outlines a specific area labeled 'ADVERTISED PLAN'. A brown line outlines a larger area labeled 'TRANSMISSION LINE INVESTIGATION AREA'. The map shows various roads including 'LINK ROAD', 'BOUNDARY ROAD', 'DAM WALL ROAD', 'MURRAY ROAD', 'CHANNEL ROAD', and 'NELSON ROAD'. A 'SOUTH WEST LINK TRACK' is also visible. Water features include 'KENNEDYS CREEK' and 'MOKOAN INLET CHANNEL'. Numerous green and yellow dots are scattered across the land, representing tree proximity categories. The map includes a legend, scale bar, and north arrow in the top right corner.
- Map Document: (\\na.aecomnet.com\ifs\APAC\Melbourne-AUMEL1\Legacy\Projects\605X\60585632\4. Tech Work Area\4.99\_GIS\02\_Maps\2023\01KennedysCrk\F8\_Tree\_Proximity\_Kennedy\_Creek.mxd)
- AECOM does not warrant the accuracy or completeness of information displayed in this map and any person using it does so at their own risk. AECOM shall bear no responsibility or liability for any errors, faults, defects, or omissions in the information.





LEGEND

- Kennedys Creek Site Boundary
- Transmission Line Investigation Area
- Contours (m)
- Roadways
- Watercourses
- Waterbodies
- All Scattered Trees

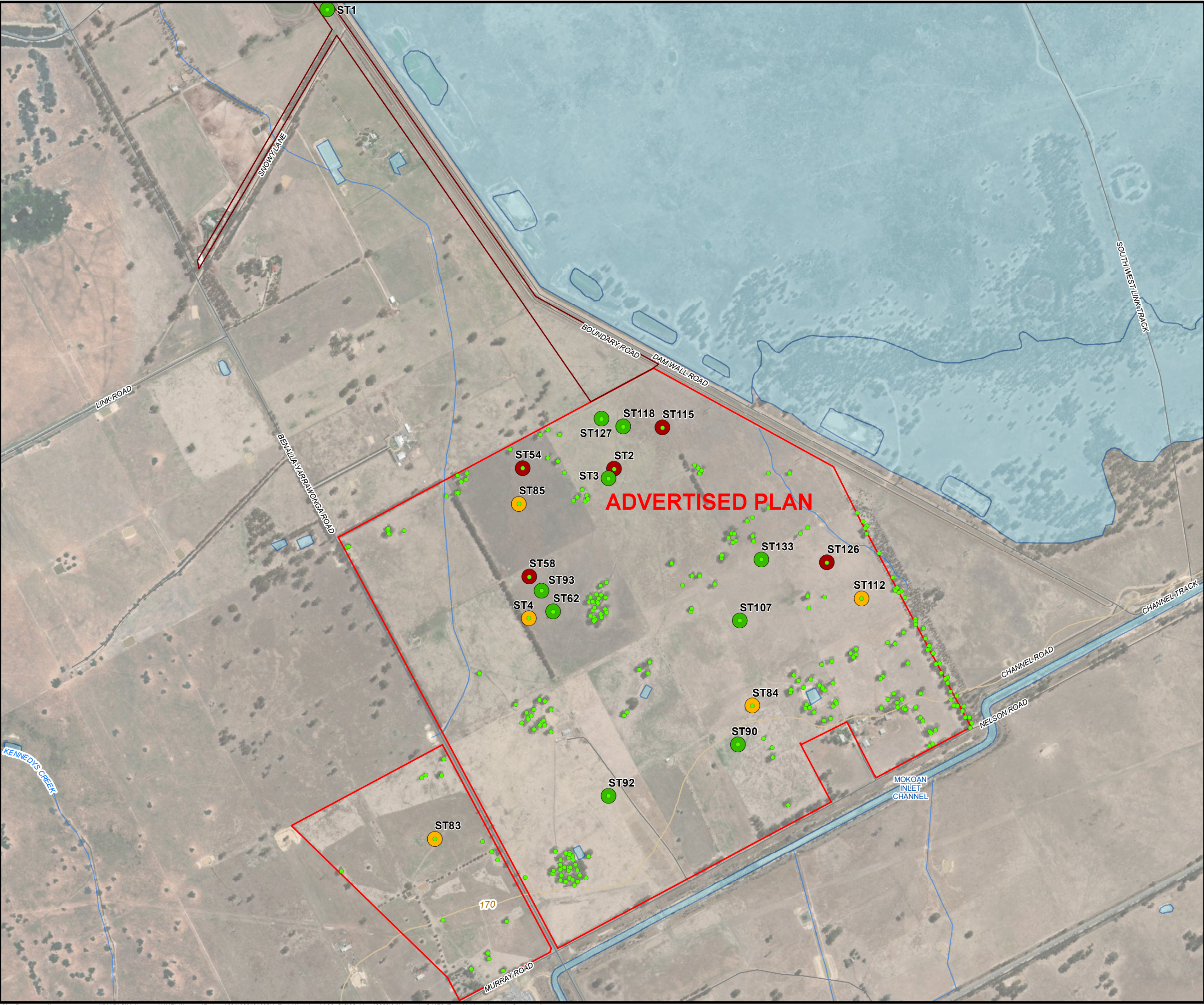
Tree Habitat Value

- High
- Med
- Low

Tree Habitat Value for Trees  
Proposed to be Impacted

Lightsource bp  
Solar Farm Planning Application  
Kennedys Creek

Figure  
F9





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# Appendix B

ADVERTISED PLAN

Threatened flora species  
likelihood of occurrence

**DRAFT****ADVERTISED PLAN****Appendix B Threatened flora species likelihood of occurrence****Table 16 Threatened flora likelihood of occurrence**

Scientific Name	Common Name	Conservation Status		Record #, (Year)	Habitat present? (Y/N)	Likelihood of Occurrence
		EPBC Act	FFG Act			
<i>Acacia melvillei</i>	Yarran		Critically Endangered	VBA (2006)	Distributed through north-western Victoria, particularly along the Murray River and flood plain. Often found in woodland.	Unlikely
<i>Allocasuarina luehmannii</i>	Buloke		Critically Endangered	VBA (1992)	Usually found growing in woodland with Grey Box on a range of on non-calcareous soils types, mainly sandy loams. It is usually found on lower parts of the landscape mainly north and west of the Great Dividing Range and within the Murray-Darling Basin.	Unlikely
<i>Amphibromus fluitans</i>	River Swamp Wallaby-grass	VU		PMST	Inhabits both natural and man-made water-bodies, including swamps, lagoons, billabongs and dams.	Unlikely
<i>Brachyscome muelleroides</i>	Mueller Daisy	VU	Endangered	PMST	Generally come from open positions on the Murray River floodplain, swampy River Red Gum Forest and damp depressions	Unlikely
<i>Digitaria divaricatissima</i> var. <i>divaricatissima</i>	Umbrella Grass		Endangered	VBA (2010)	Rare in Victoria, only recorded in Dimboola, Mildura, Tocumwal, Mitiamo and Springhurst areas. Found on heavier soils that are often flood.	Unlikely
<i>Dipodium interaneum</i>	Yellow Hyacinth-orchid		Endangered	VBA (1997)	Very rare. Distribution restricted to dry open-forest or woodland in the north east between Wangaratta and Wodonga and near Wulgulmerang in the east.	Unlikely

**DRAFT****ADVERTISED PLAN**

<i>Diuris punctata</i>	Purple Diuris		Endangered	VBA (1992)	Moist areas in box, red gum and sclerophyll woodlands, grassy low open forest.	Unlikely
<i>Eucalyptus sideroxylon subsp. Sideroxylon</i>	Mugga		Endangered	VBA (1993)	Distribution within Victoria is confined to the Chiltern area, northern Warby Range and south of Winton.	Unlikely
<i>Fimbristylis dichotoma</i>	Common Fringe-sedge		Endangered	VBA (1991)	Widespread in a variety of habitats; north from Griffith area. Rare or sporadic in Victoria, collected only from near Benalla, Euroa and Boort (pre-1950 records).	Unlikely
<i>Glycine latrobeana</i>	Clover Glycine	VU	Vulnerable	PMST	Endemic in Victoria and sporadically dispersed. Grows mainly in grasslands and grassy woodlands. Native grasslands, dry sclerophyll forests, woodlands and low open woodlands with a grassy ground layer	Unlikely
<i>Goodenia macbarronii</i>	Narrow Goodenia		Endangered	VBA (1995)	Rare in Victoria, confined to forests and grassy areas between Wedderburn and Euroa north to the Murray River, usually in damp sandy soils.	Unlikely
<i>Goodia medicaginea</i>	Western Golden-tip		Endangered	VBA (2002)	In Victoria, found sporadically in the south-west, at Long Forest west of Melbourne, in central Victoria near Eaglehawk and Killawarra Forest. Favours dry, inland sites.	Unlikely
<i>Lepidium monoplacoides</i>	Winged Peppercress	EN	Endangered	PMST	Uncommon in north-western quarter of State, mostly on heavy soils near lakes and watercourses	Unlikely
<i>Prasophyllum gilgai</i>	Gilgai Leek-orchid		Critically Endangered	VBA (2003)	Endemic to Victoria. Located in seasonally inundated grassy woodland on heavy clay loams and in gilgai formations.	Unlikely



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<i>Prasophyllum sp. aff. validum</i>	Woodland Leek-orchid		Endangered	VBA (2000), PMST	Endemic to Victoria. Sparsely located across northern and west open forest and woodlands. Found on stony and sandy soils.	Unlikely
<i>Pultenaea platyphylla</i>	Flat-leaf Bush-pea		Endangered	VBA (1991)	Confined to dry forest on granite hills, particularly in the Warby Range and near Beechworth.	Unlikely
<i>Senecio macrocarpus</i>	Large-headed Fireweed	VU	Critically Endangered	PMST	Largely confined to remnant Kangaroo-grass grasslands on loamy grey soils derived from Basalt.	Unlikely
<i>Swainsona recta</i>	Mountain Swainson-pea	EN	Critically Endangered	PMST	Grassland and open woodland, often on stony hillsides. Found in grassy understorey of woodlands and open-forests dominated by Blakely's Red-gum, Yellow Box, Candlebark and Bundy. Grows in association with understorey dominants that include Kangaroo Grass, poa tussocks and spear-grasses.	Unlikely
<i>Tripogonella loliiformis</i>	Rye Beetle-grass		Endangered	VBA (2011)	Scattered across dry regions including the basalt plains just west of Melbourne. Occurs on shallow soils covering rock.	Unlikely

## Legend:

EPBC Act

CR – Critically Endangered  
 EN – Endangered  
 VU – Vulnerable

FFG Act

Critically Endangered  
 Endangered  
 Vulnerable

Records

(####) – VBA results: (year of last record)  
 PMST – Protected Matters Search Tool

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# Appendix C

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Threatened fauna  
species likelihood of  
occurrence

**DRAFT****Appendix C Threatened fauna species likelihood of occurrence****Table 17 Threatened fauna likelihood of occurrence**

Scientific Name	Common Name	Conservation Status		Record (Year, #)	Habitat preference	Likelihood of Occurrence
		EPBC Act	FFG Act			
Birds						
<i>Actitis hypoleucos</i>	Common Sandpiper	Ma, Mi	Vulnerable	PMST	Edges of saltwater to fresh waterbodies and wetlands, including estuaries, lakes, drainage lines, tidal watercourses and mudflats; occasionally beaches and rocky headlands; mainly spring-summer non-breeding migrant	Unlikely
<i>Anthochaera phrygia</i>	Regent Honeyeater	CR	Critically Endangered	PMST, VBA (1989, 2)	Widespread but with an extremely patchy distribution. In Victoria, most sightings originate from a few sites in north-east Victoria and includes breeding habitat (Chiltern-Albury).	Possible
<i>Apus pacificus</i>	Fork-tailed Swift	Ma, Mi		PMST, VBA (2001, 1)	Aerial over a wide range of habitats, from inland to coast; spring-summer non-breeding migrant	Possible (overhead)
<i>Ardea intermedia</i>	Intermediate Egret	Ma		VBA (2017, 1)	Freshwater swamps, intertidal mudflats, inland lakes and floodplains, well vegetated rivers; also farm dams, pastures and artificial wetlands	Possible
<i>Ardea modesta</i>	Eastern Great Egret	Ma		VBA (2017, 6)	Freshwater and brackish wetlands and watercourses, intertidal mudflats, inland lakes, swamps and rivers; also farm dams, irrigation drainages and artificial wetlands.	Possible
<i>Aythya australis</i>	Hardhead		Vulnerable	VBA (2016, 1)	Deep, permanent open freshwater wetlands and waterbodies with dense fringing vegetation. Sometimes artificial wetlands (dams, sewage ponds), especially during dry periods inland.	Possible
<i>Biziura lobata</i>	Musk Duck	Ma	Vulnerable	VBA (2017, 2)	Permanent freshwater and brackish swamps and wetlands with dense vegetation, more open waters in non-breeding season; occasionally coastal areas and estuaries.	Unlikely

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<i>Botaurus poiciloptilus</i>	Australasian Bittern	EN	Critically Endangered	PMST	Occurs mainly in densely vegetated freshwater wetlands and, rarely, in estuaries or tidal wetlands.	Unlikely
<i>Burhinus grallarius</i>	Bush Stone-curlew		Critically Endangered	VBA (2001, 1)	In south-eastern Australia, occur in open grassy woodlands, including box-ironbark and Buloke woodlands, often near watercourses and areas with dense leaf litter and fallen timber; sometimes on farmlands. Occupy a wider variety of habitats in northern Australia.	Unlikely
<i>Calidris acuminata</i>	Sharp-tailed Sandpiper	Ma, Mi		PMST, VBA (2015, 1)	Margins of brackish waterbodies with emergent sedges grassland, saltmarsh or similar vegetation.	Unlikely
<i>Calidris ferruginea</i>	Curlew Sandpiper	CR, Ma, Mi	Critically Endangered	PMST	Coastal estuaries, bays and shallow wetlands, tidal mudflats and sandflats; mainly spring-summer non-breeding migrant	Unlikely
<i>Calidris melanotos</i>	Pectoral Sandpiper	Ma, Mi		PMST	Shallow freshwater or brackish wetlands, including swamps, flooded grasslands, sewage ponds, occasionally tidal flats and saltmarshes	Unlikely
<i>Chalcites osculans</i>	Black-eared Cuckoo	Ma		PMST, VBA (2000, 1)	Spring-summer migrant to southern and central Victoria, inhabiting mallee scrub, dry woodlands and box ironbark forests	Unlikely
<i>Charadrius bicinctus</i>	Double-banded Plover	Ma, Mi		VBA (2013, 1)	Coastal or near-coastal habitat on firm tidal flats or nearby short, open saltmarsh, and freshwater wetlands. May also utilise open grasslands and short-cropped pasture near water.	Unlikely
<i>Chlidonias hybrida</i>	Whiskered Tern	Ma		VBA (2017, 2)	#N/A	Unlikely
<i>Chthonicola sagittata</i>	Speckled Warbler		Endangered	VBA (2001, 8)	Eucalypt-dominated open forests and grassy woodlands, including box-ironbark forests, dense shrublands on rocky ridges or in gullies.	Unlikely
<i>Egretta garzetta</i>	Little Egret	Ma		VBA (2017, 1)	Tidal mudflats, brackish and saltwater wetlands, including saltmarshes, estuaries, littoral habitat and mangroves; less often freshwater wetlands and occasionally sewage ponds.	Possible

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<i>Falco hypoleucos</i>	Grey Falcon	VU	Vulnerable	PMST	Lightly timbered plains, woodland and watercourses in arid areas; occasionally occurs nearer to coast as rare visitor	Possible
<i>Falco subniger</i>	Black Falcon		Critically Endangered	VBA (2015, 1)	Woodland, scrub, shrubland and grassland types in arid and semi-arid zones.	Possible
<i>Gallinago hardwickii</i>	Latham's Snipe	Ma, Mi		PMST, VBA (2017, 1)	Wet grasslands and pastures, open and wooded swamps; spring-summer non-breeding migrant	Unlikely
<i>Grantiella picta</i>	Painted Honeyeater	VU	Vulnerable	PMST, VBA (1990, 1)	Open box-ironbark forests, eucalypt and casuarina woodlands and well vegetated watercourses, particularly where trees are infested with mistletoe; mainly spring-summer migrant to south-eastern Australia	Possible
<i>Antigone rubicunda</i>	Brolga		Endangered	VBA (2008, 3)	#N/A	Unlikely
<i>Haliaeetus leucogaster</i>	White-bellied Sea-Eagle	Ma	Endangered	PMST, VBA (2016, 6)	Occupies all coastal areas extending inland through main waterways, coastal islands, coastal lakes and along some inland rivers. It forages primarily for fish over large areas of open water.	Unlikely
<i>Hirundapus caudacutus</i>	White-throated Needletail	Vu, Ma, Mi	Vulnerable	PMST, VBA (2000, 2)	Aerial, mainly eastern Australia often associated with coastal and mountain regions; spring-summer non-breeding migrant.	Possible (overhead)
<i>Lathamus discolor</i>	Swift Parrot	CR	Critically Endangered	PMST, VBA (1999, 6)	Breeds in Tasmania, late spring-summer; occurs as non-breeding migrant to mainland south-eastern Australia mainly autumn-early spring. Generally prefers Box-Ironbark forests and woodlands inland of the Great Dividing Range; sometimes also other forests and woodlands in coastal and sub-coastal areas.	Possible
<i>Melanodryas cucullata</i>	Hooded Robin		Vulnerable	VBA (1992, 1)	Lowlands and foothills. Inhabits a range of vegetation, particularly with fallen timber and logs, including open eucalypt forests and box-ironbark woodlands, mallee and mulga woodlands, cypress pine woodlands, mallee heaths with scattered trees and often clearings adjacent to woodlands and forests.	Possible
<i>Motacilla flava</i>	Yellow Wagtail	Ma		PMST	Grassland habitat subject to inundation	Unlikely

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<i>Myiagra cyanoleuca</i>	Satin Flycatcher	Ma		PMST	Mainly in wet forests and dense woodlands, particularly with tall canopy of eucalypts with an understorey of tea-trees and wattles along streams. Seasonal visitor (mainly spring) to drier inland woodlands, coastal areas and occasionally gardens and parklands.	Unlikely
<i>Neophema pulchella</i>	Turquoise Parrot		Vulnerable	VBA (2001, 5)	Inhabits arid to semi-arid areas within mallee and acacia (Mulga) scrublands/open woodlands with spinifex and saltbush ground covers. Occurs in both recently burnt and older growth mallee. Known to occur within the Lower Murray/Darling and Western catchment management authority regions.	Unlikely
<i>Numenius madagascariensis</i>	Eastern Curlew	CR, Ma, Mi	Critically Endangered	PMST	Coastal lakes, estuaries, tidal mudflats and sandflats, mangroves and saltmarshes; occasionally fresh or brackish lakes near coast; mainly spring-summer non-breeding migrant	Unlikely
<i>Nycticorax caledonicus hillii</i>	Nankeen Night Heron	Ma		VBS (2003, 1)	A wide range of wetlands and watercourses, including well timbered watercourses and margins of rivers and creeks, mangroves and parks with large trees (e.g. River Red Gums)	Unlikely
<i>Pandion cristatus</i>	Eastern Osprey	Ma, Mi		PMST	Littoral and coastal habitats, and terrestrial wetlands generally preferring coastal cliffs. May also occur in atypical habitats.	Unlikely
<i>Pedionomus torquatus</i>	Plains-wanderer	CR	Critically Endangered	PMST	Low, open native grasslands, typically with sward less than 1m high, with extensive inter-tussock spaces and high diversity of small herbs; sometimes in unimproved pastures or crops.	Possible
<i>Polytelis swainsonii</i>	Superb Parrot	VU	Endangered	PMST	River Red Gum, Black Box and other eucalypt woodlands and timbered watercourses; sometimes in pastures, stubbles, clearings and wooded farmland and often killed on roads when feeding on spilt grain	Unlikely

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<i>Rhipidura rufifrons</i>	Rufous Fantail	Ma, Mi		PMST	Typically a fantail of dense forests such as rainforests, wet sclerophyll forests, monsoon forests, mangroves and riparian vegetation with a common preference for a shrubby understory. Inhabits and breeds in wet eucalypt forests and rainforests, particularly gullies and in dense undergrowth. Seasonal (mainly autumn-winter) dispersal to more open habitat (e.g. woodlands, parklands with areas of dense undergrowth, box ironbark forests).	Unlikely
<i>Rostratula australis</i>	Australian Painted Snipe	EN, Ma	Critically Endangered	PMST	Has been recorded from wetlands in all Australian states, however is most common in eastern Australia, especially the Murray-Darling Basin. Individuals are nomadic, and there is some evidence of partial migration from south-eastern wetlands to coastal central and northern Queensland in autumn and winter. Inhabits shallow, well vegetated, temporary or infrequently filled wetlands, which may have associated trees, shrubs or samphire. Occasionally inhabits brackish wetlands, saltmarsh or claypans. Typical sites include those with rank emergent tussocks of grass, sedges, rushes, reeds or samphire, often with clumps of Muehlenbeckia or sometimes Melaleuca. Feeds on seeds and invertebrates from the water's edge.	Unlikely
<i>Spatula rhynchotis</i>	Australasian Shoveler		Vulnerable	VBA (2006, 2)	Inhabits various wetlands, preferring large, well-vegetated freshwater swamps and wetlands. Also estuaries, coastal inlets and artificial waterbodies (e.g. dams, sewage ponds).	Unlikely
<i>Stagonopleura guttata</i>	Diamond Firetail		Vulnerable	VBA (2001, 19)	Open grassy eucalypt or cypress pine woodlands, acacia shrublands and edges of farmland or grassland close to wooded or lightly timbered areas. Often in wooded areas close to watercourses.	Unlikely
<i>Stictonetta naevosa</i>	Freckled Duck		Endangered	VBA (2006, 1)	Large, well vegetated swamps and wetlands, including ephemeral open lakes when inundated	Unlikely
<i>Tringa nebularia</i>	Common Greenshank	Ma, Mi	Endangered	VBA (2015, 1)	Margins of freshwater and brackish wetlands, sewage ponds, saltmarshes, dams and sometimes tidal flats and estuaries.	Unlikely
<b>Mammals</b>						

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<i>Dasyurus maculatus maculatus</i>	Spot-tailed Quoll	EN	Endangered	PMST	In Victoria, the Spot-tailed Quoll is mainly confined to public land, mostly in parks, reserves and state forests (Backhouse 2003). Locations include Mount Eccles NP and the Otway Ranges in south-west Victoria (Mansergh 1984); Macedon Ranges north-west of Melbourne (Mansergh 1984); north and east of Melbourne in the eastern highlands (Backhouse 2003; Mansergh 1995a); sites adjacent to NSW populations (Backhouse 2003); East Gippsland, particularly the upper Snowy River Valley and the Rodger River-Errinundra Plateau area (Backhouse 2003; Mansergh 1995a); Strezlecki Range in South Gippsland (Backhouse 2003); Wilson's Promontory NP, the subspecies current status at this location is unknown (Long & Nelson 2004); Grampians NP (ABC News 2013).	Unlikely
<i>Petauroides volans</i>	Greater Glider	VU	Vulnerable	PMST	Eucalypt forests and woodlands. Typically found in old growth, hollow bearing, montane, moist diverse eucalypt forests.	Unlikely
<i>Pseudomys fumeus</i>	Smoky Mouse	EN	Endangered	PMST	A variety of vegetation communities, ranging from coastal heath to dry ridgeline forest, sub-alpine heath and, occasionally, wetter gullies (Menkhorst and Seebeck 1981). Except for the wetter sites, a consistent feature of Smoky Mouse habitats is the diversity of heath and bush-pea species present, combined with potential shelter sites in the form of woody debris or rocks. The vegetation at capture sites varies widely in age post-fire.	Unlikely
<i>Pteropus poliocephalus</i>	Grey-headed Flying-fox	VU	Vulnerable	PMST	Requires foraging resources and roost sites which differ in their characteristics and therefore location. Roost sites commonly occur in gullies, in vegetation with dense canopy cover and close to water. Foraging resources include blossom from eucalypts (preferred food) and a range of rainforest fruits, commercial fruit crops and introduced trees in urban areas. The species is highly mobile and commutes daily from roost sites to foraging areas.	Possible
<b>Reptiles</b>						

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<i>Aprasia parapulchella</i>	Pink-tailed Worm-Lizard	VU	Endangered	PMST	Inhabits sloping, open woodland areas with predominantly grassy groundlayers and rocky outcrops, particularly those dominated by Kangaroo Grass. Vic distribution restricted to isolated population near Bendigo.	Unlikely
<i>Delma impar</i>	Striped Legless Lizard	VU	Endangered	PMST	Native grasslands and grassy woodland, within grass tussocks, cracks in the ground or under rocks. Has been recorded in exotic pasture.	Possible
<i>Emydura macquarii</i>	Murray Short-necked Turtle		Critically Endangered	VBA (2009, 1)	Restricted to the Murray-Darling River system in southeastern Australia, inhabiting larger rivers and permanent lakes in this region.	Unlikely
<i>Morelia spilota metcalfei</i>	Carpet Python		Endangered	VBS (1997, 7)	Generally associated with large eucalypts along rivers in the Murray/Darling basin.	Unlikely
<i>Varanus varius</i>	Lace Goanna		Endangered	VBA (1995, 2)	Occurs in well timbered areas from dry woodlands to cool temperate forests.	Unlikely
<b>Amphibians</b>						
<i>Litoria raniformis</i>	Growing Grass Frog	VU	Vulnerable	PMST	Permanent lakes, swamps, dams and lagoons or very wet areas in woodland and shrubland; often in waterbodies with dense standing and floating vegetation.	Unlikely
<b>Fishes</b>						
<i>Galaxias rostratus</i>	Flat-headed Galaxias	CR	Vulnerable	PMST, VBA (1990, 2)	Shoals in mid-water. Usually below 150 m altitude in Murray system in still or gently flowing waters, lakes, billabongs and backwaters. Depth 1 m, substrate of coarse sand and mud, and debris.	Unlikely
<i>Maccullochella macquariensis</i>	Bluenose Cod	EN	Endangered	PMST	Large fish typically inhabit deep holes, smaller fish beneath and amongst boulders and other cover. Often found in fast flowing water over bedrock, boulder and sand substrates and amongst heavy cover in faster water than for Murray cod.	Unlikely
<i>Maccullochella peelii peelii</i>	Murray Cod	VU		PMST, VBA (2013, 3)	Small clear, rocky, upland streams with riffle and pool structure on the upper western slopes of the Great Dividing Range to large, meandering, slow flowing, often silty rivers in the alluvial lowland reaches of the Murray Darling Basin.	Unlikely

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<i>Macquaria ambigua</i>	Golden Perch			PMST, VBA (2009, 7)	Variety of environments, but most frequently occurs in warm, turbid, sluggish inland waters and associated backwaters and billabongs. A tolerant fish able to withstand water temperatures of 4 to 37°C, and salinities up to 33,000 parts per million (almost that of sea-water).	Unlikely
<i>Macquaria australasica</i>	Macquarie Perch	EN	Endangered	PMST	Deep, rocky holes with considerable cover and flowing water over unsilted cobble and gravel substrate.	Unlikely
<i>Melanotaenia fluviatilis</i>	Crimson-spotted Rainbowfish		Endangered	VBS (2001, 1)	Inhabits streams, backwaters of larger rivers, drainage ditches, overflow ponds and reservoirs. Usually congregates along grassy banks or around submerged logs and branches.	Unlikely
<i>Nannoperca australis</i> (Murray-Darling lineage)	Southern Pygmy Perch (upper Murray R to Avoca R)			PMST		Unlikely
<b>Invertebrates</b>						
<i>Synemon plana</i>	Golden Sun Moth	CR	Vulnerable	PMST	Native grasslands and grassy woodlands, particularly where Wallaby-grasses dominant. Now recognised to occur also in exotic grasslands dominated by Chilean Needle Grass.	Unlikely

**Legend:**EPBC Act

CR – Critically Endangered

EN – Endangered

VU – Vulnerable

Mi – Migratory

Ma - Marine

FFG Act

Critically Endangered

Endangered

Vulnerable

Record

Year – Most recent record from the Victorian Biodiversity Atlas (VBA)

PMST – Protected Matters Search Tool (prediction)

Sources for habitat preferences descriptions: *Birds Australia*, 2003; *Churchill*, 2008; *Cogger* 1990; *DPI NSW*, 2008; *Emison et al.*, 1987; *Gray and Knight*, 2001; *HANZAB*, 1990-2006; *Hero et al.*, 1991; *Inland Fisheries Service*, 2000; *NSW DEC*, 2005; *Menkhorst and Knight*, 2001; *Robinson*, 2005; *Strahan* 1995; *Wilson and Swan* 2008; *Tyler and Knight*, 2009; *Viridans Just a Minute* 2005 and the Australian Government Department of Environment and Energy Species Profiles and Threats (SPRaT) Database

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**D R A F T**

# Appendix D

**ADVERTISED PLAN**

## Observed flora and fauna species

**DRAFT****ADVERTISED PLAN****Appendix D Observed flora and fauna species****Table 18 Observed fauna species**

Status	Scientific Name	Common Name
	<i>Anas castanea</i>	Chestnut Teal
	<i>Anas gracilis</i>	Grey Teal
	<i>Anas superciliosa</i>	Pacific Black Duck
	<i>Anthochaera carunculata</i>	Red Wattlebird
	<i>Aquila audax</i>	Wedge-tailed Eagle
	<i>Artamus cyanopterus</i>	Dusky Woodswallow
	<i>Cacatua galerita</i>	Sulphur-crested Cockatoo
	<i>Cacatua sanguinea</i>	Little Corella
Ma	<i>Cacomantis flabelliformis</i>	Fan-tailed Cuckoo
	<i>Calyptorhynchus funereus</i>	Yellow-tailed black Cockatoo
	<i>Chenonetta jubata</i>	Australian Wood Duck
	<i>Circus assimilis</i>	Spotted Harrier
Ma	<i>Coracina novaehollandiae</i>	Black-faced Cuckoo-shrike
	<i>Corvus coronoides</i>	Australian Raven
Ma	<i>Coturnix pectoralis</i>	Stubble Quail
	<i>Cracticus tibicen</i>	Australian Magpie
	<i>Cracticus torquatus</i>	Grey Butcherbird
	<i>Crinia parinsignifera</i>	Plains Froglet
	<i>Crinia signifera</i>	Common Froglet
	<i>Cygnus atratus</i>	Black Swan
	<i>Dacelo novaeguineae</i>	Laughing Kookaburra
	<i>Delma inornata</i>	Olive Legless Lizard
	<i>Elanus axillaris</i>	Black-shouldered Kite
	<i>Eolophus roseicapillus</i>	Galah
	<i>Falco berigora</i>	Brown Falcon
Ma	<i>Falco cenchroides</i>	Nankeen Kestrel
Ma	<i>Grallina cyanoleuca</i>	Magpie-lark
Ma	<i>Haliastur sphenurus</i>	Whistling Kite
Ma	<i>Hirundo neoxena</i>	Welcome Swallow
	<i>Macropus giganteus</i>	Eastern Grey Kangaroo
	<i>Malacorhynchus membranaceus</i>	Pink-eared Duck
	<i>Malurus cyaneus</i>	Superb Fairy-wren
	<i>Manorina melanocephala</i>	Noisy Miner



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Status	Scientific Name	Common Name
	<i>Myiagra inquieta</i>	Restless Flycatcher
	<i>Ocyphaps lophotes</i>	Crested Pigeon
	<i>Pardalotus punctatus</i>	Spotted Pardalote
	<i>Phaps chalcoptera</i>	Common Bronzewing
	<i>Platalea flavipes</i>	Yellow-billed Spoonbill
	<i>Platalea regia</i>	Royal Spoonbill
	<i>Platycercus eximius</i>	Eastern Rosella
	<i>Ptilotula fusca</i>	Fuscous Honeyeater
	<i>Ptilotula penicillata</i>	White-plumed Honeyeater
	<i>Rhipidura albiscapa</i>	Grey Fantail
	<i>Rhipidura leucophrys</i>	Willie Wagtail
	<i>Sturnus tristis</i>	Common Myna
	<i>Tachybaptus novaehollandiae</i>	Australasian Grebe
Ma	<i>Threskiornis molucca</i>	Australian White Ibis
Ma	<i>Threskiornis spinicollis</i>	Straw-necked Ibis
		Skink sp.

**ADVERTISED PLAN**

**DRAFT****ADVERTISED PLAN****Table 19 Observed flora species**

Native Species		
Status	Scientific Name	Common Name
P	<i>Acacia acinacea</i>	Gold-dust Wattle
P	<i>Acacia verniciflua</i>	Varnish Wattle
	<i>Alternanthera denticulata</i>	Lesser Joyweed
	<i>Amphibromus nervosus</i>	Common Swamp Wallaby-grass
	<i>Amyema pendula</i>	Drooping Mistletoe
	<i>Asperula conferta</i>	Common Woodruff
	<i>Atriplex semibaccata</i>	Berry Saltbush
	<i>Austrostipa spp.</i>	Spear Grass
	<i>Bothriochloa macra</i>	Red-leg Grass
	<i>Carex inversa</i>	Knob Sedge
	<i>Carex tereticaulis</i>	Poong'ort
P	<i>Cassinia aculeata</i>	Common Cassinia
	<i>Chloris truncata</i>	Windmill Grass
	<i>Eleocharis acuta</i>	Common Spike-sedge
	<i>Eucalyptus albens</i>	White Box
	<i>Eucalyptus camaldulensis</i>	River Red-gum
	<i>Eucalyptus melliodora</i>	Yellow Box
	<i>Eucalyptus microcarpa</i>	Grey Box
	<i>Eucalyptus polyanthemus</i>	Red Box
	<i>Juncus semisolidus</i>	Plains Rush
	<i>Juncus semisolidus</i>	Plains Rush
	<i>Juncus spp.</i>	
	<i>Juncus subsecundus</i>	Finger Rush
	<i>Lachnagrostis filiformis</i>	Common Blown-grass
P	<i>Laphangium luteoalbum</i>	Jersey Cudweed
	<i>Lomandra filiformis</i>	Wattle Mat-rush
	<i>Lythrum hyssopifolia</i>	Small Loosestrife
P	<i>Marsilea drummondii</i>	Common Nardoo
#	<i>Melaleuca ericifolia</i>	Swamp Paperbark
	<i>Oxalis perennans</i>	Grassland Wood-sorrel
	<i>Rumex spp.</i>	
	<i>Rytidosperma caespitosum</i>	Common Wallaby-grass
	<i>Rytidosperma spp. 1</i>	Wallaby Grass
	<i>Rytidosperma spp. 2</i>	Wallaby Grass
r	<i>Triglochin procera</i>	Water Ribbons

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P	<i>Vittadinia cuneata</i>	Fuzzy New Holland Daisy
	<i>Wahlenbergia fluminalis</i>	River Bluebell
	<i>Walwhalleya proluta</i>	Rigid Panic
<b>Weeds</b>		
Status	Scientific Name	Common Name
	<i>Agapanthus spp.</i>	Agapanthus
	<i>Cyperus eragrostis</i>	Drain Flat-sedge
R	<i>Cirsium vulgare</i>	Spear Thistle
	<i>Helminthotheca echinoides</i>	Ox-tongue
	<i>Hypochaeris radicata</i>	Flatweed
	<i>Leontodon taraxacoides</i> subsp. <i>taraxacoides</i>	Hairy Hawkbit
	<i>Malva spp.</i>	Mallow
	<i>Panicum effusum</i>	Hairy Panic
	<i>Paspalum dilatatum</i>	Paspalum
	<i>Phalaris aquatica</i>	Toowoomba Canary-grass
	<i>Polygonum aviculare</i>	
RC	<i>Rosa rubiginosa</i>	Sweet Briar
	<i>Rumex spp.</i>	
	<i>Setaria spp.</i>	
	<i>Solanum nigrum</i>	Black Nightshade
	<i>Sonchus oleraceus</i>	Common Sow-thistle

**Legend***EPBC Act*

CR - Critically Endangered

EN - Endangered

VU - Vulnerable

Ma - Marine

*FFG Act*

P - Protected

*Weeds*

SP - State Prohibited

RP - Regionally Prohibited

RC - Regionally Controlled

R - Restricted

WoNS - Weed of National Significance

**ADVERTISED PLAN**

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# Appendix E

ADVERTISED PLAN

Tree table

**DRAFT****ADVERTISED PLAN****Appendix E Tree table****Table 20 Summary of native canopy trees (Large Trees in Patches and Scattered Trees) found within the study area.**

Tree ID	DBH	Common Name	Scientific Name	Tree Category
ST1	95	Stag	Stag	Large Scattered Tree
ST2	172	Grey Box	<i>Eucalyptus microcarpa</i>	Large Scattered Tree
ST3	125	Stag	Stag	Large Scattered Tree
ST4	86	Stag	Stag	Large Scattered Tree
ST5	70	Grey Box	<i>Eucalyptus microcarpa</i>	Large Tree in Patch
ST6	70	Grey Box	<i>Eucalyptus microcarpa</i>	Large Tree in Patch
ST7	70	Stag	Stag	Large Tree in Patch
ST8	70	White Box	<i>Eucalyptus albens</i>	Large Tree in Patch
ST9	70	Grey Box	<i>Eucalyptus microcarpa</i>	Large Tree in Patch
ST10	70	Grey Box	<i>Eucalyptus microcarpa</i>	Large Tree in Patch
ST11	70	White Box	<i>Eucalyptus albens</i>	Large Tree in Patch
ST12	70	Stag	Stag	Large Tree in Patch
ST13	100	Grey Box	<i>Eucalyptus microcarpa</i>	Large Tree in Patch
ST14	70	Grey Box	<i>Eucalyptus microcarpa</i>	Large Tree in Patch
ST15	70	Stag	Stag	Large Tree in Patch
ST16	70	Grey Box	<i>Eucalyptus microcarpa</i>	Large Tree in Patch
ST17	70	Grey Box	<i>Eucalyptus microcarpa</i>	Large Tree in Patch
ST18	90	River Red-gum	<i>Eucalyptus camaldulensis</i>	Large Tree in Patch
ST19	70	River Red-gum	<i>Eucalyptus camaldulensis</i>	Large Tree in Patch
ST20	90	White Box	<i>Eucalyptus albens</i>	Large Tree in Patch
ST21	70	River Red-gum	<i>Eucalyptus camaldulensis</i>	Large Tree in Patch
ST22	100	Grey Box	<i>Eucalyptus microcarpa</i>	Large Tree in Patch
ST23	72	Grey Box	<i>Eucalyptus microcarpa</i>	Large Tree in Patch
ST24	70	Grey Box	<i>Eucalyptus microcarpa</i>	Large Tree in Patch
ST25	70	Grey Box	<i>Eucalyptus microcarpa</i>	Large Tree in Patch
ST26	80	Stag	Stag	Large Tree in Patch
ST27	70	Grey Box	<i>Eucalyptus microcarpa</i>	Large Tree in Patch
ST28	80	White Box	<i>Eucalyptus albens</i>	Large Tree in Patch
ST29	100	Grey Box	<i>Eucalyptus microcarpa</i>	Large Tree in Patch
ST30	100	River Red-gum	<i>Eucalyptus camaldulensis</i>	Large Tree in Patch
ST31	90	Grey Box	<i>Eucalyptus microcarpa</i>	Large Tree in Patch
ST32	90	Grey Box	<i>Eucalyptus microcarpa</i>	Large Tree in Patch
ST33	70	Grey Box	<i>Eucalyptus microcarpa</i>	Large Tree in Patch
ST34	110	Grey Box	<i>Eucalyptus microcarpa</i>	Large Tree in Patch
ST35	112	Grey Box	<i>Eucalyptus microcarpa</i>	Large Tree in Patch
ST36	100	White Box	<i>Eucalyptus albens</i>	Large Tree in Patch
ST37	73	Grey Box	<i>Eucalyptus microcarpa</i>	Large Tree in Patch
ST38	84	Grey Box	<i>Eucalyptus microcarpa</i>	Large Tree in Patch
ST39	108	Grey Box	<i>Eucalyptus microcarpa</i>	Large Tree in Patch
ST40	125	White Box	<i>Eucalyptus albens</i>	Large Tree in Patch
ST41	73	River Red-gum	<i>Eucalyptus camaldulensis</i>	Large Tree in Patch
ST42	130	Stag	Stag	Large Scattered Tree
ST43	120	River Red-gum	<i>Eucalyptus camaldulensis</i>	Large Scattered Tree
ST44	110	Grey Box	<i>Eucalyptus microcarpa</i>	Large Scattered Tree
ST45	105	Grey Box	<i>Eucalyptus microcarpa</i>	Large Scattered Tree
ST46	70	Stag	Stag	Large Scattered Tree



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Tree ID	DBH	Common Name	Scientific Name	Tree Category
ST47	125	Grey Box	<i>Eucalyptus microcarpa</i>	Large Scattered Tree
ST48	145	River Red-gum	<i>Eucalyptus camaldulensis</i>	Large Scattered Tree
ST49	145	River Red-gum	<i>Eucalyptus camaldulensis</i>	Large Scattered Tree
ST50	150	River Red-gum	<i>Eucalyptus camaldulensis</i>	Large Scattered Tree
ST51	90	Red Box	<i>Eucalyptus polyanthemos</i>	Large Scattered Tree
ST52	134	Grey Box	<i>Eucalyptus microcarpa</i>	Large Scattered Tree
ST53	135	River Red-gum	<i>Eucalyptus camaldulensis</i>	Large Scattered Tree
ST54	130	Stag	Stag	Large Scattered Tree
ST55	130	River Red-gum	<i>Eucalyptus camaldulensis</i>	Large Scattered Tree
ST56	130	Grey Box	<i>Eucalyptus microcarpa</i>	Large Scattered Tree
ST57	110	Stag	Stag	Large Scattered Tree
ST58	116	Grey Box	<i>Eucalyptus microcarpa</i>	Large Scattered Tree
ST59	125	River Red-gum	<i>Eucalyptus camaldulensis</i>	Large Scattered Tree
ST60	135	River Red-gum	<i>Eucalyptus camaldulensis</i>	Large Scattered Tree
ST61	180	River Red-gum	<i>Eucalyptus camaldulensis</i>	Large Scattered Tree
ST62	130	Grey Box	<i>Eucalyptus microcarpa</i>	Large Scattered Tree
ST63	140	River Red-gum	<i>Eucalyptus camaldulensis</i>	Large Scattered Tree
ST64	85	Stag	Stag	Large Scattered Tree
ST65	110	River Red-gum	<i>Eucalyptus camaldulensis</i>	Large Scattered Tree
ST66	125	River Red-gum	<i>Eucalyptus camaldulensis</i>	Large Scattered Tree
ST67	105	River Red-gum	<i>Eucalyptus camaldulensis</i>	Large Scattered Tree
ST68	135	River Red-gum	<i>Eucalyptus camaldulensis</i>	Large Scattered Tree
ST69	216	River Red-gum	<i>Eucalyptus camaldulensis</i>	Large Scattered Tree
ST70	125	River Red-gum	<i>Eucalyptus camaldulensis</i>	Large Scattered Tree
ST71	87	Grey Box	<i>Eucalyptus microcarpa</i>	Large Scattered Tree
ST72	85	Stag	Stag	Large Scattered Tree
ST73	105	River Red-gum	<i>Eucalyptus camaldulensis</i>	Large Scattered Tree
ST74	105	River Red-gum	<i>Eucalyptus camaldulensis</i>	Large Scattered Tree
ST75	85	Yellow Box	<i>Eucalyptus melliodora</i>	Large Scattered Tree
ST76	140	Grey Box	<i>Eucalyptus microcarpa</i>	Large Scattered Tree
ST77	110	River Red-gum	<i>Eucalyptus camaldulensis</i>	Large Scattered Tree
ST78	130	River Red-gum	<i>Eucalyptus camaldulensis</i>	Large Scattered Tree
ST79	130	Grey Box	<i>Eucalyptus microcarpa</i>	Large Scattered Tree
ST80	95	Stag	Stag	Large Scattered Tree
ST81	110	Stag	Stag	Large Scattered Tree
ST82	125	Grey Box	<i>Eucalyptus microcarpa</i>	Large Scattered Tree
ST83	100	Stag	Stag	Large Scattered Tree
ST84	105	Grey Box	<i>Eucalyptus microcarpa</i>	Large Scattered Tree
ST85	130	Stag	Stag	Large Scattered Tree
ST86	130	Yellow Box	<i>Eucalyptus melliodora</i>	Large Scattered Tree
ST87	115	Grey Box	<i>Eucalyptus microcarpa</i>	Large Scattered Tree
ST88	105	River Red-gum	<i>Eucalyptus camaldulensis</i>	Large Scattered Tree
ST89	120	River Red-gum	<i>Eucalyptus camaldulensis</i>	Large Scattered Tree
ST90	203	Grey Box	<i>Eucalyptus microcarpa</i>	Large Scattered Tree
ST91	110	Grey Box	<i>Eucalyptus microcarpa</i>	Large Scattered Tree
ST92	122	Grey Box	<i>Eucalyptus microcarpa</i>	Large Scattered Tree
ST93	114	Stag	Stag	Large Scattered Tree
ST94	110	Grey Box	<i>Eucalyptus microcarpa</i>	Large Scattered Tree
ST95	85	Stag	Stag	Large Scattered Tree

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Tree ID	DBH	Common Name	Scientific Name	Tree Category
ST96	112	Grey Box	<i>Eucalyptus microcarpa</i>	Large Tree in Patch
ST97	101	Stag	Stag	Large Scattered Tree
ST98	115	Grey Box	<i>Eucalyptus microcarpa</i>	Large Scattered Tree
ST99	72	Stag	Stag	Large Tree in Patch
ST100	95	Stag	Stag	Large Tree in Patch
ST101	120	Grey Box	<i>Eucalyptus microcarpa</i>	Large Tree in Patch
ST102	127	Grey Box	<i>Eucalyptus microcarpa</i>	Large Scattered Tree
ST103	105	Grey Box	<i>Eucalyptus microcarpa</i>	Large Tree in Patch
ST104	99	Stag	Stag	Large Scattered Tree
ST105	102	Grey Box	<i>Eucalyptus microcarpa</i>	Large Scattered Tree
ST106	110	Grey Box	<i>Eucalyptus microcarpa</i>	Large Tree in Patch
ST107	123	Grey Box	<i>Eucalyptus microcarpa</i>	Large Scattered Tree
ST108	144	Grey Box	<i>Eucalyptus microcarpa</i>	Large Scattered Tree
ST109	55	Grey Box	<i>Eucalyptus microcarpa</i>	Small Scattered Tree
ST110	99	Grey Box	<i>Eucalyptus microcarpa</i>	Large Tree in Patch
ST111	117	Grey Box	<i>Eucalyptus microcarpa</i>	Large Tree in Patch
ST112	88	White Box	<i>Eucalyptus albens</i>	Large Scattered Tree
ST113	247	Grey Box	<i>Eucalyptus microcarpa</i>	Large Scattered Tree
ST114	76	Stag	Stag	Large Scattered Tree
ST115	131	Grey Box	<i>Eucalyptus microcarpa</i>	Large Scattered Tree
ST116	102	White Box	<i>Eucalyptus albens</i>	Large Scattered Tree
ST117	110	Stag	Stag	Large Scattered Tree
ST118	99	Stag	Stag	Large Scattered Tree
ST119	89	Stag	Stag	Large Tree in Patch
ST120	99	Grey Box	<i>Eucalyptus microcarpa</i>	Large Tree in Patch
ST121	123	Grey Box	<i>Eucalyptus microcarpa</i>	Large Scattered Tree
ST122	74	White Box	<i>Eucalyptus albens</i>	Large Tree in Patch
ST123	134	Grey Box	<i>Eucalyptus microcarpa</i>	Large Scattered Tree
ST124	92	Grey Box	<i>Eucalyptus microcarpa</i>	Large Scattered Tree
ST125	134	Stag	Stag	Large Scattered Tree
ST126	108	White Box	<i>Eucalyptus albens</i>	Large Scattered Tree
ST127	115	Grey Box	<i>Eucalyptus microcarpa</i>	Large Scattered Tree
ST128	72	Grey Box	<i>Eucalyptus microcarpa</i>	Large Scattered Tree
ST129	110	Stag	Stag	Large Scattered Tree
ST130	97	Grey Box	<i>Eucalyptus microcarpa</i>	Large Scattered Tree
ST131	95	Grey Box	<i>Eucalyptus microcarpa</i>	Large Tree in Patch
ST132	92	Grey Box	<i>Eucalyptus microcarpa</i>	Large Tree in Patch
ST133	123	Grey Box	<i>Eucalyptus microcarpa</i>	Large Scattered Tree
ST134	108	Grey Box	<i>Eucalyptus microcarpa</i>	Large Scattered Tree
ST135	90	Yellow Box	<i>Eucalyptus melliodora</i>	Large Scattered Tree
ST136	115	Grey Box	<i>Eucalyptus microcarpa</i>	Large Scattered Tree
ST137	78	Grey Box	<i>Eucalyptus microcarpa</i>	Large Scattered Tree
ST138	113	Stag	Stag	Large Scattered Tree
ST139	96	Grey Box	<i>Eucalyptus microcarpa</i>	Large Scattered Tree
ST140	93	Stag	Stag	Large Scattered Tree
ST141	149	River Red-gum	<i>Eucalyptus camaldulensis</i>	Large Tree in Patch
ST142	166	Grey Box	<i>Eucalyptus microcarpa</i>	Large Scattered Tree
ST143	85	River Red-gum	<i>Eucalyptus camaldulensis</i>	Large Tree in Patch
ST144	143	River Red-gum	<i>Eucalyptus camaldulensis</i>	Large Tree in Patch

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Tree ID	DBH	Common Name	Scientific Name	Tree Category
ST145	66	River Red-gum	<i>Eucalyptus camaldulensis</i>	Small Scattered Tree
ST146	117	White Box	<i>Eucalyptus albens</i>	Large Scattered Tree
ST147	108	River Red-gum	<i>Eucalyptus camaldulensis</i>	Large Tree in Patch
ST148	108	River Red-gum	<i>Eucalyptus camaldulensis</i>	Large Tree in Patch
ST149	136	River Red-gum	<i>Eucalyptus camaldulensis</i>	Large Tree in Patch
ST150	152	Grey Box	<i>Eucalyptus microcarpa</i>	Large Scattered Tree
ST151	108	River Red-gum	<i>Eucalyptus camaldulensis</i>	Large Tree in Patch
ST152	102	River Red-gum	<i>Eucalyptus camaldulensis</i>	Large Tree in Patch
ST153	93	White Box	<i>Eucalyptus albens</i>	Large Scattered Tree
ST154	141	River Red-gum	<i>Eucalyptus camaldulensis</i>	Large Tree in Patch
ST155	149	Grey Box	<i>Eucalyptus microcarpa</i>	Large Scattered Tree
ST156	139	Grey Box	<i>Eucalyptus microcarpa</i>	Large Scattered Tree
ST157	123	River Red-gum	<i>Eucalyptus camaldulensis</i>	Large Tree in Patch
ST158	168	River Red-gum	<i>Eucalyptus camaldulensis</i>	Large Tree in Patch
ST159	70	River Red-gum	<i>Eucalyptus camaldulensis</i>	Large Tree in Patch
ST160	122	River Red-gum	<i>Eucalyptus camaldulensis</i>	Large Tree in Patch
ST161	119	Grey Box	<i>Eucalyptus microcarpa</i>	Large Scattered Tree
ST162	66	River Red-gum	<i>Eucalyptus camaldulensis</i>	Small Scattered Tree
ST163	78	River Red-gum	<i>Eucalyptus camaldulensis</i>	Large Scattered Tree
ST164	118	River Red-gum	<i>Eucalyptus camaldulensis</i>	Large Tree in Patch
ST165	135	River Red-gum	<i>Eucalyptus camaldulensis</i>	Large Scattered Tree
ST166	105	River Red-gum	<i>Eucalyptus camaldulensis</i>	Large Tree in Patch
ST167	114	Grey Box	<i>Eucalyptus microcarpa</i>	Large Scattered Tree
ST168	140	River Red-gum	<i>Eucalyptus camaldulensis</i>	Large Tree in Patch
ST169	113	River Red-gum	<i>Eucalyptus camaldulensis</i>	Large Tree in Patch
ST170	114	River Red-gum	<i>Eucalyptus camaldulensis</i>	Large Tree in Patch
ST171	121	River Red-gum	<i>Eucalyptus camaldulensis</i>	Large Tree in Patch
ST172	121	Grey Box	<i>Eucalyptus microcarpa</i>	Large Scattered Tree
ST173	142	River Red-gum	<i>Eucalyptus camaldulensis</i>	Large Tree in Patch
ST174	146	Grey Box	<i>Eucalyptus microcarpa</i>	Large Scattered Tree
ST175	120	River Red-gum	<i>Eucalyptus camaldulensis</i>	Large Scattered Tree
ST176	121	River Red-gum	<i>Eucalyptus camaldulensis</i>	Large Tree in Patch
ST177	106	River Red-gum	<i>Eucalyptus camaldulensis</i>	Large Scattered Tree
ST178	123	River Red-gum	<i>Eucalyptus camaldulensis</i>	Large Tree in Patch
ST179	94	River Red-gum	<i>Eucalyptus camaldulensis</i>	Large Tree in Patch
ST180	103	Grey Box	<i>Eucalyptus microcarpa</i>	Large Scattered Tree
ST181	135	Stag	Stag	Large Scattered Tree
ST182	135	River Red-gum	<i>Eucalyptus camaldulensis</i>	Large Tree in Patch
ST183	117	Grey Box	<i>Eucalyptus microcarpa</i>	Large Scattered Tree
ST184	121	River Red-gum	<i>Eucalyptus camaldulensis</i>	Large Scattered Tree
ST185	78	Stag	Stag	Large Tree in Patch
ST186	135	White Box	<i>Eucalyptus albens</i>	Large Scattered Tree
ST187	157	Grey Box	<i>Eucalyptus microcarpa</i>	Large Scattered Tree
ST188	120	White Box	<i>Eucalyptus albens</i>	Large Scattered Tree
ST189	105	White Box	<i>Eucalyptus albens</i>	Large Scattered Tree
ST190	135	River Red-gum	<i>Eucalyptus camaldulensis</i>	Large Tree in Patch
ST191	141	River Red-gum	<i>Eucalyptus camaldulensis</i>	Large Tree in Patch
ST192	112	River Red-gum	<i>Eucalyptus camaldulensis</i>	Large Tree in Patch
ST193	78	River Red-gum	<i>Eucalyptus camaldulensis</i>	Large Scattered Tree

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Tree ID	DBH	Common Name	Scientific Name	Tree Category
ST194	45	River Red-gum	<i>Eucalyptus camaldulensis</i>	Small Scattered Tree
ST195	98	River Red-gum	<i>Eucalyptus camaldulensis</i>	Large Tree in Patch
ST196	78	River Red-gum	<i>Eucalyptus camaldulensis</i>	Large Tree in Patch
ST197	86	River Red-gum	<i>Eucalyptus camaldulensis</i>	Large Tree in Patch
ST198	114	River Red-gum	<i>Eucalyptus camaldulensis</i>	Large Tree in Patch
ST199	120	River Red-gum	<i>Eucalyptus camaldulensis</i>	Large Tree in Patch
ST200	74	River Red-gum	<i>Eucalyptus camaldulensis</i>	Large Tree in Patch
ST201	71	River Red-gum	<i>Eucalyptus camaldulensis</i>	Large Tree in Patch
ST202	79	River Red-gum	<i>Eucalyptus camaldulensis</i>	Large Tree in Patch
ST203	105	River Red-gum	<i>Eucalyptus camaldulensis</i>	Large Tree in Patch
ST204	135	River Red-gum	<i>Eucalyptus camaldulensis</i>	Large Tree in Patch
ST205	89	Grey Box	<i>Eucalyptus microcarpa</i>	Large Tree in Patch
ST206	114	River Red-gum	<i>Eucalyptus camaldulensis</i>	Large Tree in Patch
ST207	73	Grey Box	<i>Eucalyptus microcarpa</i>	Large Tree in Patch
ST208	82	River Red-gum	<i>Eucalyptus camaldulensis</i>	Large Tree in Patch
ST209	150	River Red-gum	<i>Eucalyptus camaldulensis</i>	Large Tree in Patch
ST210	100	River Red-gum	<i>Eucalyptus camaldulensis</i>	Large Tree in Patch
ST211	114	Grey Box	<i>Eucalyptus microcarpa</i>	Large Tree in Patch
ST212	82	Grey Box	<i>Eucalyptus microcarpa</i>	Large Tree in Patch
ST213	111	River Red-gum	<i>Eucalyptus camaldulensis</i>	Large Tree in Patch
ST214	80	Grey Box	<i>Eucalyptus microcarpa</i>	Large Tree in Patch
ST215	137	River Red-gum	<i>Eucalyptus camaldulensis</i>	Large Tree in Patch
ST216	88	River Red-gum	<i>Eucalyptus camaldulensis</i>	Large Tree in Patch
ST217	80	River Red-gum	<i>Eucalyptus camaldulensis</i>	Large Tree in Patch
ST218	103	River Red-gum	<i>Eucalyptus camaldulensis</i>	Large Tree in Patch
ST219	123	River Red-gum	<i>Eucalyptus camaldulensis</i>	Large Tree in Patch
ST220	74	River Red-gum	<i>Eucalyptus camaldulensis</i>	Large Tree in Patch
ST221	112	River Red-gum	<i>Eucalyptus camaldulensis</i>	Large Tree in Patch
ST222	98	River Red-gum	<i>Eucalyptus camaldulensis</i>	Large Tree in Patch
ST223	86	River Red-gum	<i>Eucalyptus camaldulensis</i>	Large Tree in Patch
ST224	70	River Red-gum	<i>Eucalyptus camaldulensis</i>	Large Tree in Patch
ST225	103	River Red-gum	<i>Eucalyptus camaldulensis</i>	Large Tree in Patch
ST226	104	River Red-gum	<i>Eucalyptus camaldulensis</i>	Large Tree in Patch
ST227	110	River Red-gum	<i>Eucalyptus camaldulensis</i>	Large Tree in Patch
ST228	178	River Red-gum	<i>Eucalyptus camaldulensis</i>	Large Tree in Patch
ST229	113	River Red-gum	<i>Eucalyptus camaldulensis</i>	Large Tree in Patch
ST230	86	River Red-gum	<i>Eucalyptus camaldulensis</i>	Large Tree in Patch
ST231	140	River Red-gum	<i>Eucalyptus camaldulensis</i>	Large Tree in Patch
ST232	150	River Red-gum	<i>Eucalyptus camaldulensis</i>	Large Tree in Patch
ST233	151	River Red-gum	<i>Eucalyptus camaldulensis</i>	Large Tree in Patch
ST234	87	River Red-gum	<i>Eucalyptus camaldulensis</i>	Large Tree in Patch
ST235	112	River Red-gum	<i>Eucalyptus camaldulensis</i>	Large Tree in Patch
ST236	92	River Red-gum	<i>Eucalyptus camaldulensis</i>	Large Tree in Patch
ST237	78	River Red-gum	<i>Eucalyptus camaldulensis</i>	Large Tree in Patch
ST238	74	River Red-gum	<i>Eucalyptus camaldulensis</i>	Large Tree in Patch
ST239	107	Grey Box	<i>Eucalyptus microcarpa</i>	Large Tree in Patch
ST240	121	River Red-gum	<i>Eucalyptus camaldulensis</i>	Large Tree in Patch
ST241	89	River Red-gum	<i>Eucalyptus camaldulensis</i>	Large Tree in Patch
ST242	74	River Red-gum	<i>Eucalyptus camaldulensis</i>	Large Tree in Patch



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Tree ID	DBH	Common Name	Scientific Name	Tree Category
ST243	160	River Red-gum	<i>Eucalyptus camaldulensis</i>	Large Tree in Patch
ST244	88	River Red-gum	<i>Eucalyptus camaldulensis</i>	Large Tree in Patch
ST245	93	River Red-gum	<i>Eucalyptus camaldulensis</i>	Large Tree in Patch
ST246	104	River Red-gum	<i>Eucalyptus camaldulensis</i>	Large Tree in Patch
ST247	109	River Red-gum	<i>Eucalyptus camaldulensis</i>	Large Tree in Patch
ST248	92	River Red-gum	<i>Eucalyptus camaldulensis</i>	Large Tree in Patch
ST249	120	River Red-gum	<i>Eucalyptus camaldulensis</i>	Large Tree in Patch
ST250	137	River Red-gum	<i>Eucalyptus camaldulensis</i>	Large Tree in Patch
ST251	81	River Red-gum	<i>Eucalyptus camaldulensis</i>	Large Tree in Patch
ST252	98	River Red-gum	<i>Eucalyptus camaldulensis</i>	Large Tree in Patch
ST253	87	River Red-gum	<i>Eucalyptus camaldulensis</i>	Large Tree in Patch
ST254	105	River Red-gum	<i>Eucalyptus camaldulensis</i>	Large Scattered Tree
ST255	80	River Red-gum	<i>Eucalyptus camaldulensis</i>	Large Tree in Patch
ST256	106	River Red-gum	<i>Eucalyptus camaldulensis</i>	Large Tree in Patch
ST257	77	River Red-gum	<i>Eucalyptus camaldulensis</i>	Large Tree in Patch
ST258	102	River Red-gum	<i>Eucalyptus camaldulensis</i>	Large Tree in Patch
ST259	131	River Red-gum	<i>Eucalyptus camaldulensis</i>	Large Tree in Patch
ST260	109	River Red-gum	<i>Eucalyptus camaldulensis</i>	Large Tree in Patch
ST261	90	River Red-gum	<i>Eucalyptus camaldulensis</i>	Large Tree in Patch
ST262	85	River Red-gum	<i>Eucalyptus camaldulensis</i>	Large Tree in Patch
ST263	117	River Red-gum	<i>Eucalyptus camaldulensis</i>	Large Tree in Patch
ST264	91	River Red-gum	<i>Eucalyptus camaldulensis</i>	Large Tree in Patch
ST265	94	River Red-gum	<i>Eucalyptus camaldulensis</i>	Large Tree in Patch
ST266	121	River Red-gum	<i>Eucalyptus camaldulensis</i>	Large Tree in Patch
ST267	137	River Red-gum	<i>Eucalyptus camaldulensis</i>	Large Tree in Patch
ST268	77	River Red-gum	<i>Eucalyptus camaldulensis</i>	Large Tree in Patch
ST269	263	River Red-gum	<i>Eucalyptus camaldulensis</i>	Large Tree in Patch

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# Appendix F

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## Tree Habitat Value Assessment

**DRAFT****Appendix F Tree Habitat Value Assessment****Table 21 Tree habitat value assessment**

Tree ID	Species	Common Name	Tree Type	DBH	Canopy health	LTH	MTH	STH	LSH	MSH	SSH	Microbat Hollows	Other habitat features	Total habitat features	Ecology Rating	Retained (Y/N)
ST1	Stag	Stag	Large Scattered Tree	95	No canopy					6				6	High	N
ST2	<i>Eucalyptus microcarpa</i>	Grey Box	Large Scattered Tree	172	No canopy		1				1		1 small nest	3	Low	N
ST3	Stag	Stag	Large Scattered Tree	125	>70%		1		1	3	4			9	High	N
ST4	Stag	Stag	Large Scattered Tree	86	No canopy	1		2			1			4	Med	N
ST54	Stag	Stag	Large Scattered Tree	130	No canopy						1			1	Low	N
ST58	<i>Eucalyptus microcarpa</i>	Grey Box	Large Scattered Tree	116	>70%								1 small nest	1	Low	N
ST62	<i>Eucalyptus microcarpa</i>	Grey Box	Large Scattered Tree	130	30 – 70%		1	1		4	3			9	High	N
ST83	Stag	Stag	Large Scattered Tree	100	No canopy		1	2		1				4	Med	N
ST84	<i>Eucalyptus microcarpa</i>	Grey Box	Large Scattered Tree	105	30 – 70%					3	8			11	Med	N

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Tree ID	Species	Common Name	Tree Type	DBH	Canopy health	LTH	MTH	STH	LSH	MSH	SSH	Microbat Hollows	Other habitat features	Total habitat features	Ecology Rating	Retained (Y/N)
ST85	Stag	Stag	Large Scattered Tree	130	No canopy		1	2		1	1			5	Med	N
ST90	<i>Eucalyptus microcarpa</i>	Grey Box	Large Scattered Tree	203	30 – 70%		5	3		3	9		1 small nest	21	High	N
ST92	<i>Eucalyptus microcarpa</i>	Grey Box	Large Scattered Tree	122	30 – 70%					6	3		Small nest (possible mammal), 2 nests - Raptor nest and magpie nest	12	High	N
ST93	Stag	Stag	Large Scattered Tree	114	No canopy					4	3			7	High	N
ST107	<i>Eucalyptus microcarpa</i>	Grey Box	Large Scattered Tree	123	30 – 70%	1	1			1	4			7	High	N
ST112	<i>Eucalyptus albens</i>	White Box	Large Scattered Tree	88	30 – 70%		1			2	1			4	Med	N
ST115	<i>Eucalyptus microcarpa</i>	Grey Box	Large Scattered Tree	131	30 – 70%						2			2	Low	N
ST118	Stag	Stag	Large Scattered Tree	99	No canopy	1	1			2				4	High	N

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Tree ID	Species	Common Name	Tree Type	DBH	Canopy health	LTH	MTH	STH	LSH	MSH	SSH	Microbat Hollows	Other habitat features	Total habitat features	Ecology Rating	Retained (Y/N)
ST126	<i>Eucalyptus albens</i>	White Box	Large Scattered Tree	108	30 – 70%					1				1	Low	N
ST127	<i>Eucalyptus microcarpa</i>	Grey Box	Large Scattered Tree	115	>70%			1		3	2			6	High	N
ST133	<i>Eucalyptus microcarpa</i>	Grey Box	Large Scattered Tree	123	30 – 70%		2	2		1	1			6	High	N

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# Appendix G

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## Role of Trees in Facilitating Landscape Connectivity

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## Appendix G Role of Trees in Facilitating Landscape Connectivity

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# Appendix H

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Striped Legless Lizard  
Memo

**D R A F T**

## Appendix H    Striped Legless Lizard Memo

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# Appendix I

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## Native Vegetation Removal Report



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## Appendix I      Native Vegetation Removal Report

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# Appendix J

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Clause 52.17 Permit  
application

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The tables below provide the necessary information to inform the application under the ‘Detailed’ pathway.

Number	Application requirement
	<p>Information about the native vegetation to be removed, including:</p> <ul style="list-style-type: none"> <li>The assessment pathway and reason for the assessment pathway. This includes the location category of the native vegetation to be removed.</li> <li>A description of the native vegetation to be removed that includes: <ul style="list-style-type: none"> <li>whether it is a patch or a scattered tree (or both);</li> <li>the extent (in hectares);</li> <li>the number and circumference (in centimetres measured at 1.3 metres above ground level) of any large trees within a patch;</li> <li>the number and circumference (in centimetres measured at 1.3 metres above ground level) of any Scattered Trees, and whether each tree is small or large;</li> <li>the strategic biodiversity value score;</li> <li>the condition score;</li> <li>if it includes endangered Ecological Vegetation Classes; and</li> <li>if it includes sensitive wetland or coastal areas.</li> </ul> </li> <li>Maps showing the native vegetation and property in context and containing: <ul style="list-style-type: none"> <li>scale, north point and property boundaries;</li> <li>location of any patches of native vegetation and the number of large trees within the patch proposed to be removed; and</li> <li>location of Scattered Trees proposed to be removed, including their size.</li> </ul> </li> </ul> <p>The offset requirement, determined in accordance with section 5 of the Guidelines, that will apply if the native vegetation is approved to be removed.</p> <ul style="list-style-type: none"> <li>The offset requirement, determined in accordance with section 5 of the Guidelines, that will apply if the native vegetation is approved to be removed</li> </ul>
<b>Response</b>	<b>See Appendix A -</b>

Number	Application requirement
<b>2</b>	<p>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. This may be represented in a map or plan.</p>
<b>Response</b>	<p><b>See Figure 1 – Appendix A</b></p> <p>It is noted the assessment area is generally of very low relief which is characteristic of land located within the Victoria Riverina bioregion as represented in Attachment C. Low-lying areas, DEECA mapped wetlands and</p>



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Number	Application requirement
	drainage lines are also represented in Attachment C. The assessment area does not contain steep slopes, existing erosion and saline discharge areas.

Number	Application requirement
<b>3</b>	Recent, dated photographs of the native vegetation to be removed
<b>Response</b>	See below for a representative sample of the vegetation to be removed- all photos were taken during the field assessments of the site (February and March 2019).



Representative photos of large scattered trees to be removed



Large scattered trees within a grazed paddock



Representative photos of large scattered trees to be removed



Representative photos of large scattered trees to be removed

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Representative photos of large scattered trees to be removed



Representative photos of large scattered trees to be removed

Number	Application requirement
4	Details of any other native vegetation approved to be removed, or that was removed without the required approvals, on the same property or on contiguous land in the same ownership as the applicant in the five-year period before the application for a permit was lodged
Response	There has been no removal of vegetation within the property in the 5 years preceding this permit application

Number	Application requirement
5	<p>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 focused on areas of native vegetation that have the most value. The statement should include a description of the following:</p> <ul style="list-style-type: none"> <li>Strategic level planning – any regional or landscape scale strategic planning process that the site has been subject to that avoided and minimised impacts on native vegetation across a region or landscape</li> <li>Site level planning – how the proposed use or development has been sited or designed to avoid and minimise impacts on native vegetation.</li> <li>That no feasible opportunities exist to further avoid and minimise impacts on native vegetation without undermining the key objectives of the proposal.</li> </ul>
Response	<p><b>Strategic level planning:</b></p> <p>The previous proponent (South Energy) engaged with the Benalla City Council during the solar farm site selection process. Through this process the study area was identified as a suitable location for a solar farm due to the land being zoned as Industrial and access to existing transmission powerline to tie-in the solar farm.</p> <p>Adjoining land parcels were considered in the site selection process. Adjoining landowners were either not interested in joining the project due to existing land uses or the land use was considered not appropriate for solar panels. This included land that was being used for existing industrial land uses or the land was managed by the Department of Defence.</p> <p>Strategic level planning was also undertaken in accordance with the requirements of regional policy, namely the <i>Goulburn Broken Regional</i></p>

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*Catchment Strategy (2013-2019)*. The RCS highlights the importance of biodiversity within the region, including the important habitat that native vegetation provides for many species. The RCS also identifies the dominant land use within the Catchment as being privately owned land used for dryland agriculture. Waterways, floodplains and wetlands are an integral part of the Catchment due to their environmental, social and economic values. The vision of the RCS aims to achieve healthy, resilient and increasingly productive landscapes supporting vibrant communities.

The RCS provides the strategic framework for aligning sub-strategy implementation by listing the sub-strategies' 20 to 30-year objectives for biodiversity, land, water and people. The Biodiversity Strategy outlines a series of management measures to meet biodiversity objectives and prioritises geographic areas for two main actions: 1) protecting ecosystem services and 2) enhancing existing remnant vegetation through corridors and linkages.

The RCS identifies Benalla as located within 'Productive Plains'. It is highlighted that conservation reserves are too few and small to sustain wildlife, however, the area can be considered fragmented with potential for revegetation and connection of remnant patches. The focus for the area of 'Productive Plains' includes to increase native vegetation areas and connections to Goulburn and Broken Rivers, Holland and Hughes Creek and Winton Wetland.

Consideration to RCS is demonstrated through the following Project design refinements:

- Ecological assessments have been undertaken and results incorporated into the project design to ensure that values identified as 'high value' during ecological assessments are retained. This includes:
  - Retaining all patches of native vegetation
  - Minimising tree losses to 20 Large Scattered Trees; the reduction in tree losses has resulted in trees with important fauna habitat value being retained. This includes retaining all Category 1 and Category 2 trees and 30% of >Category 3
  - All areas of SBV >0.4 have been retained (Figure 7– Appendix A)

**Site level planning:**

The proponent for this development has invested significant effort in ensuring that the ultimate design of the facility has avoided and minimised ecological impact to those areas of the site that have been identified as containing higher biodiversity value.

Initially, a desktop assessment was undertaken to review DEECA's Strategic Biodiversity Value mapping (provided in Attachment C), past records of significant flora, vegetation communities and fauna species that have been recorded from within the site, or within close proximity to the property boundaries.

This assessment informed the due diligence of the suitability of the site for a solar farm, informed the early design of the proposed facility, and informed the scope of the detailed site assessments that followed.

Detailed assessments and analysis to establish the ecological values of the project area are outlined in 3.2. The assessments included a broad ecological constraints assessment conducted from the 13-14 February 2019 and detailed ecological survey undertaken from the 20-21 March and 25 July 2019. In



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addition, the transmission line ecological assessment and a tree habitat value assessment for the solar farm was undertaken on 6-8 April 2022. Further assessment for Striped Legless Lizard habitat was undertaken on 12-13 December 2022.

A GIS based 'habitat connectivity assessment' (tree proximity analysis) was also undertaken to determine those trees on the site that should be a higher priority for retention based on their regional habitat connectivity.

An iterative design process was undertaken by the Project to avoid impact to the ecological values identified by those investigations (Section 4.0) which included:

- Patches of native vegetation (Figure 3– Appendix A)
- Areas with a Strategic Biodiversity Value of >0.4 in NatureKit (Figure 7– Appendix A).
- Trees assigned higher proximity ratings via a habitat connectivity / tree proximity analysis (Figure 8- Appendix A).
- Trees with a high or medium habitat value (Figure 9– Appendix A).

Through the iterative design process, AECOM design engineers and South Energy have achieved a design which:

- Avoids of all patches of native vegetation
- Minimises tree losses to 20 Large Scattered Trees; the reduction in tree losses has resulted in trees with important fauna habitat value being retained. This includes retaining all Category 1 and Category 2 trees and 30% of >Category 3.

Whilst the project is currently proposing to remove all native vegetation within the transmission line study area, it is expected that these losses will be minimised once that component of the project progresses to detailed design. It is likely that impacts will be reduced to the minimum extent necessary to facilitate access and to construct hardstand areas.

The key design and engineering constraint relevant to tree retention is the specific layout of trackers and solar array panels which come in set lengths specified by the manufacturer. The trackers are orientated in a north-south direction to track the sun throughout the day; thus, given the length and orientation of tracker rows, avoiding all trees is not possible. The project also acquired the development with an approved layout/development footprint and associated constraints. The project has maintained a similar design to Revision E in order to retain the highest number of trees possible, however the inclusion of the transmission line study area and the additional trees not previously recorded within the solar farm study area has resulted in the loss of four additional trees

The table below provides the results of each design iteration, which demonstrates the impact of the minimisation strategies adopted.

Design option	Extent of proposed vegetation removal (ha)	Number of large trees in patches and large scattered trees (LST) proposed to be removed	Number of small scattered trees (ST) proposed to be removed
Option 1 (19/06/2019)	10.268 ha	81	0

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Option 2 (15/07/2019)	2.877 ha	42	0
Option 3 (13/08/2019)	2.838 ha	41	1
Option 4 (23/08/2019)	3.119 ha	45	1
Option 5 (3/09/2019)	2.838 ha	41	1
Option 6 (13/12/2019)	1.125 ha	16	0
Option 7 (current option)	1.963 ha	20	0

In addition, the project has also sought to avoid and minimise any impacts to remnant roadside vegetation where upgrades to existing access roads are proposed and where new access roads will be constructed from public roads. Upgrades and construction of new access roads are exempt from requiring a permit to remove, destroy or lop native vegetation under Clause 52.17-7 *vehicle access from public roads* provided they are no wider than 6 metres. Proposed works associated with upgrading existing accessways and constructing new accessways will be limited to a 5-metre complete footprint. If a wider footprint than this is required (for construction purposes) they will be sited in non-native vegetation outside of tree protection zones (TPZs).

Additional measures have been included to further reduce any direct and indirect impacts to remnant roadside vegetation – this includes siting new access roads in non-native vegetation outside of TPZs and limiting construction activities where upgrades to existing access roads may interact with adjacent tree protection zones (e.g. no machinery movement or storage of fill within the TPZ).

#### **The role of native vegetation to be removed**

As at design revision 15, 1.963 ha of native vegetation (Riverina Plains Grassy Woodland and Plains Grassy Wetland EVCs) and 20 large scattered trees are proposed to be removed. Scattered Trees or 'paddock trees' play a crucial role in the Benalla region by acting as stepping-stones between intact remnant areas of vegetation. Individually, Scattered Trees also provide habitat to a variety of rare, threatened and common fauna species through provision of food resources and hollows that provide den/nesting habitat. The Project has undergone several design iterations to avoid and minimise loss of Scattered Trees to the minimum extent. This iterative process has included consideration of the SBV map, the habitat connectivity assessment and the tree habitat value assessment so that trees retained will still function as stepping-stones to larger areas of remnant vegetation in the wider landscape – that is, trees are connected, are located proximal to 'patch vegetation' mapped within the study area and provide a range of habitat resources for fauna.

**DRAFT****ADVERTISED PLAN****The need to manage native vegetation to preserve identified landscape values:**

It is widely acknowledged the role that large remnant trees play in the Victorian Riverina and surrounding bioregions in relation to providing habitat corridors and stepping-stones between intact remnant areas of vegetation. The design of this project has taken these landscape values into account and minimised the number of tree losses and prioritised the retention of large trees with important habitat features. Subsequently, the number of tree losses has been reduced to 20 Large Scattered Trees.

In the broader Benalla and Wangaratta regions, there are several solar farm projects that will result in the loss of large trees from the landscape. Consideration of the loss of large trees at Kennedys Creek is thus important in the context of tree losses in the wider region. As of 2020, there are 1,046 large Scattered Trees identified across these renewable energy projects and 216 large trees have been approved to be removed. It is unknown whether the number of large trees removed are large Scattered Trees only or whether the large tree losses are a result of large tree in patch loss.

Through the avoid and minimise process the Project has reduced tree losses from the highest number (45 trees) to 20 Large Scattered Trees. No Large Trees in Patches will be removed. During the current revision of the project, the project sought to reduce tree losses and completed a tree habitat value assessment to further prioritise the retention of large trees that provide habitat value for fauna.

In addition, tree removal will not contribute to or further exacerbate degradation of waterways as tree removal does not occur within 30 metres of a wetland or waterway. Tree removal is also not expected to advance land degradation, including soil erosion, salination, acidity, instability and water logging.

**Whether any part of the native vegetation to be removed, destroyed or lopped is protected under the Aboriginal Heritage Act 2006:**

Trees to be removed occur within an area of Cultural Heritage Sensitivity as shown in **Figure XX**. A complex Cultural Heritage Assessment has been drafted and is expected to be completed in mid-2021.

Areas of Cultural Heritage Sensitivity will be captured under this CHMP. Areas of Cultural Heritage Sensitivity are mapped in **Figure XX**.

**Consider the impacts on habitat for rare or threatened species:**

The Project has been designed to avoid impacting on habitat for rare and threatened species by avoiding removal of all habitat zones and reducing tree losses to the minimum number practicable. The results of ecology technical studies have informed the iterative design process to avoid and minimise impacts to habitat for rare and threatened species. As a result, no species offset requirements (see **Appendix I**).

**No feasible opportunities exist to further avoid and minimise impacts on native vegetation:**



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	Due to the engineering requirements of a solar panel layout, no further opportunities exist to reduce the extent of tree loss for this project. Additionally, a further reduction in the number of panels would somewhat limit the viability of the project. Where possible, trees that were original considered for removal that occurred adjacent to access tracks or on the edge of the panel layout have since been retained through amendments to the location of access tracks and solar panels. The 20 trees that are to be removed are located within the middle of the solar layout and are unable to be designed around.
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Number	Application requirement
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.
Response	<b>No Property Vegetation Plan applies to the site</b>

Number	Application requirement
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.
Response	<b>Not applicable</b>

Number	Application requirement
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.
Response	<b>Not applicable</b>

Number	Application requirement
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. A suitable statement includes evidence that the required offset: <ul style="list-style-type: none"> <li>• is available to purchase from a third party, or</li> <li>• will be established as a new offset and has the agreement of the proposed offset provider, or</li> <li>• can be met by a first party offset.</li> </ul>
Response	<b>An offset statement has been provided in Attachment A</b>

Number	Application requirement
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<b>10</b>	<p>A site assessment report of the native vegetation to be removed, including:</p> <ul style="list-style-type: none"> <li>• A habitat hectare assessment of any patches of native vegetation, including the condition, extent (in hectares), Ecological Vegetation Class and Bioregional Conservation Status;</li> <li>• The location, number, circumference (in cm measured at 1.3 metres above ground level) and species of large trees within patches;</li> <li>• The location, number, circumference (in cm measured at 1.3 metres above ground level) and species of scattered trees and whether each tree is small or large.</li> </ul>
<b>Response</b>	26 patches of native vegetation equating to 1.963 ha and 20 Large Scattered Trees are proposed to be removed for the development of the solar farm.

Tree No.	Common Name	Scientific Name	DBH (cm)	Habitat value	X – MGA 55	Y – MGA 55
ST1	Stag	Stag	95	High		
ST2	Grey Box	<i>Eucalyptus microcarpa</i>	172	Low		
ST3	Stag	Stag	125	High		
ST4	Stag	Stag	86	Med		
ST54	Stag	Stag	130	Low		
ST58	Grey Box	<i>Eucalyptus microcarpa</i>	116	Low		
ST62	Grey Box	<i>Eucalyptus microcarpa</i>	130	High		
ST83	Stag	Stag	100	Med		
ST84	Grey Box	<i>Eucalyptus microcarpa</i>	105	Med		
ST85	Stag	Stag	130	Med		
ST90	Grey Box	<i>Eucalyptus microcarpa</i>	203	High		
ST92	Grey Box	<i>Eucalyptus microcarpa</i>	122	High		
ST93	Stag	Stag	114	High		
ST107	Grey Box	<i>Eucalyptus microcarpa</i>	123	High		
ST112	White Box	<i>Eucalyptus albens</i>	88	Med		
ST115	Grey Box	<i>Eucalyptus microcarpa</i>	131	Low		
ST118	Stag	Stag	99	High		
ST126	White Box	<i>Eucalyptus albens</i>	108	Low		
ST127	Grey Box	<i>Eucalyptus microcarpa</i>	115	High		
ST133	Grey Box	<i>Eucalyptus microcarpa</i>	123	High		

Number	Application requirement
<b>11</b>	<p>Information about impacts on rare or threatened species habitat, including:</p> <ul style="list-style-type: none"> <li>• The relevant section of the <i>habitat importance map</i> for each rare or threatened species requiring a species offset</li> <li>• For each rare or threatened species that the native vegetation to be removed is habitat for, according to the Habitat importance maps: <ul style="list-style-type: none"> <li>- The species' conservation status</li> </ul> </li> </ul>

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	<ul style="list-style-type: none"><li>- The proportional impact of the removal of native vegetation on the total habitat for that species</li><li>- Whether their habitat are highly localized habitats, dispersed habitats, or important areas of habitat within a dispersed species habitat.</li></ul>
<b>Response</b>	<p>As per <b>Appendix I</b>, there are no species present on the site that require a species offset. Offsets necessary for the removals are general offsets only.</p> <p>During the vegetation avoid and minimisation process, effort has been taken to design the project to avoid modelled habitat rare or threatened species.</p>

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