



# ***Wyalong Solar Farm***

*State Significant  
Development Assessment  
(SSD 9564)*

May 2019

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### **Cover photo**

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# Executive Summary

ESCO Pacific Pty Ltd (ESCO) proposes to develop a new 100 megawatt (MW) solar farm with 25 MW/50 MWh of battery storage approximately 8 kilometres north east of West Wyalong in central west NSW.

## Engagement

The Department exhibited the Environmental Impact Statement for the project and received 12 submissions, including 11 from Government agencies and one from the public.

Bland Shire Council supports the project and none of the other Government agencies object to the project. The public submission was from a nearby landowner that did not object to the proposed development, but did raise concerns regarding potential visual and flooding impacts, and potential impacts on neighbouring agricultural activities. ESCO has responded to all matters raised, and included supplementary vegetation screening to minimise visual impacts for road users and nearby residences. The Department notes that the site is not mapped as a flood prone area, the project represents a low flood risk and agricultural activities on neighbouring properties would not be restricted. The Department has considered these matters in its assessment and incorporated in the recommended conditions where relevant.

## Assessment

The key assessment issues for this project are land use compatibility and potential visual impacts.

ESCO has designed the project to minimise impacts on agricultural land and the surrounding natural environment. The Department considers that the project would not significantly reduce the overall agricultural productivity of the region and is satisfied that the site could be returned to agricultural uses in the future. In this regard, the development footprint does not include any mapped Biophysical Strategic Agricultural Land (BSAL). The loss of 256 hectares (ha) of agricultural land combined with the other approved and operational solar projects in the Riverina Murray Region will result in total loss of 6,310 ha, which represents a small fraction (i.e. 0.07%) of the land being used for agricultural output in the area.

The project has been designed to largely avoid impacts on vegetation and threatened species and all unavoidable impacts (including 0.16 ha of native vegetation clearing) would be offset in accordance with Government policy. The layout of the solar farm has also been designed to minimise impacts on Aboriginal heritage.

While ESCO has designed the project to minimise visual impacts, portions of the project would be visible from surrounding residences. However, the level of potential visual impact to surrounding residences would be relatively minor due to intervening vegetation and/or distance. In addition, ESCO would implement visual impact mitigation measures, including supplementary vegetation screening, which would further reduce the impacts. As such, the Department considers that there would be no significant residual visual impacts on these residences.

## Summary

Overall, the Department considers the site to be appropriate for the project as it has good solar resources and is located adjacent to the existing electricity network.

The project is consistent with both the Commonwealth's *Renewable Energy Target* and NSW's *Climate Change Policy Framework* and *Renewable Energy Action Plan* as it would contribute 100 MW of renewable energy to the National Electricity Market, including a battery storage facility with a capacity of 25 MW/50 MWh. The project would also provide flow-on benefits to the local community, including up to 150 construction jobs, with a capital investment value of \$130 million.

The Department considers that the project would result in benefits to the State of NSW and the local community and is therefore in the public interest.



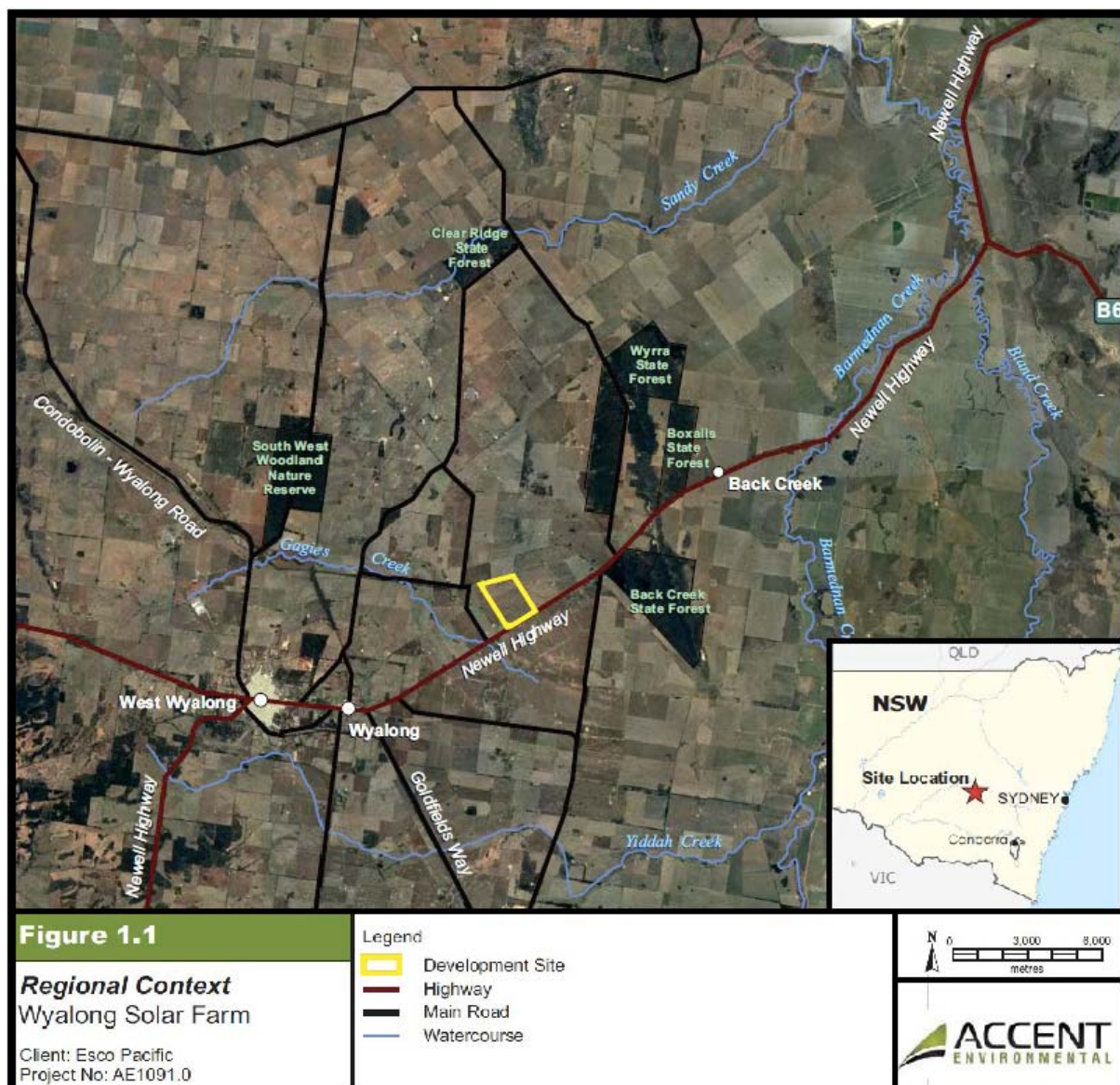
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# 1. Introduction

ESCO Pacific Pty Ltd (ESCO) proposes to develop a new 100 megawatt (MW) solar farm, with 25 MW/50 MW-hour (MWh) of battery storage, approximately 8 kilometres (km) northeast of West Wyalong, in the Bland Shire local government area (LGA) (see **Figure 1**).



**Figure 1** | Regional Context Map



## 2. Project

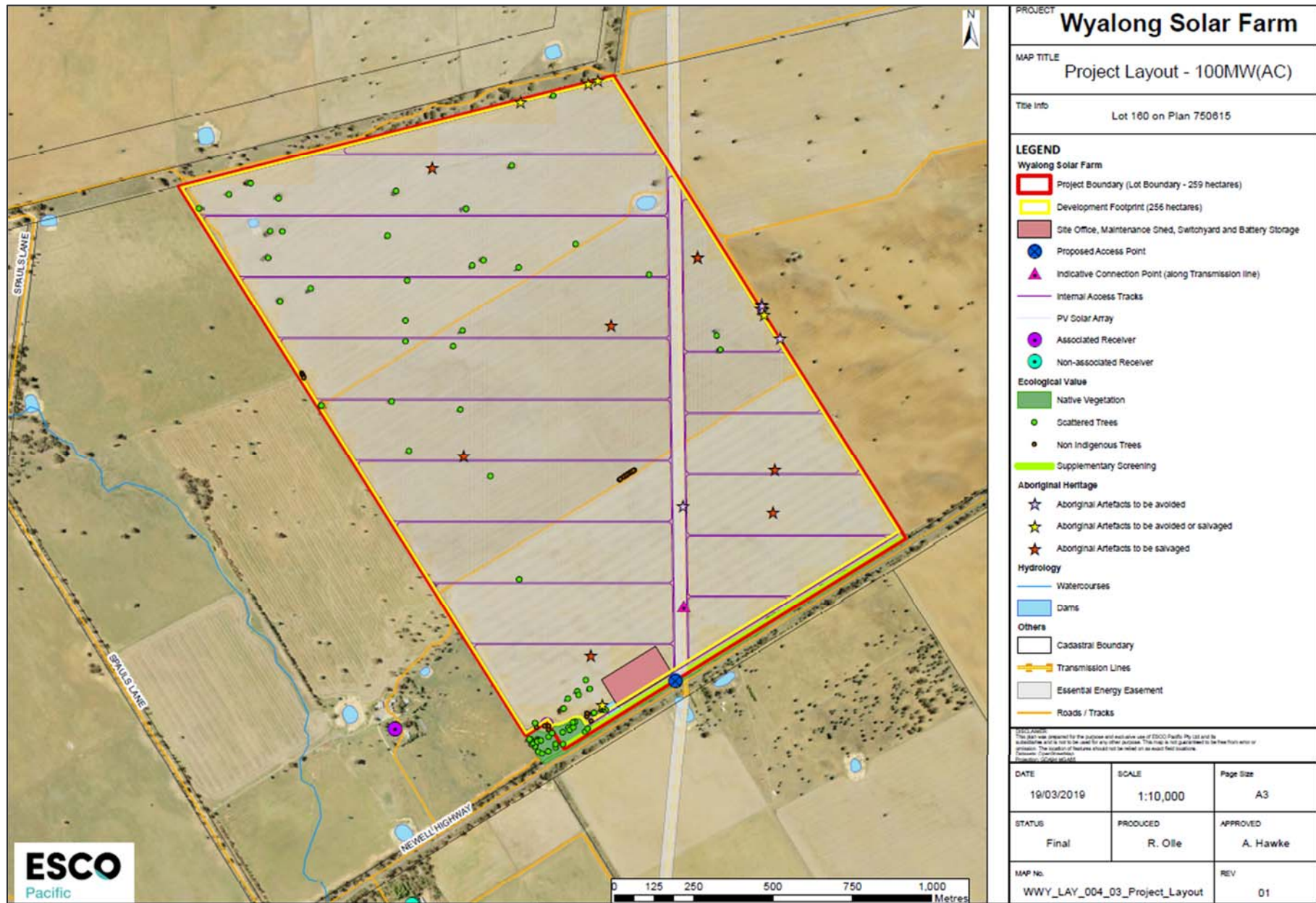
The project involves the construction of a new solar farm with a generating capacity of approximately 100 MW and 25 MW/50 MWh of battery storage. It also involves the upgrading and decommissioning of infrastructure and equipment in the future. While the capacity of the project may increase over time as technology improves, the footprint of the development would not increase.

The solar farm would connect to Essential Energy's existing 132 kilovolt (kV) overhead line that transects the development site.

The key components of the project are summarised in **Table 1**, depicted in **Figure 2**, and described in the Environmental Impact Statement (EIS) (see **Appendix B**) and Submissions Report (see **Appendix E**).

**Table 1** | Main Components of the Project

Aspect	Description
Project summary	<p>The project includes:</p> <ul style="list-style-type: none"><li>• approximately 350,000 solar panels (up to 4 m high) and 26 inverter stations (up to 3 m high);</li><li>• approximately 300 lithium-ion battery units stored in a separate enclosure (25 MW/50 MWh capacity, up to 3 m high);</li><li>• an on-site substation and connection to Essential Energy's 132 kV transmission line;</li><li>• internal access tracks, staff amenities, maintenance buildings (up to 5 m high), offices, laydown areas, car park and security fencing; and</li><li>• subdivision of the project site for the substation (about 0.25 ha)</li></ul>
Project area	259 ha (with a 256 ha development footprint)
Access route	Over-dimensional and heavy vehicles would access the site via the Newell Highway.
Site entry and road upgrades	A new access driveway off the Newell Highway would be constructed with basic right turn (BAR) and basic left turn (BAL) treatments.
Operational life	<p>The expected operational life of the infrastructure is approximately 40 years. However, the project may involve infrastructure upgrades that could extend the operational life.</p> <p>The project also includes decommissioning at the end of the project life, which would involve removing all infrastructure.</p>
Construction	<p>The construction period would last for up to nine months.</p> <p>Construction hours would be limited to Monday to Friday 7 am to 6 pm, and Saturday 8 am to 1 pm.</p>
Hours of operation	Daily operations and maintenance would be undertaken Monday to Friday 7 am – 6 pm, and on Saturday 8 am – 1 pm.
Employment	Up to 150 construction jobs and 4 operational jobs.
Capital investment value	\$130 million



**Figure 2** | Project Layout



## 3. Strategic Context

### 3.1 Site and Surrounds

The project is located on a 259 hectare (ha) site that is currently used for agricultural purposes, including grazing and cropping, and comprises predominantly flat land. The site is zoned RU1 Primary Production under the *Bland Local Environmental Plan 2011* (Bland LEP).

The proposed development footprint is 256 ha and was designed to largely avoid impacts on Aboriginal heritage sites and remnant native vegetation.

The site is crossed by a number of ephemeral watercourses. There are three farm dams within the development footprint that would be backfilled and levelled.

The land surrounding the site is also zoned RU1 and is predominantly used for agricultural purposes. There are three non-associated residences (R3, R4 and R5) within 2 km of the project site, none of which objected to the project, with the closest dwelling located approximately 600 m southwest beyond Newell Highway.

The Newell Highway abuts the southern boundary of the site and would be utilised by the project traffic.

Essential Energy's 132kV transmission line transects the site. The project would connect directly into this transmission line.

### 3.2 Other Solar Farms

The Central West region has attracted considerable interest from solar developers given the proximity of major transmission lines and existing electricity substations.

In this regard, there are two approved and one proposed State significant development solar projects within approximately 100 km of the project (see **Table 2** and **Figure 3**).

**Table 2** | Nearby solar farms

Project	Capacity (MW)	Status	Approximate distance from the project (km)
West Wyalong Solar Farm	90	Proposed	6
Jemalong Solar Farm	50	Approved	60
Sebastopol Solar Farm	150	Approved	85

The key issues for cumulative impacts relate to workforce accommodation, traffic, agricultural land, and visual amenity.

Jemalong Solar Farm and Sebastopol Solar Farm have been approved but are yet to commence construction. The proposed West Wyalong Solar Farm is going through the application process and is located approximately 6 km north of the project, which if approved, would be a 90 MW capacity project with a development footprint around 270ha.

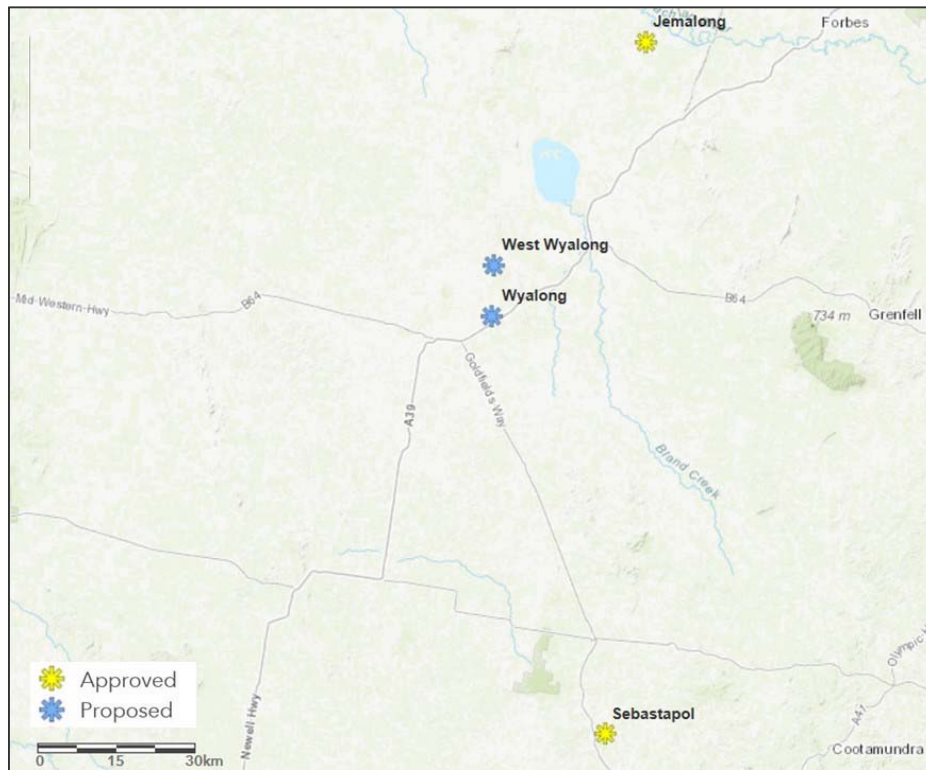
In regard to workforce accommodation, the construction workforce for these solar projects would be sourced from the local and wider region, including neighbouring LGAs and the towns of West Wyalong, Temora, Forbes, Parkes and Narrandera, as discussed further in **section 6.3**.

The project is proposing to use State network routes for heavy and light vehicles. While the surrounding regional road network may experience an increase in traffic numbers, the Newell Highway along the project's transport

route would not experience significant cumulative impacts and has sufficient capacity to absorb construction traffic of the project. This is discussed in **section 6.3**.

Potential cumulative visual impacts from the project and West Wyalong Solar Farm are considered in **section 6.2**.

The broader potential cumulative impacts on agricultural land in the region is discussed in **section 6.1**.



**Figure 3 | Nearby Solar Farms**

### 3.3 Energy Context

In 2017, NSW derived approximately 15.8% of its energy from renewable sources. The rest was derived from fossil fuels, including 79.3% from coal and 4.8% from gas. However, there are currently no plans for the development of new coal power stations in NSW, and the development of renewable energy sources, like wind and solar farms, is experiencing rapid growth.

This is highlighted in the 2017 *Independent Review into the Future Security of the National Electricity Market* (the Finkel Review), which outlines a strategic approach to ensuring an orderly transition from traditional coal and gas fired power generation to generation with lower emissions. It notes that Australia is heading towards zero emissions in the second half of the century.

The *United Nations Framework Convention on Climate Change* has adopted the Paris Agreement, which aims to limit global warming to well below 2°C, with an aspirational goal of 1.5°C. Australia's contribution towards this target is a commitment to reduce greenhouse gas emissions by 26% to 28% below 2005 levels by 2030.

One of the key initiatives to deliver on this commitment is the Commonwealth Government's *Renewable Energy Target*. Under this target, more than 20% of Australia's electricity would come from renewable energy by 2020. It is estimated that an additional 5,400 MW of new renewable energy capacity will need to be built by 2020 to achieve the *Renewable Energy Target*.

The *NSW Climate Change Policy Framework*, released in November 2016, sets an aspirational objective for NSW to achieve net zero emissions by 2050. The NSW Government also has a *Renewable Energy Action Plan*, which promotes the development of renewable energy in NSW.

NSW is one of the nation's leaders in large-scale solar, with eight major operational projects, including the largest solar farm in Australia.

In March 2018, the NSW Government identified 10 potential Energy Zones across three broad regional areas, including the New England, Central West and South West regions of NSW. The identified energy zones are aimed at encouraging "investment in new electricity infrastructure and unlocking additional generation capacity in order to ensure secure and reliable energy in NSW".

While the project would not be located within any of the three priority energy zones, it would be located within one of the five Solar Energy Zones. With a capacity of 100 MW, the project would generate enough electricity to power up to 37,500 homes, and is therefore consistent with both the Commonwealth's *Renewable Energy Target* and NSW's *Renewable Energy Action Plan*.



## 4. Statutory Context

### 4.1. State Significant Development

The project is classified as State significant development under Section 4.36 of the *Environmental Planning and Assessment Act 1979* (EP&A Act). This is because it triggers the criteria in Clause 20 of Schedule 1 of *State Environmental Planning Policy (SEPP) (State and Regional Development) 2011*, as it is development for the purpose of electricity generating works with a capital investment value of more than \$30 million.

Consequently, the Minister for Planning is the consent authority for the development. However, under the Minister's delegation of 11 October 2017, the Executive Director, Resource Assessments and Business Systems, may determine the development application as Council did not object, there were no objections from the general public and a political donations disclosure statement has not been made.

### 4.2. Permissibility

The site is located wholly within land zoned RU1 Primary Production under the Bland LEP, which is discussed further in **section 6.1**.

Under the *State Environmental Planning Policy (Infrastructure) 2007* (Infrastructure SEPP), electricity works are permissible on any land in a prescribed rural, industrial or special use zone. The project is wholly encompassed by land zoned RU1 Primary Production which is a rural zone pursuant to the Infrastructure SEPP. Consequently, the project is permissible with consent.

### 4.3. Integrated and Other Approvals

Under Section 4.41 of the EP&A Act, a number of other approvals are integrated into the State significant development approval process, and therefore are not required to be separately obtained for the proposal.

Under Section 4.42 of the EP&A Act, a number of further approvals are required, but must be substantially consistent with any development consent for the proposal (e.g. approvals for any works under the *Roads Act 1993*).

The Department has consulted with the relevant government agencies responsible for the integrated and other approvals, considered their advice in its assessment of the project, and included suitable conditions in the recommended conditions of consent to address these matters (see **Appendix F**).

## 4.4. Mandatory Matters for Consideration

Section 4.15 of the EP&A Act outlines the matters that a consent authority must take into consideration when determining development applications. These matters are summarised as:

- the provisions of environmental planning instruments (including draft instruments), development control plans, planning agreements, and the EP&A Regulations;
- the environmental, social and economic impacts of the development;
- the suitability of the site;
- any submissions; and
- the public interest, including the objects in the EP&A Act and the encouragement of ecologically sustainable development (ESD).

The Department has considered all these matters in its assessment of the project, as well as ESCO's consideration of environmental planning instruments in its EIS, as summarised in section 6 of this report. The Department has also considered relevant provisions of the environmental planning instruments in **Appendix C**.



# 5. Engagement

## 5.1 Department's Engagement

The Department publicly exhibited the EIS from 20 November 2018 until 19 December 2018, advertised the exhibition in the *West Wyalong Advocate* and the *Wagga Wagga Riverina Leader*, and notified adjoining landowners adjacent to the project boundary.

The Department also consulted with Council and the relevant government agencies throughout the assessment process.

## 5.2 Submissions and Submissions Report

During the exhibition, the Department received 12 submissions, including:

- advice from 11 government agencies (all comments); and
- one from the public (comment).

Full copies of the submissions are attached in **Appendix D**. ESCO provided a response to all matters raised in submissions on the project (see **Appendix E**).

## 5.3 Key Issues – Government Agencies

**Bland Shire Council** supports the project and has requested conditions of consent in relation waste, decommissioning, and the management of weeds and feral animals. These measures have been incorporated into the recommended conditions of consent.

The **Office of Environment and Heritage** (OEH) recommended various measures to mitigate potential impacts on Aboriginal cultural heritage and biodiversity. These measures have been incorporated into the recommended conditions of consent and discussed in **section 6.3**. OEH confirmed it has no remaining concerns.

The **Roads and Maritime Services** (RMS) recommended that ESCO develop a Traffic Management Plan and provide specific intersection treatments at the site entry point. The Department has included its recommendations in the conditions of consent. RMS confirmed it has no remaining concerns.

The **Department of Industry – Lands and Water** (Dol - L&W) recommended an Erosion and Sediment Control Plan be developed prior to construction, and that all underground infrastructure be removed following

decommissioning. The Department has considered this advice and recommended conditions requiring ESCO to minimise soil erosion associated with the development and to remove all solar farm infrastructure.

The **Rural Fire Service** (RFS) and **Fire & Rescue NSW** (F&R NSW) recommended specific operating requirements related to bushfire and hazard preparation and management, which have been incorporated into the recommended conditions of consent.

The **Division of Resources and Geoscience** (DRG) confirmed it is satisfied that the project would not sterilise any mineral resources.

The **Riverina Local Land Services** (LLS) requested that the boundary fence be established and maintained in a stock proof condition, in particular the part of the fence adjoining the Newell Highway, which is a frequently used as a Travelling Stock Route, to prevent passing livestock from entering the site. ESCO has committed to this request.

The **Environment Protection Authority, Heritage Council of NSW** and **TransGrid** raised no concerns on the project and made no recommendations.

## 5.4 Key Issues – Community

The Department received one public submission, from a nearby landowner who wished to remain anonymous. This submission did not object to the project but raised concerns related to flooding impacts, potential visual impacts and potential impacts on the project from agricultural activities at the neighbouring properties. ESCO responded to these matters in the Submissions Report and the Department has considered them in **section 6**.



# 6. Assessment

The Department has undertaken a comprehensive assessment of the merits of the project. This report provides a detailed discussion of the two key issues, namely the compatibility of the proposed land use and potential visual impacts.

The key constraints for the project are depicted in **Figure 2**. The Department has also considered the full range of potential impacts associated with the project and has included a summary of the conclusions in **section 6.3**. A list of the key documents that informed the Department's assessment is provided in **Appendix A**.

## 6.1 Compatibility of Proposed Land Use

### Provisions of the Bland LEP

The site is located wholly within the RU1 Primary Production zone under the Bland LEP. The RU1 zone includes various land uses that are both permitted with and without consent. As a solar farm is not expressly listed as permitted with or without consent, it is a prohibited land use under a strict reading of the LEP.

However, based on a broader reading of the LEP, and consideration of the objectives of the RU1 zone and other strategic documents for the region, the Department considers that there is no clear intention to prevent the development of a solar farm on the project site.

Firstly, the LEP expressly references the Infrastructure SEPP and acknowledges that electricity generating works are regulated by the Infrastructure SEPP, rather than the LEP. As described above, a solar farm is permitted with consent on land zoned RU1 under the Infrastructure SEPP.

Secondly, the project is consistent with the objectives of the RU1 zone, particularly in relation to:

- encouraging sustainable primary industry production by maintaining and enhancing the natural resource base;
- encouraging diversity in primary industry enterprises and systems appropriate for the area; and
- minimising fragmentation and alienation of resource lands.

The proposed development would not fragment or alienate any resource lands during its operation as it has generally low impacts and it could be easily returned to agricultural land following decommissioning. In addition, Council supports the development of the project, subject to the implementation of appropriate environmental mitigation measures.

Additionally, while the Bland Shire LGA has traditionally relied upon agriculture and mineral mining, the introduction of solar energy generation would contribute to a more diverse local industry, thereby supporting the local economy and community. The proposed solar farm would encourage alternative energy resources, which is consistent with the *Bland Shire Council Community Strategic Plan 2017-2027*.

Finally, the project is consistent with the Department's *Riverina Murray Regional Plan 2036* which identifies the development of renewable energy generation as a priority growth sector for the region.

### **Potential Impacts on Agricultural Land**

The project is located within the Riverina Murray Region, which makes the largest regional contribution to agricultural production in NSW, with over 9.1 million ha of this region being used for agricultural output.

While the development footprint (256 ha) does not include any mapped Biophysical Strategic Agricultural Land (BSAL), it is currently used for cropping and grazing. The development of the solar farm would therefore reduce the agricultural output of the site.

The development footprint combined with the other approved and/or operational SSD solar farms in the Riverina Murray region would be 6,310 ha. However, the loss of 6,310 ha of agricultural land represents a very small fraction (0.07 %) of the 9.1 million ha of land being used for agricultural output in the Riverina Murray region<sup>1</sup> and would result in a negligible reduction in the overall productivity of the region.

The Department also notes that neither Council nor DoL – L&W raised concerns that the operation of the project would compromise the long-term use of the land for agricultural purposes.

Furthermore, the inherent agricultural capability of the land would not be affected by the project due to the relatively low scale of the development. To this end, the land would be returned to agricultural use following decommissioning.

The potential loss of a small area of cropping and grazing land in the region must be balanced against:

- the broader strategic goals of the Commonwealth and NSW governments for the development of renewable energy into the future;
- the environmental benefits of solar energy, particularly in relation to reducing greenhouse gas emissions;
- the economic benefits of solar energy in an area with good solar resources and capacity in the existing electricity infrastructure; and
- the benefits of dispatchable energy for grid stability and reliability.

ESCO proposes to return the land back to existing levels of agricultural capability and the Department has included rehabilitation objectives in the recommended conditions to maintain the productivity of the agricultural land during the construction and operation of the project, and to fully reinstate the agricultural capability of the land following decommissioning of the project.

<sup>1</sup> *Riverina Murray Agricultural Industries Final Report*, Department of Planning and Environment, January 2016.

The public submission raised concerns regarding potential impacts on the project from neighbouring farming activities. These concerns included impacts on the solar farm from neighbouring farm activities such as spray and dust onto panels and potential for these impacts to restrict agricultural neighbouring activities. The Department notes that agricultural activities on neighbouring properties would not be restricted and potential spray and dust would be cleaned regularly from panels.

## 6.2 Visual

Concerns about potential visual impacts and impacts of glint and glare were raised by a nearby landowner, and by RMS and Council.

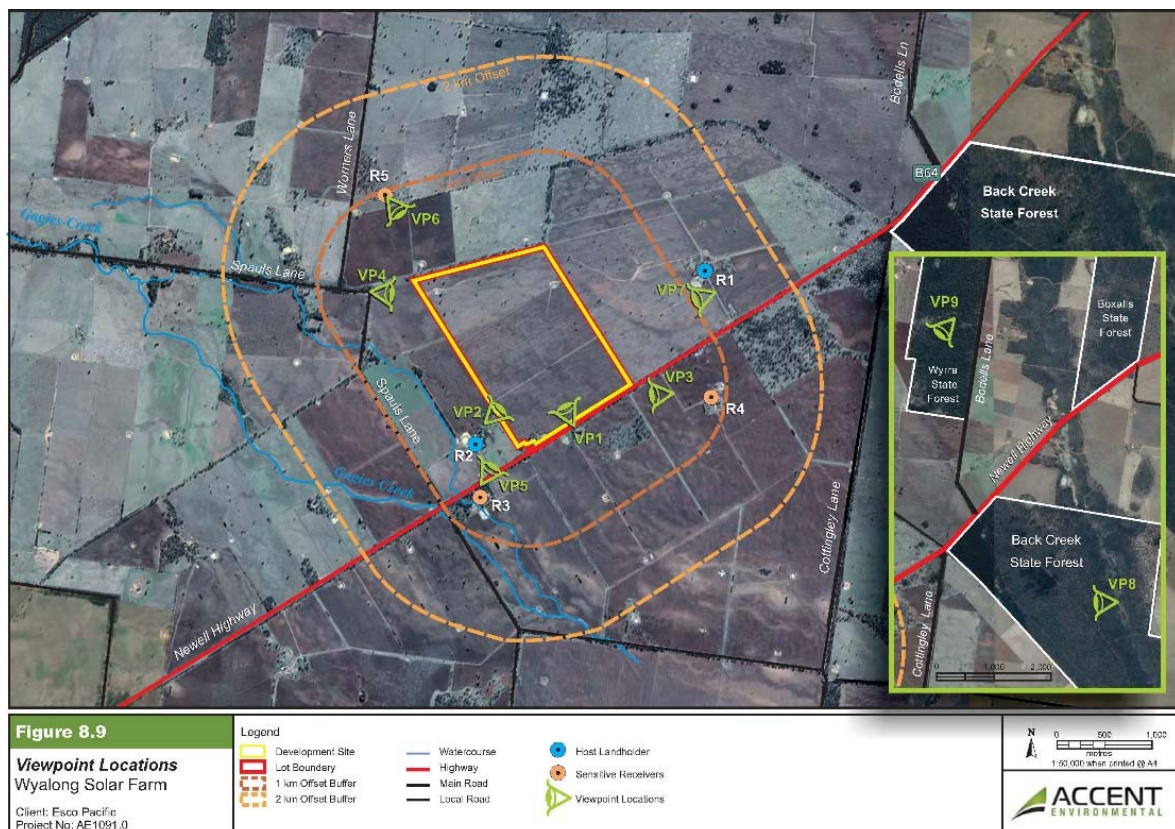
The EIS includes a visual impact assessment (VIA) that is based on nine representative viewpoints and includes photomontages showing the visual extent of the project for all viewpoint locations, including neighbouring residences and road users.

### Visual context

There are three non-associated residences located within 2 km of the project site (R3, R4 and R5) with the closest dwelling (R3) located 600 m southwest of the development footprint (see **Figure 4**).

The nearest public vantage points are in the Wyrra and Back Creek state forests which are located approximately 5.4 km and 5.7 km respectively from the project site. The project would not be visible from West Wyalong as it is located 8 km away.

The Newell Highway is located adjacent to the southern boundary of the site.



**Figure 4** | Viewpoint locations

### Assessment

All project related infrastructure would be a similar size to agricultural sheds commonly found throughout the local area. The maximum solar panel height would be up to 4 m, the maintenance building up to 5 m and the battery storage facility up to 3 m.

### Residences

Residence R5 is located approximately 1 km north of the project site, with the main aspect of the dwelling facing south towards the project. This residence would have some views of the project infrastructure. The VIA identified that without any mitigation measures in place the visual impacts for this receiver would be moderate.

Due to the distance between the residence and the project, the flat nature of the landscape, the presence of intervening vegetation and the height of the solar panels, the Department considers that mitigation measures are not warranted for the residence. Notwithstanding, the Department notes that ESCO has committed to establishing supplementary vegetation screening at residence R5, which is supported by the owner of the residence.

Residences R3 and R4 are located south of the project site across the Newell Highway. Residence R3 is located 600 m to the south west and R4 is located 840 m to the south east. These dwellings may have some views of the project, although these views would be partially screened by the existing scattered trees in the road reserve and vegetation near the residences. The VIA identified that the unmitigated visual impacts for both residences would be moderate-low.

The Department has required ESCO to establish and maintain a mature supplementary vegetation buffer along the southern boundary of the site adjacent to the Newell Highway. The proposed vegetation screening would further mitigate the visual impacts from R3 and R4.

As such, with the proposed avoidance and mitigation measures, the Department considers that the residual visual impacts would be suitably mitigated.

### Glint and Glare

The public submission also raised concerns about reflectivity and glare and measures to monitor the effectiveness of the proposed mitigation measures.

Photovoltaic panels are designed to absorb rather than reflect sunlight, and the Department is satisfied that the project would not cause noticeable glint or glare compared to other roofs or building surfaces.

### Road Users

RMS and Council's concerns related to potential visual impacts to motorists travelling along the Newell Highway. ESCO has proposed to supplement the existing vegetation screening along the full extent of the site's southern boundary adjacent to the Newell Highway (see **Figure 2**), which would reduce visual impacts on road users. The landscaping plan would be developed by ESCO in consultation with RMS and Council.

### **Recommended conditions**

The Department has recommended conditions requiring ESCO to establish and maintain a mature supplementary vegetation buffer along the southern boundary of the site (adjacent to the Newell Highway). This buffer must:

- be established prior to the commencement of operations;
- consist only of species which are endemic to the area;
- be effective at screening views of the solar panels and ancillary infrastructure from road users of the Newell Highway within 3 years of the commencement of construction; and
- be properly maintained with appropriate weed management.

ESCO must prepare a detailed Landscaping Plan for the site, in consultation with RMS and Council, which must include a description of measures that would be implemented to ensure the effectiveness of the vegetation buffer. This plan must also include a program to monitor and report on the effectiveness of these measures.

In addition, the Department has recommended conditions requiring ESCO to commission an independent audit to confirm that the development complies with the consent and recommended measures to improve the environmental performance (if required).

The Department has also required that external lighting and potential for any glare or reflection are minimised and comply with the relevant Australian Standards, and prohibits any signage or advertising on the site, unless it is required for safety purposes.

Subject to the implementation of these measures, the Department considers that there would be no significant visual impact.

## 6.3 Other Issues

The Department's consideration of other issues is summarised in **Table 3**.

**Table 3** | Other Issues

Issue	Findings	Recommended Condition
Biodiversity	<ul style="list-style-type: none"> <li>The site is mostly comprised of cleared agricultural land and supports limited native vegetation, but includes a number of scattered paddock trees in the north of the site.</li> <li>The project has been designed to avoid the higher quality native vegetation in the south-west corner of the site and the Newell Highway road reserve.</li> <li>However, the project would disturb: <ul style="list-style-type: none"> <li>0.16 ha of Western Grey Box tall grassy woodland (PCT 76) an endangered ecological community under the <i>Biodiversity Conservation Act 2016</i> (BC Act) of lower quality within the road reserve to provide site access; and</li> <li>45 paddock trees (including 13 hollow bearing) classified as Western Grey Box tall grassy woodland (PCT 76) endangered under the BC Act.</li> </ul> </li> <li>The following threatened fauna species under the BC Act were assumed to be present on site due to suitable habitat features: Glossy Black Cockatoo, Swift Parrot, Masked Owl and Sloane's Froglet.</li> <li>The impact on native vegetation and native species would generate 38 ecosystem credits and 9 species credits under the BC Act respectively. These credits would be retired in accordance with the <i>NSW Biodiversity Offset Scheme</i>.</li> <li>The Department and OEH consider that the credits have been calculated correctly.</li> </ul>	<ul style="list-style-type: none"> <li>Retire required offset credits in accordance with the <i>NSW Biodiversity Offsets Scheme for Major Projects</i> within two years of the commencement of construction.</li> <li>Prepare and implement a Biodiversity Management Plan in consultation with OEH, including measures to protect and manage vegetation and fauna habitat outside the approved disturbance area.</li> </ul>
Heritage	<ul style="list-style-type: none"> <li>Site surveys identified 12 Aboriginal items, including two artefact scatters and 10 isolated finds. All items were assessed to be of low significance</li> <li>ESCO has committed to avoiding two items and salvaging and relocating the 10 remaining items prior to the commencement of construction.</li> <li>ESCO has advised a further 3 items of 10 identified to be impacted may be avoided and remain in-situ. This would be confirmed during the detailed design phase.</li> <li>If Aboriginal artefacts or skeletal material are identified, all work would cease, and an unexpected finds procedure would be implemented.</li> <li>There are no known items of historic heritage value within or surrounding the site.</li> <li>The Department and OEH consider that the project is unlikely to result in significant impacts on the heritage values of the locality.</li> </ul>	<ul style="list-style-type: none"> <li>Ensure the development does not cause any direct or indirect impacts on any items located outside the approved development footprint.</li> <li>Salvage and relocate Aboriginal items to suitable alternative locations.</li> <li>Cease works and notify the NSW Police and OEH if human remains are identified over the life of the project.</li> <li>Prepare a Heritage Management Plan including an unexpected finds procedure.</li> </ul>
Battery storage facility	<ul style="list-style-type: none"> <li>In response to increasing demands for dispatchable energy, ESCO is proposing an on-site lithium-ion battery storage system, comprising of up to 300 containerised units, equating to approximately 25MW/50MWh.</li> </ul>	<ul style="list-style-type: none"> <li>Prepare a Fire Safety Study consistent with the Department's <i>Hazardous Industry Advisory Paper No. 2, 'Fire Safety Study'</i></li> </ul>

Issue	Findings	Recommended Condition
	<ul style="list-style-type: none"> <li>The proposed battery storage facility footprint would be approximately 50 m x 100 m and located adjacent to the maintenance yard (see <b>Figure 2</b>) and approximately 660 m east of the nearest residence. The EIS sufficiently identified the hazards and safeguards for the battery storage system, demonstrating that the development can comply with the Department's 'Hazardous Industry Planning Advisory Paper No. 4, 'Risk Criteria for Land Use Safety Planning'.</li> <li>The preliminary risk screening included in the EIS was undertaken in accordance with SEPP No.33 – <i>Hazardous and Offensive Development</i> and determined that a Preliminary Hazard Assessment was not required.</li> <li>ESCO would implement a range of hazard prevention and mitigation measures including (but not limited to): <ul style="list-style-type: none"> <li>a 10 m Asset Protection Zone (APZ) around the battery storage facility;</li> <li>automated monitoring and control systems, with temperature control, alarm and shutdown capability; and</li> <li>appropriate separation between battery storage units.</li> </ul> </li> <li>The Department has carefully assessed the proposed battery storage system in consultation with its internal hazards unit and relevant government agencies, and notes that the facility would be located away from residences and environmentally sensitive landscapes.</li> <li>Further, ESCO would be required to complete a Fire Safety Study and Emergency Plan in consultation with the relevant government agencies and to the satisfaction of the Secretary.</li> <li>Subject to the recommended conditions, the Department is satisfied that risks associated with the facility would be minimal. Subject to the recommended conditions, the Department is satisfied that risks associated with the battery storage facility would be minimal.</li> </ul>	<p><i>Guidelines</i> and the 'Best Practice Guidelines for Contaminated Water Retention and Treatment Systems', and describe the final design of any energy storage plant or equipment.</p> <ul style="list-style-type: none"> <li>Prepare an Emergency Plan in consultation with RFS and Fire and Rescue NSW.</li> </ul>
Traffic	<ul style="list-style-type: none"> <li>The main transport route is via the Newell Highway and Goldfields Way. All roads along the transport route are designated for use by B-doubles and over-dimensional vehicles.</li> <li>All vehicles would use the new site access off the Newell Highway (see <b>Figure 2</b>), which would include Basic Right Turn (BAR) and Basic Left Turn (BAL) intersection treatments.</li> <li>The main increase in traffic volumes associated with the project would occur during the 9 month construction period, with a peak period of one month. The estimated peak daily vehicle movements during construction would be 50 vehicle movements per day, comprising 25 light vehicles (cars and shuttle buses) and 25 heavy vehicles. Additionally, there would be 10 over-dimensional vehicle movements during construction.</li> <li>Traffic generation during operations would be negligible (i.e. around 2 light vehicle movements per day).</li> <li>With the above treatments and the implementation of a Traffic Management Plan, the Department, RMS and Council are satisfied that the project would not result in significant impacts on the road network capacity, efficiency or safety. With these treatments and the implementation of a Traffic Management Plan, the Department, RMS and Council are satisfied that the project would not result in significant impacts on the road network capacity, efficiency or safety.</li> </ul>	<ul style="list-style-type: none"> <li>Undertake the relevant road upgrades prior to commencing construction.</li> <li>Prepare and implement a Traffic Management Plan in consultation with RMS and Council.</li> </ul>
Noise	<ul style="list-style-type: none"> <li>Noise generated by the proposed construction, upgrading and decommissioning activities would be well below the 'highly noise affected' criterion of 75 dB(A) in the EPA's <i>Interim Construction Noise Guideline</i> (ICNG).</li> <li>However, three non-associated residences surrounding the site (R3, R4, R5) may be subject to temporary noise levels up to 7 dB(A) above the noise affected criterion of 45 dB(A) at some stage during the construction phase.</li> </ul>	<ul style="list-style-type: none"> <li>Minimise the noise generated by any construction, upgrading or decommissioning activities on site in accordance with best practice requirements outlined in the ICNG,</li> </ul>

Issue	Findings	Recommended Condition
	<ul style="list-style-type: none"> <li>These exceedances would be short-term, limited to standard daytime construction hours and similar to noise generated by agricultural machinery such as tractors and harvesters.</li> <li>Construction noise would be minimised and managed by implementing the noise mitigation work practices set out in the <i>Interim Construction Noise Guideline</i>, including scheduling activities to minimise noise, using quieter equipment, informing the immediately surrounding landowners and establishing a complaint handling procedure.</li> <li>There would be negligible noise during operation.</li> </ul>	<ul style="list-style-type: none"> <li>including consultation with nearby landowners.</li> <li>Restrict construction hours to Monday to Friday 7 am - 6 pm, and Saturday 8 am - 1 pm.</li> </ul>
Water and Erosion	<ul style="list-style-type: none"> <li>The project would require around 30 megalitres (ML) of water during construction (mainly for dust suppression) and 0.5 ML of water annually during operation. A static water supply (40,000 litres) would also be established and maintained for fire protection.</li> <li>Council has confirmed that a viable water source is available for the project through a stand pipe at West Wyalong.</li> <li>Water demands during construction and decommissioning would be met by water being trucked to the site. During operations, water would be sourced via rainwater tanks or being trucked to the site.</li> <li>The Department considers that any erosion and sedimentation risk associated with the project can be effectively managed using best practice construction techniques.</li> </ul>	<ul style="list-style-type: none"> <li>Prohibit water pollution in accordance with Section 120 of the <i>Protection of the Environment Operations Act 1997</i>.</li> <li>Undertake activities in accordance with OEH's <i>Managing Urban Stormwater: Soils and Construction</i> (Landcom, 2004) manual and <i>Guidelines for Controlled Activities on Waterfront Land</i> (DPI Water).</li> </ul>
Other hazards	<ul style="list-style-type: none"> <li>The project would comply with the National Health and Medical Research Council standards for electric and magnetic fields.</li> <li>The site is not mapped as bushfire prone land.</li> <li>Notwithstanding, ESCO has committed to managing the entire site as an Asset Protection Zone and preparing a fire management plan and Emergency Plan to manage fire risk.</li> <li>The Department considers that the bushfire risks can be suitably controlled through the implementation of standard fire management procedures and recommendations made by the RFS.</li> <li>The site is not mapped as flood prone area under the LEP.</li> <li>The project represents a low flood risk and the impact of the project to the surrounding areas would be negligible.</li> <li>Concern was raised by the community about electromagnetic impacts. The impact is assessed to be low. Due to distances to the neighbouring properties the Department considers it is unlikely the project will significantly increase electromagnetic radiation levels at the neighbouring residences.</li> </ul>	<ul style="list-style-type: none"> <li>Ensure that the development complies with relevant asset protection requirements in the RFS's <i>Planning for Bushfire Protection 2006</i>.</li> <li>Prepare and implement an Emergency Plan in consultation with RFS and Fire &amp; Rescue NSW.</li> </ul>
Workforce accommodation	<ul style="list-style-type: none"> <li>Up to 150 workers would be required during the 9 month construction period and would be sourced from the local community where possible.</li> <li>In addition to West Wyalong, the nearby towns of Temora, Forbes, Parkes and Narrandera located 70 km to 120 km from the site, would provide a potential source workers and accommodation options if necessary.</li> <li>To ensure there would be sufficient accommodation to house construction employees and to encourage use of local workers, ESCO would be required to develop an Accommodation and Employment Strategy.</li> </ul>	<ul style="list-style-type: none"> <li>Prepare an Accommodation and Employment Strategy for the project in consultation with Council.</li> </ul>
Subdivision	<ul style="list-style-type: none"> <li>ESCO is proposing to subdivide Lot 160 DP 750615 to facilitate development of the project substation.</li> <li>However, the excised lot (0.25 ha) for the substation would be under the minimum lot size of 200 ha and is prohibited under a strict reading of the LEP.</li> <li>Notwithstanding, under Section 4.38(3) of the EP&amp;A Act, development consent for the project as a whole can be granted</li> </ul>	<ul style="list-style-type: none"> <li>Subdivide the proposed lot in accordance with requirements of clause 157 of the <i>Environmental Planning and Assessment Regulation 2000</i>.</li> </ul>

Issue	Findings	Recommended Condition
	<p>despite the subdivision component of the application being prohibited by the LEP.</p> <ul style="list-style-type: none"> <li>The Department is satisfied that the subdivision should be approved as: <ul style="list-style-type: none"> <li>it would permit existing agricultural land uses to continue on land that is not required for the development;</li> <li>it would not result in the addition of any dwelling entitlements on the subdivided lots; and</li> <li>it is consistent with key objectives of the RU1 zone as it would encourage diversity in primary industry enterprises and minimise conflict between land uses.</li> </ul> </li> <li>Further, Council has not objected to the proposed subdivision.</li> </ul>	



## 7. Evaluation

The Department has assessed the development application, EIS, submissions, Submissions Report and additional information provided by ESCO and relevant government agencies. The Department has also considered the objectives and relevant considerations under section 4.15 of the EP&A Act.

The Department considers the site to be appropriate for a solar farm as it has good solar resources and available capacity on the existing electricity network.

The project has also been designed to largely avoid key constraints, particularly in relation to native vegetation and Aboriginal heritage. Any residual impacts would be managed or offset through the recommended conditions of consent.

Both the Department and Council consider a solar farm development to be a suitable land use for the site. The project would not result in any significant reduction in the overall agricultural productivity of the region. Additionally, the site could be returned to agricultural uses after the project is decommissioned and the inherent agricultural capability of the land would not be affected. The Department considers that with the proposed vegetation screening the remaining visual impacts to surrounding residences and road users would not be significant.

To address the residual impacts of the project, the Department has recommended a range of detailed conditions, developed in conjunction with agencies and Council, to ensure these impacts are effectively minimised or offset. ESCO has reviewed the conditions and does not object to them.

Importantly, the project would assist in transitioning the electricity sector from coal and gas-fired power stations to low emissions sources. It would generate approximately 221,000 MWh of clean electricity annually, which is enough to power up to 37,500 homes and save up to 212,000 tonnes of greenhouse gas emissions per year. It is therefore consistent with the goals of the Commonwealth's *Renewable Energy Target* and NSW's *Renewable Energy Action Plan*.

Further, the project includes an energy storage facility that would enable the project to store solar energy for dispatch to the grid, which would contribute to increased grid stability and energy security.

The Department considers that the project achieves a reasonable balance between maximising the efficiency of the solar resource development and minimising the potential impacts on surrounding land users and the

environment. The project would also stimulate economic investment in renewable energy and provide flow-on benefits to the local community, through job creation and capital investment.

On balance, the Department believes that the project is in the public interest and should be approved, subject to the recommended conditions of consent.



## 8. Recommendation

It is recommended that the Executive Director, as delegate of the Minister for Planning:

- **considers** the findings and recommendations of this report;
- **accepts** and **adopts** all of the findings and recommendations in this report as the reasons for making the decision to grant consent to the application;
- **agrees** with the key reasons for approval listed in the notice of decision;
- **grants consent** to the application in respect of the Wyalong Solar Farm (SSD 9564);
- **signs** the attached development consent and recommended conditions of consent (see **Appendix F**).

Recommended by:

 3/5/19

**Tatsiana Bandaruk**

Environment Assessment Officer

Resource and Energy Assessments

Recommended by:

 3/5/19

**Nicole Brewer**

A/Director

Resource and Energy Assessments



## 9. Determination

The recommendation is **Adopted** / Not adopted by:

 7/5/19

**David Kitto**

Executive Director

Resource Assessments and Business Systems



## ***Appendices***

## Appendix A – List of Documents

Wyalong Solar Farm Environmental Impact Statement, Accent environmental, 2018.

Wyalong Solar Farm Submissions Report, ESCO Pacific, 2019.

Additional information received from ESCO on 1 March and 20 March 2019.

## Appendix B – Environmental Impact Statement

See the Department's website at:

<https://www.planningportal.nsw.gov.au/major-projects/project/9966>

## Appendix C – Statutory Considerations

In line with the requirements of Section 4.15 of the EP&A Act, the Department's assessment of the project has given detailed consideration to a number of statutory requirements. These include:

- the objects found in Section 1.3 of the EP&A Act; and
- the matters listed under Section 4.15(1) of the EP&A Act, including applicable environmental planning instruments and regulations.

The Department has considered all of these matters in its assessment of the project and has provided a summary of this assessment below.

Aspect	Summary
<i>Objects of the EP&amp;A Act</i>	<p>The objects of most relevance to the Minister's decision on whether or not to approve the project are found in Section 1.3(a), (b), (c), (e) and (f) of the EP&amp;A Act.</p> <p>The Department is satisfied that the project encourages the proper development of natural resources (Object 1.3(a)) and the promotion of orderly and economic use of land (Object 5(c)), particularly as the project is:</p> <ul style="list-style-type: none"><li>• a permissible land use on the subject land;</li><li>• located in a logical location for efficient solar energy development;</li><li>• able to be managed such that the impacts of the project could be adequately minimised, managed, or at least compensated for, to an acceptable standard; and</li><li>• consistent with the goals of the <i>Renewable Energy Action Plan</i> and would assist in meeting Australia's renewable energy targets whilst reducing greenhouse gas emissions.</li></ul> <p>The Department has considered the encouragement of ESD (Object 1.3(b)) in its assessment of the project. This assessment integrates all significant socio-economic and environmental considerations and seeks to avoid any potential serious or irreversible environmental damage, based on an assessment of risk-weighted consequences. ESCO has also considered the project against the principles of ESD. Following its consideration, the Department considers that the project can be carried out in a manner that is consistent with the principles of ESD.</p> <p>Consideration of environmental protection (Object 1.3(e)) is provided in <b>section 6.3</b> of this report. Following its consideration, the Department considers that the project is able to be undertaken in a manner that would improve or at least maintain the biodiversity values of the locality over the medium to long term and would not significantly impact threatened species and ecological communities of the locality. The Department is also satisfied that any residual biodiversity impacts can be managed and/or mitigated by imposing appropriate conditions and retiring the required biodiversity offset credits.</p> <p>Consideration of the sustainable management of built and cultural heritage (Object 1.3(f)) is provided in section 6.3 of this report. Following its consideration, the Department considers the project would not significantly impact the built or cultural heritage of the locality.</p>
<i>State significant development</i>	<p>Under Section 4.36 of the EP&amp;A Act the project is considered a State significant development.</p> <p>The Minister for Planning is the consent authority for the development.</p> <p>Under the Minister's delegation of 11 October 2017, the Executive Director, Resource Assessments and Business Systems, may determine the project.</p>

Aspect	Summary
<i>Environmental Planning Instruments</i>	<p>The <i>Bland Local Environment Plan 2011</i> applies and is discussed in <b>sections 4.2</b> and <b>6.2</b> of this report.</p> <p>The project is permissible under the Infrastructure SEPP.</p> <p>Bland Shire Council is listed under <i>SEPP No. 44 – Koala Habitat Protection</i>. The assessment found that there is no core koala habitat identified on the site, and the Department is satisfied that there would be no impacts on koala habitat.</p> <p>The Department has considered the provisions of <i>SEPP No. 55 – Remediation of Land</i>. A preliminary assessment of the land found no contaminated land within the project site, and the Department is satisfied the site is suitable for the development.</p>

## Appendix D – Submissions

See the Department's website at:

<https://www.planningportal.nsw.gov.au/major-projects/project/9966>

## Appendix E – Submissions Report

See the Department's website at:

<https://www.planningportal.nsw.gov.au/major-projects/project/9966>

## Appendix F – Recommended Conditions of Consent

See the Department's website at:

<https://www.planningportal.nsw.gov.au/major-projects/project/9966>