

# REFERRAL OF A PROJECT FOR A DECISION ON THE NEED FOR ASSESSMENT UNDER THE *ENVIRONMENT EFFECTS ACT 1978*

## REFERRAL FORM

The *Environment Effects Act 1978* provides that where proposed works may have a significant effect on the environment, either a proponent or a decision-maker may refer these works (or project) to the Minister for Planning for advice as to whether an Environment Effects Statement (EES) is required.

This Referral Form is designed to assist in the provision of relevant information in accordance with the *Ministerial Guidelines for assessment of environmental effects under the Environment Effects Act 1978* (Seventh Edition, 2006). Where a decision-maker is referring a project, they should complete a Referral Form to the best of their ability, recognising that further information may need to be obtained from the proponent.

**It will generally be useful for a proponent to discuss the preparation of a Referral with the Impact Assessment Unit (IAU) at the Department of Environment, Land, Water and Planning (DELWP) before submitting the Referral.**

If a proponent believes that effective measures to address environmental risks are available, sufficient information could be provided in the Referral to substantiate this view. In contrast, if a proponent considers that further detailed environmental studies will be needed as part of project investigations, a more general description of potential effects and possible mitigation measures in the Referral may suffice.

In completing a Referral Form, the following should occur:

- Mark relevant boxes by changing the font colour of the 'cross' to black and provide additional information and explanation where requested.
- As a minimum, a brief response should be provided for each item in the Referral Form, with a more detailed response provided where the item is of particular relevance. Cross-references to sections or pages in supporting documents should also be provided. Information need only be provided once in the Referral Form, although relevant cross-referencing should be included.
- Responses should honestly reflect the potential for adverse environmental effects. A Referral will only be accepted for processing once IAU is satisfied that it has been completed appropriately.
- Potentially significant effects should be described in sufficient detail for a reasonable conclusion to be drawn on whether the project could pose a significant risk to environmental assets. Responses should include:
  - a brief description of potential changes or risks to environmental assets resulting from the project;
  - available information on the likelihood and significance of such changes;
  - the sources and accuracy of this information, and associated uncertainties.
- Any attachments, maps and supporting reports should be provided in a secure folder with the Referral Form.
- A USB copy of all documents will be needed, especially if the size of electronic documents may cause email difficulties. **Individual documents should not exceed 10MB as they will be published on the Department's website.**

- A completed form would normally be between 15 and 30 pages in length. Responses should not be constrained by the size of the text boxes provided. Text boxes should be extended to allow for an appropriate level of detail.
- The form should be completed in MS Word and not handwritten.

The party referring a project should submit a covering letter to the Minister for Planning together with a completed Referral Form, attaching supporting reports and other information that may be relevant. This should be sent to:

Postal address

**Minister for Planning  
PO Box 500  
EAST MELBOURNE VIC 8002**

Couriers

**Minister for Planning  
Level 16, 8 Nicholson Street  
EAST MELBOURNE VIC 3002**

In addition to the submission of the hardcopy to the Minister, separate submission of an electronic copy of the Referral via email to [ees.referrals@delwp.vic.gov.au](mailto:ees.referrals@delwp.vic.gov.au) is required. This will assist the timely processing of a referral.

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## PART 1 PROPONENT DETAILS, PROJECT DESCRIPTION & LOCATION

### 1. Information on proponent and person making Referral

|   |   |
|---|---|
| <b>Name of Proponent:</b>   | Solis RE  |
| <b>Authorised person for proponent:</b><br><b>Position:</b><br><b>Postal address:</b><br><b>Email address:</b><br><b>Phone number:</b><br><b>Facsimile number:</b>                      | King Arthur<br>Executive Director, Solis RE<br>Solis RE, 120 fox road, NARRE WARREN NTH, VIC 3804<br><a href="mailto:king.arthur@solisre.com.au">king.arthur@solisre.com.au</a><br>0429148938<br>N/A  |
| <b>Person who prepared Referral:</b><br><b>Position:</b><br><b>Organisation:</b><br><b>Postal address:</b><br><b>Email address:</b><br><b>Phone number:</b><br><b>Facsimile number:</b> | Catherine Sherwin<br>Senior Associate<br>Ricardo Energy Environment and Planning<br>Level 4 / 3 Bowen Crescent, Melbourne VIC 3004<br><a href="mailto:Catherine.sherwin@ricardo.com">Catherine.sherwin@ricardo.com</a><br>0414 862 552  |
| <b>Available industry &amp; environmental expertise:</b> (areas of 'in-house' expertise & consultancy firms engaged for project)  | Town Planning and Draftsman- Ricardo Energy Environment & Planning<br>Ecologist - Nature Advisory<br>Bushfire – Bushfire Planning<br>Landscape Architects – Davidson Studios<br>Glint and Glare Consultant – Ricardo Energy Environment<br>Community Consultation – Spence Consulting<br>Traffic Engineers – Traffix Group<br>Heritage Advisors – Andrew Long + Associates<br>Agricultural Consultants - RMCG |

### 2. Project – brief outline

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| <b>Project title:</b><br><br>Fulham Solar Farm  |
| <b>Project location:</b><br><br>The subject site (160 hectares) is located at Hopkins Road, Fulham approximately 8km's west of Sale, Victoria.<br><br>The primary site for the solar farm is identified as Lot 2 on PS323461L, Lot 2 on PS204862W, and Crown Allotment 25 Section B Parish of Wurruk Wurruk. Note, it does not have a street address number.<br><br>The powerline extension is located within the road reserve along Settlement and Hopkins Road (the road name changes part way along).<br><br>Refer attached: <ul style="list-style-type: none"><li>• 20. Subject Site and AMG Coordinates</li><li>• 21. Site Topography and contours</li><li>• 2. Certificate of Titles.</li></ul> |

- Refer 3. 30866 *Town Planning Report* pages 7 to 13.

**Short project description** (few sentences):

The proposal seeks to construct and carry out buildings and works on the site to develop a new renewable energy facility (solar energy facility), utility installation (powerline), erect business identification signage, and remove 27.878 hectares of native vegetation.

The solar energy facility will house over 200,000 solar panels generating approximately 80MW of electricity and provided with 80MWh battery storage.

The solar farm will include panels and associated infrastructure such as inverters, converters, a switching yard, fencing and landscape buffer around the entire site.

The solar farm will cost an estimated \$175million and the project is 'shovel ready' to commence construction.

Refer:

- 3. 30866 *Town Planning Report* pages 14 to 21
- 5. *Design Documents*.

**Aim/objectives of the project** (what is its purpose / intended to achieve?):

The project's purpose is to construct a solar energy facility that will have over 200,000 solar panels to generate 80MW with 80MWh of battery storage which in turn will provide an important role in the reduction of greenhouse gas emissions with a conservative annual output of 144,000 MWh per annum, therefore avoiding 130,000 tonnes of carbon dioxide emission each year for 35 years of operation.

In addition to the positive effect on the environment with respect to reducing greenhouse gas emissions a key objective of the project is to also provide substantial benefit to the local Gippsland region. This includes opportunities for local jobs and businesses, and access to lower cost power for the commercial sector. This is a critical project for Gippsland providing approximately 120 much-needed construction jobs in a challenging economic environment. Additional jobs will also be created for landscape planting and maintenance. The project will also provide an important electricity source that will assist in stabilising the supply of power as we transition from coal fired energy to renewables.

The project is shovel ready with the aim to commence construction second quarter 2022.

**Background/rationale of project** (describe the context / basis for the proposal, eg. for siting):

The development will assist in meeting the Victorian Government's objective of accelerating the development of well-sited and well-designed renewable energy generation facilities in Victoria, to reduce emissions, create jobs and put downward pressure on energy prices, while meeting legislated generation targets. It will support the Renewable Energy (Jobs and Investment) Act 2017 target of renewable energy generation of 40% by 2025 and the Victorian Government's commitment to increasing the target to 50% by 2030. At a Federal level, the proposed solar energy facility will also contribute to Australia's commitment to the Paris Climate Change Agreement 2016, and is in step with recent Federal announcements over a long term emissions reduction strategy and net zero by 2050.

A feasibility study was undertaken to determine the suitability of the site for the proposed solar energy facility. The assessment determined that the site was suitable, based on a series of factors including infrastructure, topography, location, vegetation and size.

In summary, the subject site is considered to be ideally located for the following reasons:

- Topographical conditions avoid the need for unnecessary earthworks or changes to the

natural landscape. The change in level across the site is gradual over and minimal earthworks are required to accommodate the proposal.

- The site is close to the electricity grid with access to AusNet transmission lines running approximately 1.5km south of the site.
- The site has ready access to main roads.
- It is not located within a protect declared irrigation district.
- It is not located within a floodplain or a major water course or wetland.
- No state significant agricultural land will be lost as the combination of the soil's characteristics and annual rainfall means the site has a low agricultural value.
- There will be no loss of cultural heritage or landscape values of significance.
- The site does not contain any high value native vegetation with the majority of native vegetation found on site being poor quality grassland.
- The area is farming land.
- The size and shape of the site minimises direct abuttals and there are very few sensitive receptors in the area.
- There are no other solar energy facilities within proximity, thereby avoiding cumulative impacts of built form concentration of these types of facilities.
- The grid connection extension will not result in the loss of any native vegetation or impact on culturally significant land.
- The project will provide an important stable electricity source that will assist in stabilising the supply of power of the region which experiences instability in power supply. The inclusion of batteries in the design ensures this stability.

**Main components of the project** (nature, siting & approx. dimensions; attach A4/A3 plan(s) of site layout if available):

The plans have been included within this submission and contain site layout and elevations (refer 5. *Design Documents*).

The proposed solar energy facility will comprise the following key components:

- A minimum 200,000 solar panels with 80MW output
- 80MWh battery storage
- Substation
- Transformer
- Switching Yard
- 23 x inverter stations

Other site features include a security fence, the main administration building with amenities, and 10 car parking spaces with five each near the administration building and substation and a water tank near the main entrance.

The solar panels and mounting system are made up of a combination of monofacial and bifacial panels.

The bifacial panels allow the module to collect light from both sides of the panel, capturing reflected sunlight from the surface under the solar tracker. The tracker runs north to south with the modules able to tilt from east to west to follow the sun's trajectory.

A 5 metre wide landscaping buffer will run on the outer side of the firebreak around the entire periphery of the development. The landscape buffer will incorporate a good mix of indigenous trees, shrubs and grasses which will soften and screen the proposed solar energy facility. Refer 12. *Landscape Plan*.

A 10-metre firebreak will be provided between solar panels/ infrastructure and landscaping buffer in line with the recommendations of the Bushfire Report (Refer 8. *Bushfire Assessment*) and CFA. A 4-metre perimeter road will be located within this firebreak. Passing bays have been incorporated to

the perimeter road every 600 metres and are at least 20 metres long.

A 10-metre buffer constructed of non-combustible materials and clear of vegetation is provided around key infrastructure located at the south east corner including the AC coupled battery storage area, transformer, and substation.

It is noted that the site will continue to be used for farming purposes as sheep will graze on site once construction is completed.

Please see attached:

- 3. 30866 Town Planning Report pages 14 to 21
- 5. Design Documents.
- 12. Landscape Plan
- 8. Bushfire Assessment.

**Ancillary components of the project** (eg. upgraded access roads, new high-pressure gas pipeline; off-site resource processing):

South of the Fulham Correction Centre Hopkins Road provides a 4m wide sealed carriageway with approximately 2m gravel shoulder on both sides. The proposal seeks to upgrade to a 6 metre wide sealed carriageway between the Correctional Centre access and proposed main site access, as recommended in the attached Traffic Assessment (*11. Traffic Engineering Assessment*).

Connecting the solar facility to the grid will require the construction of an overhead powerline, which will run along the western side of Hopkins and Settlement Road for approximately 1.5km and will follow the same alignment of an existing north-south powerline. Details of the grid connection are included within the Design Documents (*5. Design Documents*).

**Key construction activities:**

Construction of the renewable energy facility is expected to commence in the second quarter of 2022 and take approximately 28 weeks.

The proposed construction works are to be undertaken between 7:00am-5:00pm Monday to Saturday, in line with EPA Guidelines.

An average of 6 truck deliveries are expected per day during the construction period. Specifically, a minimum of 3 trucks and a maximum of 12 trucks per day is anticipated.

In total, approximately 1,000 trucks are expected during the construction period. This will include semi-trailers transporting the solar panels within 40-foot containers. In addition, a small number of deliveries per day via vans/private vehicles are anticipated. An average of approximately 50 staff per day are expected to be working on-site during the construction period.

Concurrently, planting of the perimeter landscape buffer will occur and include up to 4 people per day for a period of approximately 4 months planting 35,800 indigenous plants. Refer *12. Landscape Plan*.

**Key operational activities:**

The solar panels will only be generating electricity during daylight hours, but the facility is to include battery storage and components of the facility that will operate 24 hours per day, 7 days per week. A maximum of 5 employees are expected on site at any one time.

Farming practices will continue concurrently with the solar farm operating and will include grazing of sheep.

**Key decommissioning activities** (if applicable):

The facility will be operational for 35 years. Within 3 months of the solar energy facility permanently ceasing operation a Decommissioning Management Plan must be prepared and subsequently

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| submitted, approved and endorsed by the Responsible Authority (DELWP).                      |
| <b>Is the project an element or stage in a larger project?</b>                              |
| No  |
| <b>Is the project related to any other past, current or mooted proposals in the region?</b> |
| No  |
| <b>What is the estimated capital expenditure for development of the project?</b>            |
| \$175,000,000   |

#### 4. Project alternatives

**Brief description of key alternatives considered to date** (eg. locational, scale or design alternatives. If relevant, attach A4/A3 plans):

The *25. Solar Energy Facilities Design and Development Guideline August 2019* (Solar Development Guideline) were introduced into the planning scheme via amendment VC161 as a decision guideline for planning permit applications.

Page 10 of the document outlines ideal siting conditions that are carefully designed and have a minimal impact on surrounding communities, the environment, and other land use activities.

The considerations discussed in Section 2. Background/rational of project of this report allowed the project team to narrow down the site location to the proposed Hopkins Road, Fulham.

It is highlighted that various sites were investigated and through assessment were determined as unsuitable due to their proximity to grid connection, high value retention native vegetation, declared irrigation district, sensitive receptors and topography.

The subject site was deemed suitable as per the siting guidance outlined in the Solar Development Guideline. Refer further detail on appropriateness of the subject site which is detailed above under 'Section 2: Background rational of project'.

In terms of layout alternatives, the current design is the most efficient layout to maximise solar panel layout and power output. Concept plans were designed in an effort to avoid all native vegetation (Refer *26. Vegetation Retention Concept Plan*), however resulted in the loss of over 40,000 panels making the project unfeasible.

The solar panels are installed in rows of 'solar tables' of which the length is 105m. Accordingly to retain a 1m x 1m patch, the site would lose approximately 87 solar panels. Various grassland patches were investigated to see if it was feasible to design around them, however, due to their location and size, designing around the vegetation proved to impact the feasibility of the \$175 million project as it resulted in inefficient layouts and large unusable areas due to the 'solar table' lengths.

As such, the design focused on retaining the highest rated patches of native grassland on site, which is located in the south-east corner. The panel design layout was reduced to accommodate this grassland.

As discussed in Section 11, the grassland to be removed is assessed as having a very low quality. No medium to high value native vegetation is to be removed to accommodate the solar farm facility.

**Brief description of key alternatives to be further investigated** (if known):

N/A

#### 5. Proposed exclusions

**Statement of reasons for the proposed exclusion of any ancillary activities or further project stages from the scope of the project for assessment:**



N/A.

It is noted that a powerline extension is proposed as part of the solar farm application. The extension does not require the removal of any native vegetation which has triggered the referral.

## 6. Project implementation

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| <b>Implementing organisation</b> (ultimately responsible for project, ie. not contractor):  |
| SOLIS RE  |
| <b>Implementation timeframe:</b>  |
| <ul style="list-style-type: none"> <li>• July 2020 – Project Planning Commenced</li> <li>• August 2021 – Final Design Completed</li> <li>• September 2021 – Community Consultation Completed, Planning Permit Application lodged with DELWP</li> <li>• Q1 2022 – Planning Permit Received</li> <li>• Q2 2022 – Construction Commenced</li> <li>• 2023 – Construction Completed</li> </ul> |
| <b>Proposed staging</b> (if applicable):  |
| N/A   |

## 7. Description of proposed site or area of investigation

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| <b>Has a preferred site for the project been selected?</b>   |
| <input checked="" type="checkbox"/> Yes  |
| <p><b>General description of preferred site</b>, (including aspects such as topography/landform, soil types/degradation, drainage/ waterways, native/exotic vegetation cover, physical features, built structures, road frontages; attach ground-level photographs of site, as well as A4/A3 aerial/satellite image(s) and/or map(s) of site &amp; surrounds, showing project footprint):</p> <p>The site is formally identified as Lot 2 on PS323461L, Lot 2 on PS204862W, and Crown Allotment 25 Section B Parish of Wurruk Wurruk, as shown in Figure 2.1 below. It is located on Hopkins Road, Fulham, on the north-western corner of Hopkins Road and McLarens Road. Located within the Shire of Wellington, the subject site is approximately 207km east of Melbourne.</p> <p>The land is rectangle in shape, and abuts Hopkins Road along the eastern boundary, and McLarens Road along the southern boundary.</p> <p>With an approximately 1km frontage to Hopkins Road along the eastern boundary and 1.6km southern frontage to McLaren’s Road, the site has a total land area of approximately 160hectares. A dwelling is located on the eastern portion of the site and is currently vacant.</p> <p>The topography is relatively flat, with a gentle slope from the north-western corner down to the south-eastern corner of approximately 7 metres. Given the size of the site, the change in level is modest and gradual.</p> <p>The main vehicular access to the property is located in the north-eastern corner of the site via Hopkins Road, near the shared boundary with the Fulham Correctional Centre. A second access point to the site is also available from Hopkins Road and is attached to the driveway servicing the existing dwelling on the site that is located approximately midway down the eastern boundary (approximately 425 metres south of the north-eastern corner).</p> <p>The site also has three vehicular access points along McLarens Road, the first is located in the south western corner, the second is situated 350m east on the corner of the neighbouring dwelling, and the third is positioned approximately 820 metres west of the Hopkins and McLarens Road intersection.</p> |

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| <p>The site is currently used for low intensity grazing of cattle (Black Angus) for beef production. Pastures are moderate to low quality, with a mix of annual and perennial pasture. The quality of the pasture is moderate to poor, with significant areas where weeds are dominant (Refer 7. <i>Agricultural Land Value Assessment</i>).</p> <p>There is limited farming infrastructure on the site, comprising stock yards located adjacent to the dwelling on site, as well as stock proof boundary fencing. Two windmills are also on site, but are not in working order (i.e. do not pump water to stock troughs). Six small dams are dotted around the property, and an old creek line has been made into a channel in the south-eastern corner of the land.</p> <p>There is an established wind row along part of the western boundary and some trees surrounding the existing dwelling. Patches of native grassland are located predominately in the north west and south east section of the site (Refer 10. <i>Native Vegetation Map</i>). The rest of the site is clear of trees with a mixture of annual and perennial (exotic) pasture species. (Refer 15a. <i>Flora and Fauna Assessment</i>). Two overhead electricity power lines run through the east of the site, providing energy to the vacant dwelling.</p> <p>Refer 22. <i>Images - Site Aerial, Site Surrounds, Ground Photos, and Road Frontages</i> for images</p>  |
| <p><b>Site area</b> (if known): 160 hectares</p>  |
| <p><b>Route length</b> (for linear infrastructure) ..... (km) <b>and width</b> .....(m)</p> <p>Power line – 1.5km</p>   |
| <p><b>Current land use and development:</b> Agricultural (cattle grazing)</p>   |
| <p><b>Description of local setting</b></p> <p>The site and surrounds are located within the Shire of Wellington in a rural setting with farmland typical in the immediate and wider context of the site and surrounds.</p> <p>The nearest major towns to the site are:</p> <ul style="list-style-type: none"> <li>• Sale (E) 8 km (population 13,672)</li> <li>• Rosedale (W) 17.5km (population 1,654)</li> <li>• Tarralgon (W) 40km (population 27,958)</li> <li>• Maffra (N) 16km (population 4,316)</li> <li>• Stratford (N) 18km (population 2,617)</li> </ul> <p><b>North</b></p> <p>To the immediate north of the property is Fulham Correctional Centre. The facility is classified medium/ minimum security level and has an operational capacity of 893 residents. Further north across Princess Highway is TAFE Gippsland’s Fulham Campus, the Gippsland Armed Forces Museum and the Victorian Emergency Management Training Complex. The West Sale Airport is roughly 2.2 kilometres north of the land located north of Princes Highway. The facility currently hosts a number of aviation businesses such as charter flight operations.</p> <p><b>East</b></p> <p>To the east is Hopkins Road. Vegetation alongside the road is sparse with the exception of a cluster of trees to the north east and south east. The neighbouring properties to the east are also used for grazing.</p> <p>The RAAF Base East Sale is 15 kilometres east of the proposal. This facility is currently used as training base for Air Force personnel. Whilst the township of Sale is located 9 kilometres east of the property.</p> |

**South**

No. 379 McLaren's Road Fulham is a property located to the south of the site and is enveloped by the land that is the subject of this application. The site contains a residential dwelling and is heavily vegetated with canopy trees.

Abutting the south of the property is the unsealed McLaren's Road. Six properties sit on the southern side of McLaren's Road opposite the subject site with the land also being used for grazing.

The Holey Plains State Park is located approximately 6 kilometres south of the site.

**West**

To the immediate west is farmland used for grazing purposes. The closest dwelling to the west is approximately 1km from the site. Further west is the township of Kilmany which is approximately 9kms from the site.

Refer 22. *Images - Site Aerial, Site Surrounds, Ground Photos, and Road Frontages* for images

**Planning context** (eg. strategic planning, zoning & overlays, management plans):

The land is zoned Farming Zone, and there are no overlay controls. The site is within a designated bushfire prone area.

The site is not within an area of Aboriginal Cultural Heritage and confirmation was sought from a heritage consultant to confirm that no CHMP was required. (Refer 9. *Cultural Heritage Assessment*)

Please refer to pages 21 to 25 of the 3. *30866 Town Planning Report* for a detailed list of state, regional and local planning policies relevant in the Wellington Shire Council. This includes relevant clauses such as Clause 19.01-1S (Energy Supply), Clause 19.01-2S (Renewable Energy), Clause 52.17 (Native Vegetation) and Clause 53.13 (Renewable Energy Facility).

**Local government area(s):** Wellington Shire Council

**8. Existing environment****Overview of key environmental assets/sensitivities in project area and vicinity**

(cf. general description of project site/study area under section 7):

**Native Vegetation**

Evidence on site, including floristic composition and soil characteristics, suggested that Plains Grassy Woodland (EVC 55) and Swamp Scrub (EVC 53) were present within the study area

A total of 19 patches (referred to herein as habitat zones) comprising the abovementioned EVCs, were identified in the study area. This totalled an area of 29.330 hectares of native vegetation in patches and included no large trees.

**Biodiversity**

No flora, fauna or ecological communities listed under the EPBC Act or FFG Act were recorded during the Flora and Fauna Assessment (refer 15a. *Flora and Fauna Assessment*) and there are no implications under either of these Acts for the proposed development.

During the field assessments, 35 plant species were recorded of which 16 (46%) were indigenous and 19 (54%) were introduced or non-indigenous native in origin.

Fauna species considered to have the 'potential to occur' are those for which suitable habitat exists, but recent records are scarce. The analysis indicates that seven listed fauna species are likely to occur or have the potential to occur. These species include the following:

- Black Falcon
- Fork-tailed Swift
- Great Egret

- Latham's Snipe
- Magpie Goose
- White-throated Needletail
- Green and Golden Bell Frog

Refer 15a. *Flora and Fauna Assessment* for a detailed list of flora and fauna species within the study area.

#### **Sensitive Receptors – Amenity Impacts**

Sensitive receptors near the site include dwellings and accommodation at the Fulham Correctional Centre abutting the north of the site.

Solar Farms have the potential to negatively impact the social environment for surrounding residents. Of particular concern are noise, glint and glare, visual impact, and traffic. A suite of specialist reports have been prepared to identify where these impacts may occur and provide mitigation measures to ensure no detrimental impact to surrounding residents amenity. These effects are discussed in detail in Section 15 of this document.

Refer Page 1 of 5. *Design Document* for the location of sensitive receptors.

Refer 4. *Acoustic Report*

Refer 11. *Traffic Impact Assessment*

Refer 13. *Visual Impact Assessment*

Refer 14. *Glint and Glare Assessment*

## **9. Land availability and control**

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| <b>Is the proposal on, or partly on, Crown land?</b>   |
| <input checked="" type="checkbox"/> No   |
| <b>Current land tenure</b> (provide plan, if practicable):   |
| The land is owned by Margaret and Wayne Ferguson of 1194 Longford-Letts Beach Road, Longford VIC 3851 (Refer 2. <i>Certificate of Titles</i> ).  |
| The powerline is located in the road reserve owned by Council.   |
| <b>Intended land tenure</b> (tenure over or access to project land)  |
| The ownership of the site will remain unchanged. A lease agreement has been entered into for the operation of a solar farm. Please note, farming practices will continue on site during the operation as a solar energy facility in the form of sheep grazing. |
| <b>Other interests in affected land</b> (eg. easements, native title claims):  |
| N/A  |

## **10. Required approvals**

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| <b>State and Commonwealth approvals required for project components</b> (if known):                              |
| A planning permit issued by the Minister for Planning is required for the use and development of the solar farm. |
| <b>Have any applications for approval been lodged?</b>   |
| <input checked="" type="checkbox"/> Yes  |
| A planning permit application was lodged with DELWP on 29 September 2021   |

**Approval agency consultation** (agencies with whom the proposal has been discussed):

DELWP

**Other agencies consulted:**

- Ausnet
- Worksafe
- CASA
- West Sale Airport
- Wellington Shire Council (Council Staff and Councillors)
- Australian Defence Force
- MP Darren Chester (Local Federal Member of Parliament)
- Gippsland TAFE (Fulham Campus)

## PART 2 POTENTIAL ENVIRONMENTAL EFFECTS

### 11. Potentially significant environmental effects

**Overview of potentially significant environmental effects** (identify key potential effects and comment on their significance and likelihood, as well as key uncertainties):

A flora and fauna assessment was undertaken to provide information on the extent and condition of native vegetation on the subject site (refer *15a. Flora and Fauna Assessment*). It found that the vast majority of the study area consisted of open pasture for livestock grazing, which was typically dominated by introduced species, such as Cocksfoot, Rye Grass, and Toowoomba Canary-grass. Approximately one quarter of the study area supported native vegetation consisting of Spear Grass, Wallaby Grass, Rush, Common Blown-grass and Common Wheat-grass.

Approximately one quarter of the study area supported native vegetation in the form of highly modified woodland, and to a lesser extent, highly modified swamp scrub vegetation, which was concentrated in the north-eastern, south-eastern and south-western parts of the study area.

The site contains 19 patches of native vegetation (absent of large trees), equating to a total extent of 29.330 hectares, which comprised:

- 13 patches of highly modified Plains Grassy Woodland (EVC 55), equating to an extent of 28.795 hectares; and
- 6 patches of highly modified Swamp Scrub vegetation (EVC 53), equating to an extent of 0.535 hectares.

Of the 29.330 Hectares of patch native vegetation recorded, 27.878 hectares of native vegetation will be removed as part of the solar farm proposal. As the site has been historically cleared and is highly modified from the original state, the majority of vegetation of site is classified low quality vegetation.

All of the native grassland to be removed is 'very low quality native vegetation' with condition scores (out of 100) ranging from 21 to 27. In an effort to minimise the loss of native vegetation, the highest rated patches, located in the south east corner, have been retained in addition to vegetation present on the roadsides. Noting, all new vehicular access points avoid any roadside native vegetation patches.

The project will provide the appropriate offset to compensate for the biodiversity impact from the removal of the native vegetation. Whilst this offset will account for the total removal, a majority of the vegetation will be retained and sit beneath the solar panels. There is increasing evidence showing that solar panel infrastructure and plant species can create a mutually beneficial relationship. The panels collect condensation which in turn drips down to the vegetation below providing an important source of water.

Retention of the lowest quality native vegetation was not possible as there were no feasible opportunities to further avoid and minimise impacts on native vegetation without undermining the key objectives of the proposal. The solar panels are installed in rows of 'solar tables' of which the length is 58m-105m. Accordingly to retain a 1m x 1m patch of native vegetation, the site would lose up to 87 solar panels per patch. (Refer *5. Design Documents*)

In addition to providing an offset for the removal of native vegetation, a 5 metre wide landscape buffer will be planted around the perimeter of the site. With a total area of 29,226m<sup>2</sup>, the buffer will consist of over 30,000 indigenous trees, shrubs, grasses, and groundcover. The buffer will be maintained and protected as appose to the grassland which is currently used as grazing land. The buffer will improve the longer term native vegetation diversity on the site and will provide a greater habitat opportunity for local wildlife moving forward.

It is also noted that the solar farm has an expected operation life of approximately 35 years. A decommissioning plan requires the land to be turned back to its original state after the use has ceased.

### **Land Use**

The use of the site as Solar Energy Facility is appropriate as the soil on site is described as a mix of yellow and brown sodosols, which are generally sandy and strongly acidic. These soils tend to be low inherent fertility and a low water storage capacity. As such, the land is unsuitable for cropping and will provide limited agricultural potential.

Furthermore, the agricultural output from the farm operation has been assessed as \$118,837 per annum. A typical farm needs to generate approximately \$250-500k gross income per annum in order to have sufficient net income for one family farm or one employee. The report concludes that this property is considered to have sufficient economic return to represent about 24% to 48% of a viable one family farm, and the economic output from the site is considered insignificant at a regional and state level, as it is 0.15% of the Wellington Shire's agricultural production, and 0.0009% of the state's agricultural value of output.

Refer 7. *Agricultural Land Value Assessment*

### **Social Amenity**

Solar Farms have the potential to negatively impact the social environment for surrounding residents. Of particular concern are noise, glint and glare, visual impact, and traffic. These effects are discussed in detail in Section 15 of this document.

### **Community Benefit Scheme**

The Fulham Solar Farm Community Benefits Scheme will be designed to deliver benefits to key stakeholders in the community, with the objective of fulfilling the communities needs and aspirations for renewable energy projects in the Gippsland region. The scheme comprises the following initiatives:

- Fulham Community Fund – A community fund of \$50,000 per annum to broaden the environmental and community benefits of the Fulham Solar Farm within the local community
- GROW Gippsland – GROW Gippsland is a Victorian Government program (funded by the Latrobe Valley Authority) where organisations publicly commit to implementing actions to maximise local and social impact in the Gippsland region.
- Broadening Horizons - Broadening Horizons is an innovative education model that is designed to build the aspirations of young people and support increased engagement in their learning.
- Local and Social Procurement Policy - The Proponent will develop (and publish) a local and social procurement policy, outlining its commitment to ensuring that local businesses are prioritised in all purchasing decisions and the mechanisms to achieve this.
- Aboriginal Engagement and Participation Plan - The Proponent will develop (and publish) an Aboriginal Engagement and Participation Plan, outlining its commitment to working with the Traditional Owners and local Aboriginal community to ensure the aspirations of the community are fulfilled on the project.
- Solar Farm tourism Program - The Proponent will work with the community via the CBSC to design a meaningful tourism experience

Refer 19. *Community Benefits Scheme*

## 12. Native vegetation, flora and fauna

### Native vegetation

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| <p><b>Is any native vegetation likely to be cleared or otherwise affected by the project?</b></p> <p><input checked="" type="checkbox"/> Yes</p>   |
| <p><b>What investigation of native vegetation in the project area has been done?</b> (briefly describe)</p> <p>A Flora and Fauna Assessment was undertaken as part of the project (refer <i>15a. Flora and Fauna Assessment</i>). Specifically, the scope of the investigation included the following:</p> <ul style="list-style-type: none"> <li>• A review of existing information on the flora, fauna and native vegetation of the study area and surrounds, including the following: <ul style="list-style-type: none"> <li>○ The Victorian Biodiversity Atlas administered by the Department of Environment, Land, Water and Planning (DELWP);</li> <li>○ The Commonwealth Environment Protection and Biodiversity Conservation Act 1999 (EPBC Act) Protected Matters Search Tool; and</li> <li>○ DELWP's Native Vegetation Information Management system (NVIM).</li> </ul> </li> <li>• A site survey, performed by Nature Advisory (Refer <i>15a. Flora and Fauna Assessment</i>) involving the following: <ul style="list-style-type: none"> <li>○ Characterisation and mapping of native vegetation on the site, as defined in the Guidelines;</li> <li>○ Assessment of native vegetation in accordance with the Guidelines, including habitat hectare assessment;</li> <li>○ Compilation of flora species list for the site;</li> <li>○ Assessment of the nature and quality of native fauna habitat; and</li> <li>○ Assessment of the likelihood of occurrence of EPBC Act- and FFG Act-listed flora, fauna and communities on the site.</li> </ul> </li> </ul> <p>A flora and fauna assessment was also undertaken along the powerline extension to determine if any native vegetation would be removed to accommodate the powerline extension. It was found that none would be impacted. Refer <i>15b. Flora and Fauna Assessment Hopkins and Settlement Road (Grid Connection)</i></p> |
| <p><b>What is the maximum area of native vegetation that may need to be cleared?</b></p> <p>Estimated area 27.878 (hectares)</p>   |
| <p><b>How much of this clearing would be authorised under a Forest Management Plan or Fire Protection Plan?</b></p> <p><input checked="" type="checkbox"/> N/A    0</p>  |
| <p><b>Which Ecological Vegetation Classes may be affected?</b> (if not authorised as above)</p> <p><input checked="" type="checkbox"/> Preliminary/detailed assessment completed.    If assessed, please list.</p>   |
| <p>Swamp Scrub (EVC 53)<br/>Plains Grassy Woodland (EVC 55)</p>  |
| <p><b>Have potential vegetation offsets been identified as yet?</b></p> <p><input checked="" type="checkbox"/> Yes</p>   |
| <p><b>Other information/comments?</b> (eg. accuracy of information)</p> <p>N/A = not yet determined</p>  |

### Flora and fauna

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| <p><b>What investigations of flora and fauna in the project area have been done?</b><br/>(provide overview here and attach details of method and results of any surveys for the project &amp; describe their accuracy)</p>  |
| <p>Existing flora and fauna species records and information about the potential occurrence of listed matters was obtained from an area termed the 'search region', defined here as an area with a radius of ten kilometers from the approximate centre point of the study area (coordinates: latitude 38° 06' 58" S and longitude 146° 58' 03" E).</p> <p>A list of the flora and fauna species recorded in the search region was obtained from the Victorian Biodiversity Atlas (VBA), a database administered by DELWP.</p> |



The online EPBC Act Protected Matters Search Tool (DAWE 2021a) was consulted to determine whether nationally listed species or communities potentially occurred in the search region based on habitat modelling.

Field assessments were conducted on 26 and 27 August, and 29 and 30 October 2020. During these assessments, the study area was initially surveyed by vehicle and areas supporting native vegetation and/or fauna habitat were inspected in more detail on foot.

Sites in the study area found to support native vegetation or with potential to support listed matters were mapped through a combination of aerial photograph interpretation and ground-truthing using a hand-held GPS (accurate to approximately five metres). Species and ecological communities listed as threatened under the EPBC Act or FFG Act (where they occurred on public land) were also mapped using the same method.

#### **Flora Species and Habitat**

Records of flora species were made in conjunction with sampling methods used to undertake habitat hectare assessments of native vegetation described above. Specimens requiring identification using laboratory techniques were collected.

Species protected under the FFG Act were determined by crosschecking against the FFG Act Protected Flora List (DELWP 2017b).

The potential for habitats to support listed flora species was assessed based on the criteria outlined below:

- The presence of suitable habitat for flora species such as soil type, floristic associations and landscape context; and
- The level of disturbance of suitable habitats by anthropogenic disturbances and invasions by pest plants and animals.

Wherever appropriate, a precautionary approach was adopted in determining the likelihood of occurrence or flora listed under the EPBC Act and/or FFG Act. That is, where insufficient evidence was available on the potential occurrence of a listed species, it is assumed that this could be in an area of suitable habitat

#### **Fauna Species and Habitats**

The techniques below were used to detect fauna species utilising the study area.

- Incidental searches for mammal scats, tracks and signs (e.g. diggings, signs of feeding and nests/burrows).
- Turning over logs/rocks and other ground debris for reptiles, frogs and mammals.
- Daytime bird observations.
- General searches for reptiles and frogs; including identification of frog calls in seasonally wet areas.
- General searches for bat habitat including waterbodies and potential roosting sites such as caves, dead trees with hollows and underneath bark of trees.
- Fauna habitats are described using habitat components that include old-growth trees, fallen timber, leaf litter, water bodies and surface rocks.

Habitat connectivity of the study area (i.e. degree of isolation/fragmentation), including linkages to other habitats in the region, was determined using field observations, recent aerial photography and NatureKit (DELWP 2021a).

Wherever appropriate, a precautionary approach was adopted in determining the likelihood of occurrence or fauna listed under the EPBC Act and FFG Act. That is, where insufficient evidence was available on the potential occurrence of a listed species, it is assumed that it could be in an area of suitable habitat.

#### **Limitations/Accuracy**

Site assessments were carried out in winter and spring. The short duration and seasonal timing of field assessments can result in some species not being detected when these may occur at other times. Additionally, some flora species and life-forms may be undetectable at the time of the survey or unidentifiable due to a lack of flowers or fruit.

Difficulties in identifying flora in its observed state limited the accuracy of determining native

vegetation patch extent. The timing of the survey and condition of vegetation was otherwise considered suitable to ascertain the extent and condition of native vegetation and fauna habitats. These limitations were not considered to compromise the validity of the current investigation that was designed to address the relevant policies and decision guidelines.

Identification of EVCs considers vegetation types that would have naturally occupied the landscape prior to European impacts. Significant past vegetation clearance, and alteration of the study area's landform and hydrology, has resulted in the emergence of an artificial site ecology that is likely to be notably different to what would have naturally occupied the study area.

Identification of EVCs in altered areas was therefore based upon consideration of:

- Modelled EVC mapping (DELWP 2021a);
- Any observed indigenous flora species that are useful for determining EVCs; and
- Relevant published EVC benchmark descriptions.

If the above information was not sufficient to allow for a reasonable conclusion to be made regarding which EVC would have naturally occurred and the observed vegetation resembled an EVC that is likely to have naturally occurred in the region, EVC identification was based upon the structure and floristic composition of current observed vegetation.

## **Results**

### Flora Species

During the field assessments, 35 plant species were recorded of which 16 (46%) were indigenous and 19 (54%) were introduced or non-indigenous native in origin (Refer Appendix 3 of *15a. Flora and Fauna Assessment*).

### Fauna Species

This analysis indicates that seven listed fauna species are likely to occur or have the potential to occur. These species include the following:

- Black Falcon (listed under FFG Act);
- Fork-tailed Swift (Migratory under EPBC Act);
- Great Egret (listed under FFG Act);
- Latham's Snipe (Migratory under EPBC Act);
- Magpie Goose (listed under FFG Act);
- White-throated Needletail (Migratory under EPBC Act);
- Green and Golden Bell Frog (Vulnerable under EPBC Act).

Refer Appendix 3 of *15a. Flora and Fauna Assessment* for detailed information relating to results and methods

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| <p><b>Have any threatened or migratory species or listed communities been recorded from the local area?</b></p> <p><input checked="" type="checkbox"/> NYD</p>   |
| <p>Three listed migratory bird species (excluding oceanic species and shorebirds) have the potential to occur in the study area. The susceptibility of these species to possible impacts from any development in the study area is discussed below.</p> <p><u>White-throated Needletail (Vulnerable under EPBC Act)</u></p> <ul style="list-style-type: none"> <li>This species may occur in the study area, however only in the capacity of flying over due to the strictly aerial biology. White-throated Needletail depends mostly on extensive forests to forage but may occasionally use adjacent farmland. Due to the lack of forested areas in the vicinity this species is unlikely to be impacted by the development.</li> </ul> <p><u>Fork-tailed Swift (Migratory under EPBC Act)</u></p> <ul style="list-style-type: none"> <li>This species may occur in the study area, however only in the capacity of flying over due to the strictly aerial biology. Differently to White-throated Needletail, this species prefers open landscapes to forests. However, due to the abundance of this habitat in the region and the scarce records of the species in the vicinity, this species is unlikely to be impacted by the development.</li> </ul> <p><u>Latham's Snipe (Migratory under EPBC Act)</u></p> <ul style="list-style-type: none"> <li>The site holds suitable habitat for the species in the form of dams, drainage lines and flooded pasture. The species will likely occur occasionally in the study area, however due to the wide availability of higher quality habitat in the reserves to the south and east Latham's Snipe is unlikely to be impacted by the development.</li> </ul> <p>Refer Appendix 3 of <i>15a. Flora and Fauna Assessment</i> for further details on listed migratory bird species.</p> |
| <p><b>If known, what threatening processes affecting these species or communities may be exacerbated by the project?</b> (eg. loss or fragmentation of habitats) Please describe briefly.</p> <p>Based on the relevant guidelines, the proposed development is unlikely to result in an impact on any EPBC Act-listed values.</p> <p>There will be no fragmentation of habitat, and it is noted that the significant increased planting of indigenous species will improve the habitat opportunity on site.</p>  |
| <p><b>Are any threatened or migratory species, other species of conservation significance or listed communities potentially affected by the project?</b></p> <p><input checked="" type="checkbox"/> No</p>   |
| <p><b>Is mitigation of potential effects on indigenous flora and fauna proposed?</b></p> <p><input checked="" type="checkbox"/> Yes</p> <p>Recommendations to mitigate impacts to vegetation during construction were included within the Flora and Fauna Assessment (Refer Appendix 3 of <i>15a. Flora and Fauna Assessment</i>) and are provided below:</p> <ul style="list-style-type: none"> <li>Establish appropriate vegetation protection zones around areas of native vegetation to be retained prior to works.</li> <li>Ensure all construction personnel are appropriately briefed prior to works, and that no construction personnel, machinery or equipment are placed inside vegetation protection zones.</li> </ul>  |
| <p><b>Other information/comments?</b> (eg. accuracy of information)</p>  |

### 13. Water environments

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| <p><b>Will the project require significant volumes of fresh water (eg. &gt; 1 GI/yr)?</b><br/> <input checked="" type="checkbox"/> No</p>   |
| <p><b>Will the project discharge waste water or runoff to water environments?</b><br/> <input checked="" type="checkbox"/> No</p>   |
| <p><b>Are any waterways, wetlands, estuaries or marine environments likely to be affected?</b><br/> <input checked="" type="checkbox"/> No</p>  |
| <p><b>Are any of these water environments likely to support threatened or migratory species?</b><br/> <input checked="" type="checkbox"/> No</p>  |
| <p><b>Are any potentially affected wetlands listed under the Ramsar Convention or in 'A Directory of Important Wetlands in Australia'?</b><br/> <input checked="" type="checkbox"/> No</p>  |
| <p><b>Could the project affect streamflows?</b><br/> <input checked="" type="checkbox"/> No</p>   |
| <p><b>Could regional groundwater resources be affected by the project?</b><br/> <input checked="" type="checkbox"/> No</p>  |
| <p><b>Could environmental values (beneficial uses) of water environments be affected?</b><br/> <input checked="" type="checkbox"/> No</p>   |
| <p><b>Could aquatic, estuarine or marine ecosystems be affected by the project?</b><br/> <input checked="" type="checkbox"/> No</p>   |
| <p><b>Is there a potential for extensive or major effects on the health or biodiversity of aquatic, estuarine or marine ecosystems over the long-term?</b><br/> <input checked="" type="checkbox"/> No</p>  |
| <p><b>Is mitigation of potential effects on water environments proposed?</b><br/> <input checked="" type="checkbox"/> No</p> <p>As discussed in Section 7.9 of the Town Planning Report (Refer 3. <i>30866 Town Planning Report</i>) to manage stormwater on site, a stormwater management plan will be required. Adopting a stormwater collection system, which may include a Water Sensitive Urban Design (WSUD), will be required to collect, and discharge stormwater safely to the site's legal point of discharge point.</p> <p>As per the Solar Development Guidelines there is a requirement for a drainage and stormwater plan which will form part of the Environmental Management Plan (EMP). This will be a planning permit requirement, as per the Solar Development Guidelines requirements (Refer 25. <i>Solar Energy Facilities Design and Development Guideline August 2019</i>).</p>  |
| <p><b>Other information/comments?</b> (eg. accuracy of information)</p> <p>A very small portion of the study area (approximately 0.2%) supported wetland habitat that included farm dams and a narrow drainage line. This habitat was degraded and supported sparse fringing vegetation due to stock access and erosion. These areas were mostly isolated but may attract frogs and some waterbirds, and provide a drinking spot for birds and other vertebrates. The proposed facility has been designed to avoid impact to this area. A 2.1m high security fence and 5m wide landscape buffer will separate the open drain the facility.</p> <p>This man made channel (Refer 7. <i>Agricultural Land Value Assessment</i>) is noted as an 'open drain' on the Site Survey (Refer 6. <i>Site Survey</i>), that connects to an existing stormwater drainage network connecting to the east at 995 Settlement Road and the south at 913 Settlement Road (Refer 6. <i>Site Survey</i>). There are no easements on title (Refer 2. <i>Certificate of Title</i>). This section of the open drain sits under the ownership of the land owner of the subject site.</p> <p>In addition, information source from MapshareVic, also confirms the site is approximately 2km from the closest designated floodway extent of the La Trobe River (located south of the Hopkins Road). Our review confirms the site will not be impacted by major flood risks associated with the La Trobe River and can be considered as a safe site in the context of flood/stormwater risks (Refer Section 7.9 of 3. <i>30866 Town Planning Report</i>).</p> <p>It is noted that the site does not fall within an Irrigation District. The nearest Irrigation District is Macalister Irrigation District, which is approximately 1.5km North of the site (Refer Section 7.9 of 3. <i>30866 Town Planning Report</i>).</p> <p>Refer 15a. <i>Flora and Fauna Assessment</i> and Refer 5. <i>Design Documents</i></p> |

## 14. Landscape and soils

### Landscape

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| <p><b>Has a preliminary landscape assessment been prepared?</b><br/> <input checked="" type="checkbox"/> Yes Refer 12. <i>Landscape Plan</i></p>  |
| <p><b>Is the project to be located either within or near an area that is:</b></p> <ul style="list-style-type: none"> <li>• <b>Subject to a Landscape Significance Overlay or Environmental Significance Overlay?</b><br/> <input checked="" type="checkbox"/> Yes If yes, provide plan showing footprint relative to overlay.</li> </ul>  |
| <p>The site is not located near an SLO or ESO. The closest is an Environmental Significance Overlay – Schedule 7 (ESO7) on and around land at the Kilmany Recycling Resource Centre, 14 Velore Road. This overlay relates to a landfill buffer which is in place to ensure to limit any adverse impact on development from the nearby municipal landfill site. The subject site is located over 1.5 km from the ESO7 buffer and is therefore not relevant to the subject site.</p> <p>Refer 23. <i>Vic Plan Property Report – Hopkins Road, Fulham</i> and 24. <i>Vic Plan Property Report – 14 Velore Road, Kilmany</i>.</p>   |
| <ul style="list-style-type: none"> <li>• <b>Identified as of regional or State significance in a reputable study of landscape values?</b><br/> <input checked="" type="checkbox"/> No</li> </ul>  |
| <ul style="list-style-type: none"> <li>• <b>Within or adjoining land reserved under the <i>National Parks Act 1975</i> ?</b><br/> <input checked="" type="checkbox"/> No</li> </ul>   |
| <ul style="list-style-type: none"> <li>• <b>Within or adjoining other public land used for conservation or recreational purposes ?</b><br/> <input checked="" type="checkbox"/> No</li> </ul>   |
| <p><b>Is any clearing vegetation or alteration of landforms likely to affect landscape values?</b><br/> <input checked="" type="checkbox"/> No</p>  |
| <p>A visual impact assessment (refer 13. <i>Visual Impact Assessment</i>) has been prepared and included within this submission.</p> <p>Following the desktop assessment and identification of potential receptors, the site visit was conducted and the key viewsheds confirmed. The 18 selected receptors all occur within a two kilometre radius from the site. The proposal was found to have very low - high/moderate visual impact on the identified viewsheds.</p> <p>The proposed design for the solar farm includes perimeter buffer screen planting which seeks to mitigate detrimental views from the selected receptors. The buffer planting will be composed of locally indigenous plant species to provide ground level, mid and upper storey vegetative cover.</p> <p>The assessment concluded that the proposed Fulham Solar Farm would have a low effect on the existing landscape characters and values as well as the local context.</p> |
| <p><b>Is there a potential for effects on landscape values of regional or State importance?</b><br/> <input checked="" type="checkbox"/> No</p>   |
| <p><b>Is mitigation of potential landscape effects proposed?</b><br/> <input checked="" type="checkbox"/> Yes If yes, please briefly describe.</p>  |

**Note:** A preliminary landscape assessment is a specific requirement for a referral of a wind energy facility. This should provide a description of:

- The landscape character of the site and surrounding areas including landform, vegetation types and coverage, water features, any other notable features and current land use;
- The location of nearby dwellings, townships, recreation areas, major roads, above-ground utilities, tourist routes and walking tracks;
- Views to the site and to the proposed location of wind turbines from key vantage points (including views showing existing nearby dwellings and views from major roads, walking tracks and tourist routes) sufficient to give a sense of the overall site in its setting.

## Soils

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| <p><b>Is there a potential for effects on land stability, acid sulphate soils or highly erodible soils?</b></p> <p><input checked="" type="checkbox"/> No</p> |
| <p><b>Are there geotechnical hazards that may either affect the project or be affected by it?</b></p> <p><input checked="" type="checkbox"/> No</p>           |
| <p><b>Other information/comments?</b> (eg. accuracy of information)</p>   |

## 15. Social environments

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| <p><b>Is the project likely to generate significant volumes of road traffic, during construction or operation?</b></p> <p><input checked="" type="checkbox"/> No</p>   |
| <p>A Traffic Impact Assessment provided with the planning application details the amount of traffic movement to the site during construction and concludes that there will be no material traffic impact to the surrounding road network during construction or during operation of the facility.</p> <p>It is highlighted that traffic generation during general operating hours will primarily be associated with staff arrivals and departures. If we conservatively assume that all 5 staff arrive in the AM peak hour and depart in the PM peak hours (which is unlikely), there would be no more than 5 vehicle movements generated in any one hour, and no more than 10 vehicle movements per day.</p> <p>In total, during the construction stage there will be an average of approximately 122 vehicle movements per day generated (i.e. 61 entry movements and 61 exit movements). This will result in a total average daily traffic volume on Hopkins Road of approximately 252 vehicles per day adjacent to the site, and less than 700 vehicles per day to the north of the Correctional Centre access. (Refer 11. <i>Traffic Impact Assessment</i>)</p> <p>A Traffic Management Plan, as part of the Construction Environment Management Plan will ensure that traffic is managed appropriately during construction. Discussions with the Fulham Correctional Centre specific to the TMP have already occurred and further discussion and input will be obtained once the TMP is drafted and ready for submission to DELWP for approval to ensure there is no conflict with the adjacent facility.</p>  |
| <p><b>Is there a potential for significant effects on the amenity of residents, due to emissions of dust or odors or changes in visual, noise or traffic conditions?</b></p> <p><input checked="" type="checkbox"/> No</p>   |
| <p><u>Dust or Odour</u></p> <p>There is no potential for significant effects on the amenity of residents due to emissions of dust or odour. The facility does not generate any odour. Appropriate dust mitigation measures will be included as part of the Construction Environment Management Plan (CEMP) requirements. Furthermore, proposed landscaping will also assist with dust mitigation. A CEMP would be a conditional requirement of any permit issued for a solar farm.</p> <p><u>Visual</u></p> <p>A Visual Impact Assessment was prepared to provide an objective review of the proposed solar project and the potential visual impacts on the surrounding environment (Refer 13. <i>Visual Impact Assessment</i>).</p> <p>Following the desktop assessment and identification of potential receptors, a site visit was conducted and the key viewsheds confirmed. The 18 selected receptors all occur within a two kilometre radius from the site. Receptors chosen were based on the DELWP Guidelines which stipulates photomontages to be taken from public land. Due to the close proximity of the proposal to the dwelling at 379 McLarens Road and accommodation block at the Fulham Correctional Centre access to their private land was also sought. The proposal was found to have very low - high/moderate visual impact on the identified viewsheds.</p> <p>The proposal design includes a perimeter buffer planting which seeks to mitigate detrimental views from the selected receptors. The buffer planting will be composed of locally indigenous plant species to provide ground level, mid and upper storey vegetative cover.</p> |

A higher visual impact occurred at the northern boundary of the site on Hopkins Road. The proposed 45,000lt water tank and security fencing were found to be visually prominent at this location. The proposed buffer planting adjacent to the security fence allows it to recede. By locating the water tank back from the boundary and within the buffer planting, it is better screened from view and further allows the fence to recede at this location.

A moderate/low visual impact resulted at the intersection of Hopkins Road and McLaren's Road. Initial designs indicated security fencing along the boundary at this intersection, resulting in high visual dominance of the fence. The proposal has relocated the security fence to run adjacent to the buffer planting, in alignment with the interior road and adjacent to the man-made channel traversing the site.

The assessment concluded that's the proposed Fulham Solar Farm would have a low effect on the existing landscape characters and values as well as the local context.

#### Noise

An acoustic report (refer 4. *Acoustic Report*) was prepared and has been included within this submission. The purpose of the noise assessment has been to consider any potential noise emissions associated with the proposed use which may affect residential receptors located in the vicinity of the subject site.

The report details that the photovoltaic solar panels do not emit noise of any potential significance. The solar panels will include small motors which will enable the panels to rotate throughout the day period to maximise efficiency. The motors will emit negligible noise relative to the other sources discussed below.

The components with the potential to emit noise beyond the boundaries of the site are:

- Inverters Stations
- Converters
- Main substation transformer
- Air Conditioning units at switching room, switching station, and site office and amenities building.

Noise emitted from the solar energy facility will only be generated during daylight hours, with the exception of the battery storage and its components which will operate 24 hours per day, 7 days per week.

After initial modelling identified noise levels exceed the project target noise, modelling was conducted to determine noise control strategies to achieve off site noise levels in compliance with the guidelines. The following noise control strategies were recommended to ensure compliance with relevant EPA noise limits:

- Selection of inverter stations that include a noise reduction kit. This kit enables operation at full electrical capacity while emitting reduced noise emission compared with the standard equipment configuration.
- 4 m high noise barriers around the inverter stations
- Placement of the converters inside acoustically lined enclosures.

The report concluded that compliance with relevant assessment criteria can be achieved by a combination of appropriate equipment selection, noise control barriers and full enclosures of the most significant noise sources. Permit conditions would be applied to any permit issued for a solar farm ensuring noise emissions are mitigated appropriately and meet relevant EPA guidelines.

#### Glint and Glare

A Glint and Glare Report (refer 14. *Glint and Glare Assessment*) has been prepared to ensure that receptors, such as surrounding dwellings, road users and aviation service providers are not impacted detrimentally by the proposed energy facility.

The conclusions of the initial analysis determined that moderate glint and glare would be present for some receptors, only at specific times of day, on certain days of the year, for short periods of time. The conclusions of this analysis were used to determine mitigation measures that would prevent glint and glare at these times, so no incidences of glint and glare would be experienced.

The mitigation measures proposed within the Landscape Plan (refer 12. *Landscape Plan*) will fully mitigate against the risk of glint and glare (refer 14. *Glint and Glare Assessment*). Whilst the proposed landscaping matures, hessian screening will be incorporated within the security fencing (refer 5. *Design Documents*). The screening measures proposed, were designed to minimise visual impact and blend in with the surrounding biodiversity and landscape character.

The report concluded there will be no glint and glare issues caused by the proposed development that will cause unreasonable impacts to the surrounding area as a result of the mitigation measures proposed in the report.

**Is there a potential for exposure of a human community to health or safety hazards, due to**



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| <b>emissions to air or water or noise or chemical hazards or associated transport?</b><br><input checked="" type="checkbox"/> No   |
| <b>Is there a potential for displacement of residences or severance of residential access to community resources due to the proposed development?</b><br><input checked="" type="checkbox"/> No                        |
| <b>Are non-residential land use activities likely to be displaced as a result of the project?</b><br><input checked="" type="checkbox"/> No  |
| <b>Do any expected changes in non-residential land use activities have a potential to cause adverse effects on local residents/communities, social groups or industries?</b><br><input checked="" type="checkbox"/> No |
| <b>Is mitigation of potential social effects proposed?</b><br><input checked="" type="checkbox"/> No   |
| <b>Other information/comments?</b> (eg. accuracy of information)<br>N/A  |
|  |

### Cultural heritage

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| <b>Have relevant Indigenous organisations been consulted on the occurrence of Aboriginal cultural heritage within the project area?</b><br><input checked="" type="checkbox"/> Yes If yes, list the organisations so far consulted.  |
| Contact has been made with Gunaikurnai Land and Waters Aboriginal Corporation (GLAWAC). Employee details form part of the stakeholder data base, accordingly correspondence, including important project updates, have been sent through.<br><br>Further to this, we have commenced preliminary discussions with GLAWAC around providing landscaping services for the project.   |
| <b>What investigations of cultural heritage in the project area have been done?</b><br>(attach details of method and results of any surveys for the project & describe their accuracy)   |
| An assessment as to whether the construction of a solar energy facility and associated utility installation (powerline) would require a mandatory Cultural Heritage Management Plan was prepared by Andrew Long + Associates (refer 9. <i>Cultural Heritage Assessment</i> ). The report identified that there were no registered Aboriginal cultural heritage places within 50 metres of the activity area nor any waterways within 200 metres of the site.<br><br>The assessment concluded that 'the activity area does not contain an area of cultural heritage sensitivity as might be defined in Part 2, Division 3, of the Regulations.' As such, a CHMP is not required for the proposed activity of a solar energy facility. |
| <b>Is any Aboriginal cultural heritage known from the project area?</b><br><input checked="" type="checkbox"/> No  |
| <b>Are there any cultural heritage places listed on the Heritage Register or the Archaeological Inventory under the <i>Heritage Act 1995</i> within the project area?</b><br><input checked="" type="checkbox"/> No  |
| <b>Is mitigation of potential cultural heritage effects proposed?</b><br><input checked="" type="checkbox"/> No<br><br>If Aboriginal cultural or historical heritage artifacts are identified during construction, it is expected that construction would cease whilst direction and an action plan were provided via an accredited heritage advisor.  |
| <b>Other information/comments?</b> (eg. accuracy of information)   |

**16. Energy, wastes & greenhouse gas emissions**

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| <b>What are the main sources of energy that the project facility would consume/generate?</b>   |
| <input checked="" type="checkbox"/> Electricity network. If possible, estimate power requirement/output .....  |
| <p>The solar energy facility will house over 200,000 solar panels generating approximately 80MW of electricity and provided with 80MWh battery storage.</p> <p>The solar energy facility will provide an important role in the reduction of greenhouse gas emissions with a conservative annual output of 144,000 MWh per annum, therefore avoiding 130,000 tonnes of carbon dioxide emission each year for 35 years of operation.</p>   |
| <b>What are the main forms of waste that would be generated by the project facility?</b>   |
| <input checked="" type="checkbox"/> Other. Describe briefly.   |
| <p>The solar panels will be the main form of waste generated by the proposed facility. However, it is noted that solar panels have an average life span of approximately 25-30 years. Occasional panels will need to be replaced where required and these panels will be recycled.</p> <p>At the decommissioning of the facility the solar panels and modules will be recycled. Noting that solar modules are constructed primarily of glass, plastic, and aluminum and accordingly are 100% recyclable.</p> |
| <b>What level of greenhouse gas emissions is expected to result directly from operation of the project facility?</b>   |
| <p>No greenhouse gas emissions are anticipated as a direct result from the operation of the solar farm. Noting the small onsite office would be powered by the solar farm.</p> <p>Please add any relevant additional information, including any identified mitigation options.</p>   |

**17. Other environmental issues**

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| <b>Are there any other environmental issues arising from the proposed project?</b> |
| <input checked="" type="checkbox"/> No   |

**18. Environmental management**

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| <b>What measures are currently proposed to avoid, minimise or manage the main potential adverse environmental effects? (if not already described above)</b>   |
| <p>Measures proposed to avoid, minimise and manage the loss of native vegetation have been discussed in detail in Section 11.</p> <p>This includes appropriate setbacks to native vegetation to be retained, including fencing and landscaping provided in the intervening space.</p> <p>During construction the retained native vegetation on site and in the roadside will be protected via construction requirements detailed in the Construction Environmental Management Plan (CEMP) which will be a conditional requirement of the planning permit.</p> |
| <input checked="" type="checkbox"/> Siting: Please describe briefly:  |
| Highest rated patches of native grassland retained on site (discussed above and at Section 11: Potentially significant environmental effects)   |
| <input checked="" type="checkbox"/> Design: Please describe briefly:  |
| Separation of construction and equipment from native vegetation to be retained  |

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|---|
| (discussed above)   |
| <input checked="" type="checkbox"/> Environmental management:<br><br>CEMP (discussed above) |

## 19. Other activities

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| <b>Are there any other activities in the vicinity of the proposed project that have a potential for cumulative effects?</b><br><input checked="" type="checkbox"/> No |
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## 20. Investigation program

### Study program

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| <b>Have any environmental studies not referred to above been conducted for the project?</b><br><input checked="" type="checkbox"/> No |
|   |
| <b>Has a program for future environmental studies been developed?</b><br><input checked="" type="checkbox"/> No                       |
|   |
|   |

### Consultation program

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| <b>Has a consultation program conducted to date for the project?</b><br><input checked="" type="checkbox"/> Yes If yes, outline the consultation activities and the stakeholder groups or organisations consulted.  |
| In summary, to support the ongoing community and stakeholder engagement undertaken over the past 12 months, a formal period of community consultation was undertaken between 13 September 2021 and 28 September 2021 by independent consultants Spence Consulting Group. This consultation process was undertaken to support and inform the planning permit application to DELWP.   |
| Due to COVID-19 restrictions, a modified consultation process was undertaken, which included:<br>Face-to-face consultation where possible   |
| <ul style="list-style-type: none"> <li>• Publication of all project plans and impact assessments on the Fulham Solar Farm website;</li> <li>• Public notice of the project and planning application process in local and State-wide newspapers</li> <li>• Project plans physically displayed on community noticeboards in Rosedale and Sale;</li> <li>• Letterbox drop to all neighbours within a 2km radius of the project site</li> </ul> |
| Distribution of project details across social media channels (LinkedIn and Facebook), and;  |
| During this period, 4 responses were received from community members and community groups, with no objections received. The enquiries received covered a range of topics including:   |
| <ul style="list-style-type: none"> <li>• Letter of support</li> <li>• Project impacts, including glint and glare and visual impact</li> <li>• Complaints handling register</li> <li>• Species selection in the landscape plan.</li> </ul>   |
| A response was provided to all of the enquiries received and all contacts were added to the Stakeholder Database. As a result of these responses the project:   |
| <ul style="list-style-type: none"> <li>• Changed plant species proposed</li> <li>• Provided additional information in the Visual Impact Assessment</li> <li>• Face-to-face meetings to discuss the glint and glare assessment</li> <li>• Created a complaints handling register</li> </ul>  |

