

EPBC Act referral



Australian Government

Department of Agriculture, Water and the Environment

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Title of proposal	2020/8730 - Solar Farm, Axedale, 25 kms east of Bendigo, VIC
Section 1	
Summary of your proposed action	
1.1 Project industry type	Energy Generation and Supply (renewable)
1.2 Provide a detailed description of the proposed action, including all proposed activities	
<p>UPC\AC Renewables (UPC) proposes to develop, construct and operate a major grid-connected solar farm near Axedale, located 25 kilometres east of Bendigo in central Victoria.</p> <p>Construction of the solar farm will involve either driving or screwing steel piles into the ground at regular intervals. Tracker tubes will be installed on top of the piles to create rows with a north-south alignment, typically separated by a 5-8 metre spacing for a "1P" configuration (1 panel mounted in portrait on the tube) or 8-12 metres for a "2P" configuration (2 panels mounted in portrait on the tube). Solar photovoltaic (PV) modules (or "panels") will be affixed to the tracker tubes, which will allow the panels to track the sun east to west throughout the day to maximise energy yield.</p> <p>Ancillary equipment such as DC-AC inverters, a site office, gravel roads and operations & maintenance infrastructure will be installed within the boundary of the solar farm. A high voltage electrical substation will be constructed on-site with a transformer to step up the voltage to 220kV for injection into the grid. Medium voltage cable reticulation will be trenching to the depth required by relevant Australian standards throughout the site, to transport the electricity from the inverters to the substation. Other civil works will include the construction of internal gravel access tracks to access the inverters for maintenance and a temporary laydown area during construction. To the extent possible, the use of concrete or aggregate will be minimized wherever possible, except for where a concrete bench is required (e.g. foundation for the inverters and substation).</p> <p>The solar farm will have a useful life of up to 30 years, after which UPC will remediate the site to agricultural use.</p>	
1.3 What is the extent and location of your proposed action?	
See Appendix B	
1.5 Provide a brief physical description of the property on which the proposed action will take place and the location of the proposed action (e.g. proximity to major towns, or for off-shore actions, shortest distance to mainland)	
<p>The proposed action will take place on a 362 ha area of land classified as freehold land near the town of Axedale in central Victoria, approximately 25 kilometres east of Bendigo, Victoria. The proposed 362 ha development footprint is comprised of four separate landholdings that are all zoned as Farm Zone (FZ) within the Victorian Riverina Bioregion (39~1\PP3243, Lot 1 TP23380, Lot 2 TP23380, 7~A\PP3801, 16~A\PP3801, 16A~A\PP3801, 17A~A\PP3801, 19A~A\PP3801, 39A~1\PP3243, 3~A\PP3801, 4~A\PP3801, 5~A\PP3801). Landholdings within the development footprint range in size (60 ha to 140 ha), and uses from small rural landholdings to large-scale cropping enterprises. Approximately one half of the proposed 362 ha development footprint is within the Campaspe Shire Council and the other half is within the Bendigo Shire Council boundary.</p> <p>The project also involves entry points from Russells Bridge Road and Barnadown-Knowsley Road.</p>	
1.6 What is the size of the proposed action area development footprint (or work area) including disturbance footprint and avoidance footprint (if relevant)?	
The proposed development footprint is approximately 362 hectares.	
1.7 Proposed action location	
Address - Barnadown-Knowsley Road, Axedale, Victoria, 3551, Australia	
1.8 Primary jurisdiction	
Victoria	
1.9 Has the person proposing to take the action received any Australian Government grant funding to undertake this project?	
<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	



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1.10 Is the proposed action subject to local government planning approval?

☒ Yes ☐ No

1.10.1 Is there a local government area and council contact for the proposal?

☒ Yes ☐ No

1.10.1.0 Council contact officer details

1.10.1.1 Name of relevant council contact officer	Andrew Fletcher – Campaspe Shire & Peter O'Brien – City of Greater Bendigo (p.o'brien@bendigo.vic.gov.au)
1.10.1.2 E-mail	a.fletcher@campaspe.vic.gov.au
1.10.1.3 Telephone Number	03 5481 2347 – Campaspe Shire & 03 5434 6393 – City of Greater Bendigo

1.11 Provide an estimated start and estimated end date for the proposed action	Start Date	01/01/2021
	End Date	31/12/2023

1.12 Provide details of the context, planning framework and state and/or local Government requirements

The proposed 362 hectare development footprint is freehold land zoned as Farming Zone (FZ). The proposed action and its development footprint are not covered by any planning overlays.

Under the Planning and Environment Act 1987, Clause 35.07 (FZ), a planning permit is required for the use and development of the site for a solar farm and ancillary works. Under Clause 52.17 a planning permit is also required for removal of native vegetation to ensure that impacts on native vegetation do not result in a net loss to biodiversity and do not significantly degrade the land and water.

As the subject site falls within two local government areas, two separate Planning Schemes are applicable (Campaspe Planning Scheme and Greater Bendigo Planning Scheme). While the zones are the same for both Councils, there are differing regional and local policies, as outlined below;

Relevant Clauses from the (State) Planning Policy Framework include:

- Clause 12 Environmental and Landscape Values
- Clause 12.01 Biodiversity
- Clause 12.01-2S Native Vegetation Management
- Clause 12.03 Water Bodies And Wetlands
- Clause 12.05-2S Landscapes
- Clause 13 Environmental Risks and Amenity
- Clause 13.02-1S Bushfire Planning
- Clause 13.03-1S Floodplain management
- Clause 14 Natural Resource Management
- Clause 14.01-1S Protection of Agricultural Land
- Clause 14.02-2S Water Quality
- Clause 15.02-1S Energy and Resource Efficiency
- Clause 17 Economic Development
- Clause 17.01R Diversified Economy – Loddon Mallee North (Campaspe Shire Council)
- Clause 17.01R Diversified Economy – Loddon Mallee South (City of Greater Bendigo)
- Clause 19 Infrastructure



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- 19.01-1R Energy Supply
- 19.01-2S Renewable Energy – Loddon Mallee North (Campaspe Shire Council)
- 19.01-2R Renewable Energy – Loddon Mallee South (City of Greater Bendigo)

The applicable Clauses of the Greater Bendigo Local Planning Policy Framework include:

- Clause 21.08-5 Flooding aims to minimise risks to health and safety and potential damage to buildings, whilst preserving the natural functions of floodplains.
- Clause 21.07-1 Economic Growth aims to facilitate a strong and diverse economy that fosters innovation, learning, jobs, development and productivity in Greater Bendigo.
- Clause 21.07-8 Agriculture aims to protect productive agricultural land from inappropriate land uses and to minimise fragmentation of agricultural land, while minimising environmental impacts from intensive agriculture.
- Clause 22.04 Salinity and Erosion Risk Policy aims to minimise risk of salinity and rising water tables, and ensure development occurs on capable sites which maintain native vegetation.
- The related Clauses of the Campaspe Shire Local Planning Policy Framework include:
 - Clause 21.03-2 Biodiversity seeks to protect remnant native vegetation, located on private land and along river corridors, including grasslands and wetland vegetation.
 - Clause 21.04-1 Climate Change recognises the need to plan for climate change and variability, and strategies to support new technology to reduce greenhouse emissions.
 - Clause 21.04-2 Flooding acknowledges that comprehensive floodplain management is the necessary means to ensure flood hazards are minimised.
 - Clause 21.04-3 Bushfire recognises that extensive areas of the municipality are bushfire prone and aims to minimise the risk to life and ensure new development does not increase bushfire risk.
 - Clause 21.04-4 Salinity and Erosion aims to minimise salinity, erosion and rising water tables on the environment.
 - Clause 21.05-1 Agriculture identifies the economic importance of irrigated primary production in the region and the jeopardy of investments in areas of fragmented agricultural land with houses dispersed throughout. The aims include ensuring agriculture remains a key economic base in the region and ensuring rural production is not compromised by development.
 - Clause 21.07-1 Economic Growth aims to support a diverse economic environment and continue the growing labour force. Council strategies have a balanced approach to economic growth and enable new employment opportunities within the Shire.
 - Clause 22.04 Non-Agricultural Uses in the Farming Zone outlines the preferred mix of uses in the farming zone is of those that support agriculture and rural industries that promote economic development. Uses that cause negative impact on agriculture are discouraged.

Other applicable sections include Clause 53.13 Renewable Energy Facility (Other Than Wind Energy Facility and Geothermal Energy Extraction) and incorporated documents including Solar Energy Facilities Design and Development Guidelines (DELWP 2018), The Loddon Mallee North Regional Growth Plan (Campaspe Shire) and The Loddon Mallee South Regional Growth Plan (Greater Bendigo).

1.13 Describe any public consultation that has been, is being or will be undertaken, including with Indigenous stakeholders

UPC/AC Renewables has undertaken extensive consultation with the Taungurung Land and Waters Council (TLaWC), the Registered Aboriginal Party (RAP) under the Victorian Aboriginal Heritage Act 2006, as part of the Cultural Heritage Management Plan (CHMP 16197) preparation process. This consultation has included an inception meeting, post standard assessment (survey) meeting and meetings to discuss the complex assessment (excavation) methodology and results. In addition, TLaWC representatives have taken part in all field assessments completed for the CHMP.

UPC has a detailed stakeholder engagement plan which to date has involved targeted discussions with nearby landowners and prominent community members. UPC has undertaken consultation with the wider community through phone calls,



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Facebook, letters, a community drop-in information session and the local media. On 10 July 2019, UPC held the first Community Information Session. Details of the session were widely advertised well in advance and the session was attended by a number of locals and interested parties from the district. UPC has maintained transparency and has kept the community informed during all aspects of project development.

CHMP 16197 contains documentation of all consultation undertaken throughout the completion of the CHMP. The CHMP was executed by the RAP on 2 December 2019.

1.14 Describe any environmental impact assessments that have been or will be carried out under Commonwealth, State or Territory legislation including relevant impacts of the project

Biosis undertook a preliminary flora and fauna assessment of a 624 ha area of land proposed for development into a solar farm near Axedale on behalf of UPC in 2018. Data obtained from the broader biodiversity assessment (Biosis 2019) assisted UPC in refining the extent of the proposed action's 362 ha development footprint so as to:

- Minimise the number of scattered trees proposed to be removed.
- Avoid and/or minimise impacts on ecological communities or habitat identified as being potentially utilised by Matters of National Environmental Significance (MNES).

The biodiversity assessment report prepared by Biosis (2019) for the broader 624 ha study area has been attached (Attachment 6).

Following finalisation of the biodiversity assessment, Biosis was commissioned to provide advice as to whether the proposed action was likely to result in a significant impact on any MNES identified during the initial biodiversity assessment. This advice is outlined in Section 2.

1.15 Is this action part of a staged development (or a component of a larger project)?

☐ Yes ☒ No

1.16 Is the proposed action related to other actions or proposals in the region?

☐ Yes ☒ No



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Section 2

Matters of national environmental significance

2.1 Is the proposed action likely to have any direct or indirect impact on the values of any World Heritage properties?

☐ Yes ☒ No

2.2 Is the proposed action likely to have any direct or indirect impact on the values of any National Heritage places?

☐ Yes ☒ No

2.3 Is the proposed action likely to have any direct or indirect impact on the ecological character of a Ramsar wetland?

☐ Yes ☒ No

2.4 Is the proposed action likely to have any direct or indirect impact on the members of any listed species or any threatened ecological community, or their habitat?

☒ Yes ☐ No

Species or threatened ecological community

Swift Parrot *Lathamus discolor*

Impact

The Swift Parrot is listed as a critically endangered species under the EPBC Act. Grey Box *Eucalyptus microcarpa* and White Box *Eucalyptus albens* provide a foraging resource for Swift Parrots across their broad mainland range, which covers virtually all of Victoria and substantial portions of eastern New South Wales and south-eastern Queensland. The proposed action plans to remove 1 large White Box tree (DBH > 70 cm), 15 large scattered Grey Box trees (DBH > 70 cm) and 5 small scattered Grey Box trees (DBH < 70 cm) (Biosis 2019: Figure 3.1-3.3, Appendix 1 Table A1.2). A total of 112 large scattered trees and 17 small scattered trees will be retained.

Whilst removal of scattered Grey Box and White Box trees will result in the loss of potential foraging habitat for the species, this impact is considered unlikely to result in a significant impact on the species. This is mainly due to the unreliable and episodic nature of flowering and occurrence of lerps in Grey Box trees, which highlights the Swift Parrot population is not dependent on any one area for these resources but rather relies on the presence of numerous areas of potential foraging habitat (to ensure the species has constant supply of an unreliable foraging resource throughout the winter, particularly at identified priority sites) (Saunders and Tzaros 2011).

The scattered trees within the study area form a very small component of a much larger network of winter foraging habitat across much of Victoria and parts of eastern New South Wales and Queensland. As a consequence, no small or local areas of White Box or Grey Box trees represent a resource on which survival of the species depends, and removal of 15 large and 5 small scattered Grey Box trees and 1 large White Box tree within the study area is therefore unlikely to result in a significant impact.

Furthermore, the scattered trees removed as a result of this proposed action are not within or immediately adjacent to an area of defined priority habitat for Swift Parrot. Crosbie Nature Conservation Reserve (NCR) is identified as a priority site in the Swift Parrot recovery plan (Saunders and Tzaros 2011) and is located 7 km east of the site. Several other priority sites are found in the region including Heathcote – Graytown National Park and Pilchers Bridge NCR. The proposed removal of 1 large White Box tree and 15 scattered large and 5 small Grey Box trees is not likely to impact upon any Swift Parrot priority site or the species use of any such priority site. A detailed assessment against the relevant significant impact criteria for Swift Parrot is attached (Attachment 5).



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Species or threatened ecological community

Grey Box (*Eucalyptus microcarpa*) Grassy Woodlands of South-Eastern Australia ecological community

Impact

A total of 6.1 hectares of the Grey Box (*Eucalyptus microcarpa*) Grassy Woodlands of South-Eastern Australia ecological community was identified by Biosis during an initial biodiversity assessment within the proposed 362 hectare development footprint (Biosis 2019: Figure 3.1). This ecological community is listed as critically endangered under the EPBC Act, meaning any proposed removal of this community will trigger a significant impact. All patches of Grey Box Woodland within the proposed 362 hectare development footprint are to be retained and no reduction in extent of the ecological community will occur (Biosis 2019: Figure 3.1-3.3). A buffer of 15 metres will also be incorporated around the woodland to ensure indirect impacts are avoided.

The project also involves two entry points from public road reserves. Both road reserves support areas of this ecological community. Entry points have been designed to use existing disturbed areas, including an existing gateway (Russells Bridge Road) and a cleared area under the existing powerline (Barnadown-Knowsley Road).

The existing gateway may require some upgrade, including replacement of soil with gravel to improve the carrying capacity of the entrance. This upgrade may occur within the tree protection zones of two Grey Box trees, in an area of this community. These trees will not be directly removed, but may be treated as an assumed loss due to impacts to the TPZs of the trees.

The proposed action is therefore considered unlikely to trigger a significant impact on the community given that all Grey Box Woodland has been avoided during the design stage of the proposed action. A detailed assessment against the relevant significant impact criteria for Grey Box (*Eucalyptus microcarpa*) Grassy Woodlands of South-Eastern Australia ecological community is attached (Attachment 5).

Species or threatened ecological community

Painted Honeyeater *Grantiella picta*

Impact

Painted Honeyeater *Grantiella picta* is listed as vulnerable under the EPBC Act. The biodiversity assessment undertaken by Biosis identified potential habitat for Painted Honeyeater within the proposed 362 hectare development footprint. Mistletoe is an important habitat resource for this species, therefore woodland patches and scattered eucalypts within the footprint are considered potential habitat, as these features are likely to support mistletoe.

The proposed action is considered unlikely to have a significant impact on the species. This is largely due to the broad geographic range of the Painted Honeyeater population and that the species prefers wider blocks of remnant vegetation with high numbers of mature trees, as these typically host more mistletoes (Commonwealth of Australia 2015). The proposed action of removing 1 large White Box tree and 15 large and 5 small scattered Grey Box trees for this project is considered unlikely to have a significant impact on the species given 129 eucalypt trees and the 6.10 hectares of Grey Box Woodland community will be retained as habitat within the development footprint.

A detailed assessment against the relevant significant impact criteria for Painted Honeyeater is attached (Attachment 5).

2.4.2 Do you consider this impact to be significant?

☐ Yes ☒ No

2.5 Is the proposed action likely to have any direct or indirect impact on the members of any listed migratory species or their habitat?

☐ Yes ☒ No



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2.6 Is the proposed action to be undertaken in a marine environment (outside Commonwealth marine areas)? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
2.7 Is the proposed action likely to be taken on or near Commonwealth land? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
2.8 Is the proposed action taking place in the Great Barrier Reef Marine Park? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
2.9 Is the proposed action likely to have any direct or indirect impact on a water resource from coal seam gas or large coal mining development? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
2.10 Is the proposed action a nuclear action? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
2.11 Is the proposed action to be taken by a Commonwealth agency? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
2.12 Is the proposed action to be undertaken in a Commonwealth Heritage place overseas? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
2.13 Is the proposed action likely to have any direct or indirect impact on any part of the environment in the Commonwealth marine area? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No



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Section 3

Description of the project area

3.1 Describe the flora and fauna relevant to the project area

A biodiversity assessment of the proposed action area recorded a total of 28 native plant species and 23 introduced plant species from directly within the proposed 362 hectare development footprint (Attachment 6; Biosis 2019). Three of the native species are protected flora under the FFG Act whilst three introduced species are noxious weeds under the CaLP Act. No significant species were observed or considered likely to occur.

Patches of Plains Woodland scored in low condition within the 362 hectare proposed development footprint, using the Habitat hectares method (DSE 2004), have canopies of predominately Grey Box. The understory of these patches consisted primarily of bare ground or leaf litter with scattered occurrences of Wallaby-grass *Rytidosperma* spp. and/or Spear-grass *Austrostipa* spp. that could not be identified to species due to heavy grazing pressure from sheep and occasional occurrences of the more robust herb Berry Saltbush *Atriplex semibaccata* or Wingless Bluebush *Maireana enchylaenoides*.

Patches of Plains Woodland scored in moderate condition within the 362 hectare development footprint were assessed to have been modified by the agricultural land use but still retain many habitat features. These include large numbers of large trees, higher amounts of native ground cover, and fallen timber. These patches are valuable habitat but remain disconnected from core habitat due to surrounding clearing and often lack obvious signs of eucalypt recruitment. The understory of these patches consists primarily of bare ground or leaf litter with scattered occurrences of Wallaby-grass and/or Spear-grass and occasional occurrences of the more robust herb Berry Saltbush or Wingless Bluebush. Patches with more intact understorey supported a greater range of herbs including Variable Sida *Sida corrugata*, Woolly New Holland Daisy *Vittadinia gracilis* and Lemon Beauty-heads *Calocephalus citreus*.

Where patches of Plains Grassy Woodland within the development footprint were scored in good condition and dominated by Grey Box, they were assessed as meeting the listing criteria for the EPBC listed community Grey Box (*Eucalyptus microcarpa*) Grassy Woodlands of South-Eastern Australia ecological community because they supported more than 8 perennial native species in the mid and ground layers (Attachment 6; Biosis 2019: Figure 2.1-2.3).

Approximately 86 paddock trees were mapped as scattered trees according to the definitions of the Victorian Government Department of Environment, Land, Water & Planning (DELWP) within the proposed 362 hectare development footprint (Attachment 6; Biosis 2019: Figure 2.1-2.3). Paddock trees, or scattered trees, are distinguished as being isolated native trees located within otherwise cleared paddocks and provide essential resources in the landscape including stepping stone connectivity, large canopies and decorticating bark for foraging and habitat.

All paddock trees were eucalypts and were one of four species: White Box *Eucalyptus albens*, River Red-gum *Eucalyptus camaldulensis*, Yellow Gum *Eucalyptus melliodora* or Grey Box.

Of these trees, 52 scattered trees were classified as large trees (DBH > 70 centimetres) according to the ecological vegetation class (EVC) benchmark appropriate for their location. A total of 6 trees were dead or close to being dead but were mapped as they were larger than 40 centimetres DBH and so were included in DELWP native vegetation removal calculations.

Roadsides (including Russells Bridge Road and Barnadown-Knowsley Road), support some areas of Grey Box Woodland, areas of River Red-gum Woodlands and cleared areas dominated by exotic species. These road reserves were not assessed in detail. Only areas where access was required were assessed, and these locations were chosen to make use of existing clearances or disturbed areas.

Biosis recorded a total of 13 native bird species, one native mammal species, and one native reptile during the biodiversity assessment of the broader 624 hectare study area, which includes the proposed 362 hectare development footprint (Attachment 6; Biosis 2019: Appendix 2).

While no significant fauna species were observed during the site inspection, potential habitat for Swift Parrot in the form of scattered large old trees and woodland patches, particularly those that support Yellow Gum, were noted within the proposed 362 hectare development footprint. Potential habitat for Painted Honeyeater in the form of scattered large old trees and woodland patches, particularly those supporting mistletoe, were also observed.

Potential habitat for Pink-tailed Worm-Lizard was identified within the broader 624 hectare study area during the initial biodiversity assessment. Habitat for the species, however, has been specifically excluded from the proposed 362 hectare development footprint, and will therefore not be impacted directly or indirectly by the proposed action.

3.2 Describe the hydrology relevant to the project area (including water flows)



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The proposed action is located within the Victorian Riverina bioregion within the floodplain of the Campaspe River. The topography is generally flat with only small scale variations in topography. Elevation varies only 20 metres throughout the broader study area. Drainage lines throughout are generally in poor condition and subject to erosion although still often supporting patches of modified native vegetation or some efforts at rehabilitation. Detailed findings of the hydrological investigations are outlined in Attachment 7.

3.3 Describe the soil and vegetation characteristics relevant to the project area

The landscape has been cleared of most native vegetation and cultivated for wheat or pasture production. Soils throughout the majority of the proposed 362 hectare development footprint consist of alluvial clays. While dry at the time of survey, many parts of the proposed development footprint showed evidence of recent water-logging including the presence of plant species associated with wetter environments such as Hairy Willow-herb *Epilobium hirtigerum*, Small Loosestrife *Lythrum hyssopifolia* and Toad Rush *Juncus bufonius* (Attachment 6; Biosis 2019).

Where native vegetation persists within the 362 hectare development footprint, it largely exists in the form of trees retained in paddocks to provide shelter for stock either as paddock trees or as larger patches (Biosis 2019: Figure 2.1-2.3).

Adjacent road reserves support areas of remnant woodlands and cleared areas dominated by exotic species.

3.4 Describe any outstanding natural features and/or any other important or unique values relevant to the project area

Key ecological values of the proposed 362 hectare development footprint were identified and mapped during the broader biodiversity assessment, and include the following:

- 11.58 hectares of native vegetation, principally Plains Woodland, ranging from poor to good quality according to a Vegetation Quality Assessment but almost always supporting Large Trees, many of which contain tree hollows.
- 86 scattered trees (paddock trees), most of which are classified as Large Trees (52 trees), and which contribute to landscape connectivity and fauna habitat.
- 6.10 hectares of 'Grey Box (*Eucalyptus microcarpa*) Grassy Woodland of South Eastern Australia', which is listed as a threatened ecological community under the EPBC Act.
- Potential habitat for EPBC Act listed threatened fauna species: Swift Parrot *Lathamus discolor* and Painted Honeyeater *Grantiella picta*.

Key ecological values proposed to be impacted within the 362 hectare development footprint includes 16 large (DBH>70 centimetres) and five small scattered Grey Box trees, which provide potential foraging habitat for Swift Parrot.

This data has been submitted to DELWP to obtain a Native Vegetation Removal (NVR) Report in order to support an application to remove, destroy or lop native vegetation in accordance with Victoria's Guidelines for the removal, destruction or lopping of native vegetation. Details of the offset requirements necessary for the approval to be granted are provided within the biodiversity assessment report (Attachment 6; Biosis 2019: Appendix 5).

3.5 Describe the status of native vegetation relevant to the project area

The following native vegetation values were identified as present within the proposed action's 362 hectare development footprint during a biodiversity assessment undertaken by Biosis on the 3 and 4 December 2018:

- 6.10 hectares of 'Grey Box (*Eucalyptus microcarpa*) Grassy Woodland of South Eastern Australia', which is listed as a threatened ecological community under the EPBC Act.
- Three FFG Act protected flora species: Lemon Beauty-heads *Calocephalus citreus*, Jersey Cudweed *Helichrysum luteoalbum*, and Woolly New Holland Daisy *Vittadinia gracilis*
- 86 scattered trees, mapped according to the definitions by DELWP. Most of which are classified as Large Trees (52 trees), and which contribute to landscape connectivity and fauna habitat.
- 27 patches of native vegetation equating to 11.58 hectares, comprised of: 25 patches of Plains Woodland (EVC 803), ranging from poor to good quality according to Vegetation Quality Assessment but almost always supporting Large Trees; Two patches of Plains Woodlands/ Gilgai Wetland Mosaic (EVC 235), which was used to describe wetland vegetation along drainage lines within Plains Woodland areas.



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The location and extent of native vegetation values inside the 362 hectare proposed development footprint can be viewed in Figure 2 within the attached biodiversity report (Attachment 6; Biosis 2019).

The proposed 362 hectare impact area is on private land, therefore no protected flora permit is required under the FFG Act. Under the Planning and Environment Act 1987 – Clause 52.17, a planning permit is required to remove native vegetation, including scattered trees. Proposed vegetation removal data has been submitted DELWP to obtain a NVR. Details of the offset requirements necessary for the approval to be granted are provided within the biodiversity assessment report (Attachment 6; Biosis 2019: Appendix 5).

3.6 Describe the gradient (or depth range if action is to be taken in a marine area) relevant to the project area

The topography within the proposed development footprint is generally flat with only small scale variations in topography. Elevation varies only 20 metres across much of the site.

3.7 Describe the current condition of the environment relevant to the project area

Vegetation patches mapped during the initial biodiversity assessment undertaken by Biosis were divided into Habitat Zones with comparable quality for Vegetation Quality Assessment. The Vegetation Quality Assessment, using the habitat hectares method (DSE 2004), found that Habitat Zones within the proposed action area ranged in site condition score from poor to good condition. However, the landscape is largely cleared therefore landscape scores were poor for all Habitat Zones.

All other areas are dominated by introduced vegetation. These artificial habitats have been subject to clearing, pasture improvement, grazing of domestic stock and cropping.

All trees proposed for removal have a Bioregional Conservation Status of Endangered and a condition score of 0.2.

Detailed information relating to current vegetation quality and habitat scores can be found within the attached biodiversity report (Attachment 6; Biosis 2019).

3.8 Describe any Commonwealth Heritage places or other places recognised as having heritage values relevant to the project

There are no Commonwealth Heritage Places recorded within the project area.

A Cultural Heritage Management Plan (CHMP 16197) has been completed under the Victorian Aboriginal Heritage Act 2006. During the CHMP field assessments, a low density artefact scatter of Aboriginal cultural heritage material has been identified. In order to fulfil the requirements of the Aboriginal Heritage Regulations 2007, this material is recorded on the Victorian Aboriginal Heritage Register (VAHR) and is detailed within the CHMP report.

No historic heritage has been identified within the project area.

3.9 Describe any Indigenous heritage values relevant to the project area

Aboriginal cultural heritage flaked and ground stone artefacts have been identified across the eastern section of the project area, as a dispersed, low density artefact scatter. The nature, extent and significance of this Aboriginal place documented in the Cultural Heritage Management Plan (CHMP 16197). The assessment of the Indigenous heritage values has found that cultural heritage material is located in close proximity to Forest Creek to the east of the proposed action area, and along the unnamed ephemeral drainage line which runs through the eastern section of the proposed action area. No further Aboriginal cultural heritage has been identified in the proposed action area.

3.10 Describe the tenure of the action area (e.g. freehold, leasehold) relevant to the project area

Most of the project is located on freehold land whilst small access points are required through public road reserves.

3.11 Describe any existing or any proposed uses relevant to the project area

The majority of the locality is occupied by farmland, principally broad-acre dry land cropping and sheep production, with a mix of geologies and land use histories, on the eastern side of the Campaspe River.



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Section 4

Measures to avoid or reduce impacts

4.1 Describe the measures you will undertake to avoid or reduce impact from your proposed action

Based on the data obtained from the biodiversity assessment undertaken by Biosis (2019; Attachment 6), UPC/ AC Renewables was able to refine the proposed action into a development footprint of approximately 362 hectares (Attachment 1).

Following finalisation of the biodiversity assessment report, Biosis was commissioned to provide advice as to whether the proposed action was likely to result in a significant impact on any MNES identified during the initial biodiversity assessment. This advice is outlined in Section 2.4.1 of this referral and Attachment 5.

Advice provided by Biosis also assisted UPC in considering their layout options, and in selecting a design that:

- Reduced the project size to avoid paddocks with significant numbers of scattered trees that would be difficult to avoid.
- Minimised the absolute number of scattered Grey Box and White Box trees (that provide potential foraging habitat for Swift Parrot) proposed to be removed.
- Retained all patches of the Grey Box (*Eucalyptus microcarpa*) Grassy Woodlands of South-Eastern Australia ecological community.
- Excluded all areas which provide potential habitat for Pink-tailed Worm-Lizard.
- Selected project entry points from public roads in areas where there are existing disturbances, such as existing gateways, cleared areas and areas under existing overhead powerlines.

4.2 For matters protected by the EPBC Act that may be affected by the proposed action, describe the proposed environmental outcomes to be achieved

The following Matters of National Environmental Significance (MNES) that may be impacted by the proposed action include Swift Parrot and Painted Honeyeater; through the removal of scattered Grey Box and White Box trees which provide potential foraging habitat.

To minimise impact on potential foraging habitat for these species, UPC/AC Renewables has purposefully selected a final layout design that retains all patches of the Grey Box (*Eucalyptus microcarpa*) Grassy Woodlands of South-Eastern Australia ecological community and 28 large scattered Grey Box trees within the proposed 362 hectare development footprint.



Note: PDF may contain fields not relevant to your application. These fields will appear blank or unticked. Please disregard these fields.

Section 5

Conclusion on the likelihood of significant impacts

5.1 You indicated the below ticked items to be of significant impact and therefore you consider the action to be a controlled action

- ☐ World Heritage properties
- ☐ National Heritage places
- ☐ Wetlands of international importance (declared Ramsar wetlands)
- ☐ Listed threatened species or any threatened ecological community
- ☐ Listed migratory species
- ☐ Marine environment outside Commonwealth marine areas
- ☐ Protection of the environment from actions involving Commonwealth land
- ☐ Great Barrier Reef Marine Park
- ☐ A water resource, in relation to coal seam gas development and large coal mining development
- ☐ Protection of the environment from nuclear actions
- ☐ Protection of the environment from Commonwealth actions
- ☐ Commonwealth Heritage places overseas
- ☐ Commonwealth marine areas

5.2 If no significant matters are identified, provide the key reasons why you think the proposed action is not likely to have a significant impact on a matter protected under the EPBC Act and therefore not a controlled action

Detailed reasons the proposed action is not likely to have significant impact on any MNES protected under the EPBC Act are outlined within Attachment 5.

The proposed action plans to remove approximately 1 large (DBH > 70 centimetres) White Box *Eucalyptus albens* and 15 large (DBH > 70 centimetres) and 5 small (DBH < 70 centimetres) Grey Box *Eucalyptus microcarpa* trees within the proposed 362 hectare development footprint. Access to the site through Russells Bridge Road may also impact on the tree protection zones of 2 small Grey Box trees.

The proposed action is considered unlikely to have a significant impact on Swift Parrot *Lathamus discolor*. This is mainly due to the unreliable and episodic nature of flowering and occurrence of lerps in Grey Box and White Box trees, which highlights the Swift Parrot population is not dependent on any one area of this resource but rather relies on the presence of numerous areas of potential foraging habitat (to ensure the species has constant supply of an unreliable foraging resource throughout the winter, particularly at identified priority sites) (Saunders and Tzaros 2011).

The proposed action is considered unlikely to have a significant impact on Painted Honeyeater *Grantiella picta*, given the extent of remnant woodland and scattered trees remaining in the area (Biosis 2019: Appendix 1 Table A1.2). This outcome is largely attributed to the broad geographic range of the species population and that the species preference for wider blocks of remnant vegetation with high numbers of mature trees, as these typically host more mistletoes (Commonwealth of Australia 2015).

The proposed action is considered unlikely to trigger a significant impact on the community given that all Grey Box Woodland has been identified and avoided during the design stage of the proposed action. All patches of Grey Box Woodland within the proposed 362 hectare development footprint are to be retained and no reduction in extent of the ecological community will occur (Biosis 2019: Figure 3.1-3.3). A buffer of 15 metres will also be incorporated around the woodland patches to ensure indirect impacts are avoided.



Note: PDF may contain fields not relevant to your application. These fields will appear blank or unticked. Please disregard these fields.

Section 6

Environmental record of the person proposing to take the action

6.1 Does the person taking the action have a satisfactory record of responsible environmental management? Explain in further detail

UPC/AC Renewables is an ethical developer whose company ethos values environmental conservation. UPC/AC is committed to undertaking business activities in an environmentally sensitive and forward thinking manner.

UPC/AC has undertaken extensive consultation on this particular project to minimise the absolute number of scattered trees which are proposed to be removed, including assessing various possible designs that allow for different numbers of trees to be retained. The proposed action seeks to retain and conserve patches of remnant native vegetation on the site wherever possible without preventing a viable project from being designed, constructed and operated.

6.2 Provide details of any past or present proceedings under a Commonwealth, State or Territory law for the protection of the environment or the conservation and sustainable use of natural resources against either (a) the person proposing to take the action or, (b) if a permit has been applied for in relation to the action – the person making the application

The following Matters of National Environmental Significance (MNES) that may be impacted by the proposed action include Swift Parrot; through the removal of scattered Grey Box and White Box trees which provide potential foraging habitat.

To minimise impact on potential foraging habitat for these species, UPC/AC Renewables has purposefully selected a final layout design that retains all patches of the Grey Box (*Eucalyptus microcarpa*) Grassy Woodlands of South-Eastern Australia ecological community and 28 large scattered Grey Box trees within the proposed 362 hectare development footprint.

6.3 If it is a corporation undertaking the action will the action be taken in accordance with the corporation's environmental policy and framework?

☒ Yes ☐ No

6.3.1 If the person taking the action is a corporation, provide details of the corporation's environmental policy and planning framework

UPC/AC Renewables is committed to undertaking business activities in an environmentally sensitive and forward thinking manner.

To achieve this, they:

- Comply with environmental laws and regulations in all work locations.
- Understand and manage potential environmental risks at all work locations.
- Consult with communities and other relevant stakeholders about UPC activities.
- Participate in integrated approaches to land use planning.
- Identify and implement opportunities for efficient energy and water usage.
- Identify and implement opportunities for waste avoidance and minimisation.
- Report annually to all stakeholders on our environmental performance.

UPC/AC Renewables is also a founding signatory to the Clean Energy Council's Best Practice Charter, which specifically includes the following relevant clauses:

- Clause 3: We will be sensitive to areas of high biodiversity, cultural and landscape value in the design and operation of projects.
- Clause 9: We will demonstrate responsible land stewardship over the life of the development and welcome opportunities to enhance the ecological and cultural value of the land.
- Clause 10: At the end of the project's design or permitted life we will engage with the community on plans for the responsible decommissioning or refurbishment/repowering of the site.



Note: PDF may contain fields not relevant to your application. These fields will appear blank or unticked. Please disregard these fields.

6.4 Has the person taking the action previously referred an action under the EPBC Act, or been responsible for undertaking an action referred under the EPBC Act?

☒ Yes ☐ No

6.4.1 EPBC Act No and/or Name of Proposal

Proposed Robbins Island Wind Farm (2017/8096) and Jim's Plains Wind Farm (2017/8065).



Note: PDF may contain fields not relevant to your application. These fields will appear blank or unticked. Please disregard these fields.

Section 7

Information sources

Reference source

Biosis 2019. Biodiversity assessment: Proposed Solar Farm site, Axedale. Report for UPC Renewables Australia. Authors: Nerenberg S and Venosta M, Biosis Pty Ltd, Melbourne. Project no. 29139

Reliability

High

Uncertainties

None

Reference source

Saunders, D.L. & C.L. Tzaros 2011. National Recovery Plan for the Swift Parrot (*Lathamus discolor*). Birds Australia, Melbourne.

Reliability

High

Uncertainties

None

Reference source

Commonwealth of Australia 2015. Conservation Advice *Grantiella picta* painted honeyeater. Department of the Environment, Canberra. Available from: <http://www.environment.gov.au/biodiversity/threatened/species/pubs/470-conservation-advice.pdf>.

Reliability

High

Uncertainties

None

Reference source

DSE 2004. Native Vegetation: Sustaining a living landscape. Vegetation Quality Assessment Manual – Guidelines for applying the Habitat hectares scoring method. Version 1.3. Victorian Government Department of Sustainability & Environment, Melbourne.

Reliability

High

Uncertainties

None



Note: PDF may contain fields not relevant to your application. These fields will appear blank or unticked. Please disregard these fields.

Section 8
Proposed alternatives
Do you have any feasible alternatives to taking the proposed action? Yes <input checked="" type="checkbox"/> No



Note: PDF may contain fields not relevant to your application. These fields will appear blank or unticked. Please disregard these fields.

Section 9

Person proposing the action

9.1.1 Is the person proposing the action a member of an organisation?

☒ Yes ☐ No

Organisation

Organisation name UPC RENEWABLES AUSTRALIA PTY LTD
Business name UPC\AC RENEWABLES AUSTRALIA
ABN 27616856672
ACN 616856672
Business address Suite 2, Level 2, 13-17 Castray St, Battery Point, 7004, Tasmania, Australia

Postal address

Main Phone number NA

Fax

Primary email address admin@upcrenewables.com

Secondary email address

9.1.2 I qualify for exemption from fees under section 520(4C)(e)(v) of the EPBC Act because I am:

☐ Small business
☒ Not applicable

9.1.2.2 I would like to apply for a waiver of full or partial fees under Schedule 1, 5.21A of the EPBC Regulations *

☐ Yes ☒ No

9.1.3 Contact

First name Michael
Last name Zippel
Job title Project Developer
Phone NA
Mobile 0422 678 795
Fax
Email michael.zippel@upc-ac.com
Primary address Level 3, 61 Cromwell St, Collingwood, 3066, VIC, Australia
Address

Declaration: Person proposing the action

I, Michael Zippel on behalf of UPC Renewables Australia Pty Ltd, declare that to the best of my knowledge the information I have given on, or attached to the EPBC Act Referral is complete, current and correct. I understand that giving false or misleading information is a serious offence. I declare that I am not taking the action on behalf or for the benefit of any other person or entity.

Signature:  Date: 27 August 2020

I, Michael Zippel on behalf of UPC Renewables Australia Pty Ltd, the person proposing the action, consent to the designation of Michael Zippel on behalf of UPC Renewables Australia Pty Ltd as the proponent for the purposes of the action described in this EPBC Act Referral.

Signature:  Date: 27 August 2020.....



Note: PDF may contain fields not relevant to your application. These fields will appear blank or unticked. Please disregard these fields.

Proposed designated proponent

9.2.1 Is the proposed designated proponent a member of an organisation?

☒ Yes ☐ No

Organisation

Organisation name	UPC RENEWABLES AUSTRALIA PTY LTD
Business name	UPC\AC RENEWABLES AUSTRALIA
ABN	27616856672
ACN	616856672
Business address	Suite 2, Level 2, 13-17 Castray Esplanade, Battery Point, 7004, Tasmania, Australia
Postal address	
Main Phone number	NA
Fax	
Primary email address	admin@upcrenewables.com
Secondary email address	

9.2.2 Contact

First name	Michael
Last name	Zippel
Job title	Project Developer
Phone	NA
Mobile	0422 678 795
Fax	
Email	Michael.zippel@upc-ac.com
Primary address	Level 3, 61 Cromwell St, Collingwood, 3066, Victoria, Australia
Address	

Declaration: Proposed Designated Proponent

I, Michael Zippel on behalf of UPC Renewables Australia Pty Ltd, the
proposed designated proponent, consent to the designation of
myself as the proponent for the purposes of the action described in this EPBC Act Referral.

Signature:  Date: 27 August 2020



Note: PDF may contain fields not relevant to your application. These fields will appear blank or unticked. Please disregard these fields.

Referring party (person preparing the information)**9.3.1 Is the referring party (person preparing the information) a member of an organisation?**

☒ Yes ☐ No

Organisation


Organisation name	BIOSIS PTY LTD
Business name	
ABN	65006175097
ACN	
Business address	38 Bertie St, Port Melbourne, 3207, VIC, Australia
Postal address	
Main Phone number	(03) 8686 4800
Fax	
Primary email address	melbourne@biosis.com.au
Secondary email address	

9.3.2 Contact

First name	Erin
Last name	Baldwin
Job title	Zoologist
Phone	0488300450
Mobile	
Fax	
Email	ebaldwin@biosis.com.au
Primary address	38 Bertie St, Port Melbourne, 3207, VIC, Australia
Address	

Declaration: Referring party (person preparing the information)

I, Erin Baldwin, declare that to the best of my knowledge the information I have given on, or attached to this EPBC Act Referral is complete, current and correct. I understand that giving false or misleading information is a serious offence.

Signature:  Date: 31 August 2020



Note: PDF may contain fields not relevant to your application. These fields will appear blank or unticked. Please disregard these fields.

Appendix A	
Attachment	
Document Type	File Name
action_area_images	Attachment 1 Site Layout.pdf
localgov_approval_consent	Attachment 2 Planning Permit.pdf
localgov_approval_consent	Attachment 3 UPC Axedlae Solar Permit.pdf
public_consultation_reports	Attachment 4 Axedale Solar Farm Indigenous Consultation.pdf
public_consultation_reports	Attachment 4 Axedale Solar Farm Indigenous Consultation V2.pdf
supporting_tech_reports	Attachment 5 29688 Axedale.Solar.Farm.SISA.Summ.Tables.20190822.pdf
flora_fauna_investigation	Attachment 6 29139.AxedaleSolar.FFA.FIN.20191017.pdf
hydro_investigation_files	Attachment 7 ERM Hydrological Surveys Report.pdf
corp_env_policy_docs	Attachment 8 UPC Renewables Australia - Environmental Policy.pdf

Appendix B
Coordinates
Area 1
-36.712537883194,144.54524206788
-36.712675494529,144.5566146341
-36.712606688893,144.5566146341
-36.730666053611,144.56489729554
-36.73678807428,144.56515478761
-36.736891250221,144.55901789338
-36.734655740464,144.55897497804
-36.734552561519,144.54541372926
-36.712537883194,144.54524206788