STATE SIGNIFICANT DEVELOPMENT ASSESSMENT
Wellington Solar Project (SSD 8573)

EXECUTIVE SUMMARY

First Solar proposes to develop a new 174 megawatt photovoltaic solar farm with an energy storage facility near Wellington in central NSW.

The Department publicly exhibited the Environmental Impact Statement for the project and received submissions from six government agencies and one member of the general public. The single public submission objected to the project and raised concerns about the broader impacts of large scale renewable projects on energy security and pricing. The Department has considered this and other residual matters in its assessment.

The key issues to consider include land use compatibility and amenity impacts (including visual, noise and traffic). The Department is satisfied that the project would not significantly reduce the overall agricultural productivity of the region, and that the site could be easily returned to agricultural uses in the future. Subject to the implementation of visual impact mitigation measures, including vegetation screening, the Department is satisfied there would be no significant visual impacts on the surrounding residences. The potential noise and traffic impacts would be short-term, minor in nature and can be managed in accordance with Government policy. The Department is satisfied that with the relevant road upgrades and implementation of a comprehensive Traffic Management Plan, impacts to local roads and motorists would be minor.

In summary, the Department considers the site to be suitable for a large-scale solar farm as it has good solar resources, has largely been cleared for agricultural purposes and is close to the existing electricity network. The project is consistent with both the Commonwealth's *Renewable Energy Target* and NSW's *Climate Change Policy Framework* as it would contribute 174 MW of renewable energy to the National Electricity Market, and increase the diversity of supply. The Department considers that the project would result in benefits for NSW and the local community, and is therefore in the public interest.

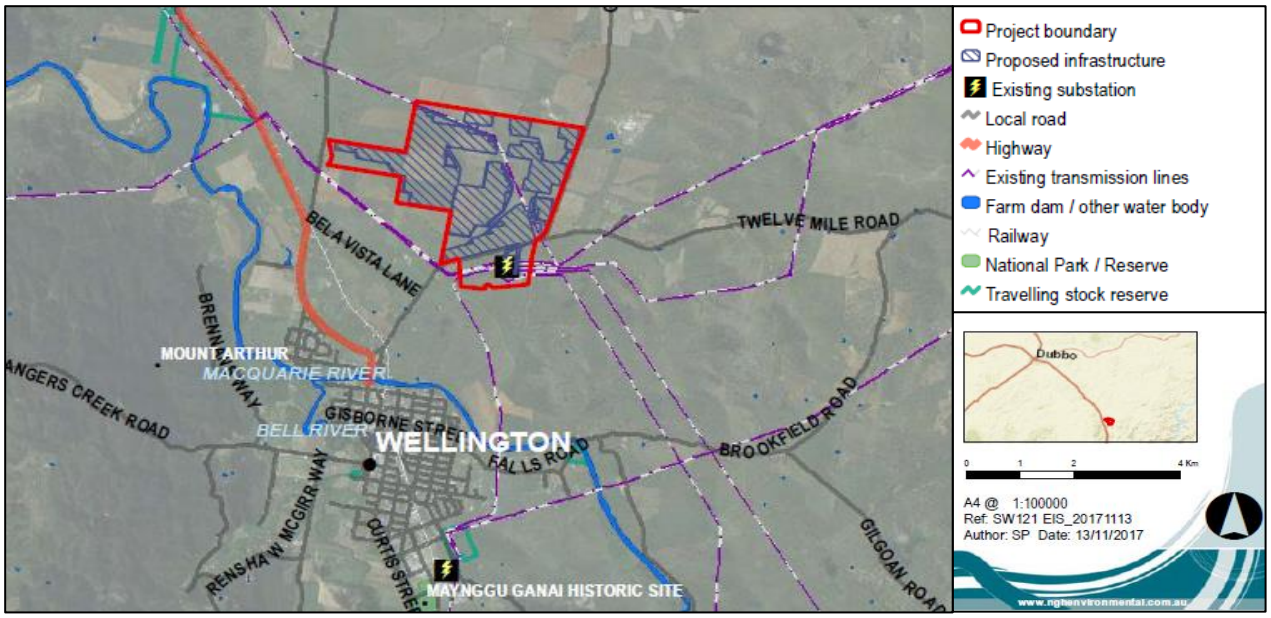

Figure 1: *Regional Context*

1. BACKGROUND

First Solar (Australia) Pty Ltd (the Applicant) proposes to develop a new 174 MW photovoltaic (PV) solar farm with an energy storage facility near Wellington in the Dubbo Regional local government area.

1.1 Project setting

The project would be located on a 559 hectare (ha) site near the Mitchell Highway, approximately 2 kilometres (km) north-east of Wellington (see **Figure 1**). There is an existing 330 kV overhead transmission line that passes through the site, and connects to Transgrid's Wellington substation, directly adjacent to the south of the site.

The project site is gently undulating, consists mostly of cleared agricultural land, and is on land zoned SP2 – Infrastructure, RU1 – Primary Production and R5 – Large Lot Residential. It is currently used for irrigation cropping and grazing, and includes three small farm dams. One stream, Wuuluman Creek, and an overland ephemeral drainage line run through the project site in a generally east to west direction and flow to the Macquarie River, located approximately 1.3 km west of the site.

The proposed development footprint within the site is 491 ha and was designed to avoid impacts to flood prone land and minimise impacts on remnant vegetation, hollow-bearing trees, and historic and Aboriginal heritage items. There are 19 'non-associated' residences located within 1 km of the project site, with the nearest located approximately 30 metres (m) to the west of the site. There are a further 169 non-associated residences located within 2 km of the project, the majority of which are located to the south of the site on the outskirts of Wellington.

Additionally, the Wellington and Macquarie Correctional Centres, which are maximum security prisons which can together house up to 1150 inmates, are located directly east of the site across Goolma Road.

1.2 Project description

The project involves the construction of a new solar farm with an initial generating capacity of 174 megawatts (MW) and energy storage capacity of 100 MW hours. It also involves any upgrading or decommissioning of infrastructure and equipment in the future. While the capacity of the proposed solar farm may increase over time as technology improves, the footprint of the development would not increase.

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

Table 1: *Major components of the project*

Aspect	***Description***
Project summary	The project includes: • approximately 440,000 solar panels (up to 4.5 metres (m) in height) and approximately 50 inverter stations (up to 2.9 m in height); • an energy storage facility with up to 6 purpose-built blocks; • a substation within TransGrid's Wellington substation containing one transformer and associated switchgear; • an overhead 33kV, 132 kV or 330 kilovolt (kV) transmission line connecting the energy storage facility to the substation; • a permanent site office and operations and maintenance facility to be located either within the residence on site (i.e. Narrawa Homestead) or in a new building; • internal access tracks, staff amenities, car parking, laydown area and security fencing. • The expected operational life of the initial infrastructure is approximately 30 years. However, infrastructure upgrades could extend the operational life well beyond this. • The project also includes decommissioning at the end of the project life, which would involve removing all above ground infrastructure.
Project area	559 ha (with a 491 ha development footprint)
Access route	Access to the site would be via the Mitchell Highway and Goolma Road.

Aspect	*Description*
Site entry and road upgrades	• The site would be accessed off Goolma Road, approximately 4.6 km north of the intersection with the Mitchell Highway. • Key road works for the project would involve upgrading the intersection of Goolma Road and the site access point with a Basic Right Turn (BAR) and Basic Left Turn (BAL) treatment.
Construction traffic and timeframe	• The construction period would last for up to 12 months from the commencement of site establishment works, and include a peak period of 6 months. • Construction hours would be limited to Monday to Friday 7 am to 6 pm, and Saturday 8 am to 1 pm.
Hours of operation	• The project would operate during daylight hours. • Daily operations and maintenance by site staff would be undertaken Monday to Friday 7 am to 6 pm and Saturday 8 am to 1 pm.
Employment	Up to 200 full time equivalent construction jobs and 3 full time staff equivalent operational jobs.
CIV	$270 million

1.3 Strategic context

In 2017, NSW derived approximately 19.6% of its energy from renewable sources. The rest was derived from fossil fuels, including 75.8% from coal and 4.6% 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 recently released *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 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* (UNFCCC) 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* (RET). 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.

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*." The project would be located within the 'priority' Central West Energy Zone.

NSW is currently leading Australia in large-scale solar, with five major operational projects, including one of the largest solar farms in Australia.

With a capacity of 174 MW, the project would generate enough electricity to power up to 46,000 average NSW homes, and is therefore consistent with both the Commonwealth's *Renewable Energy Target* and NSW's *Renewable Energy Action Plan*.

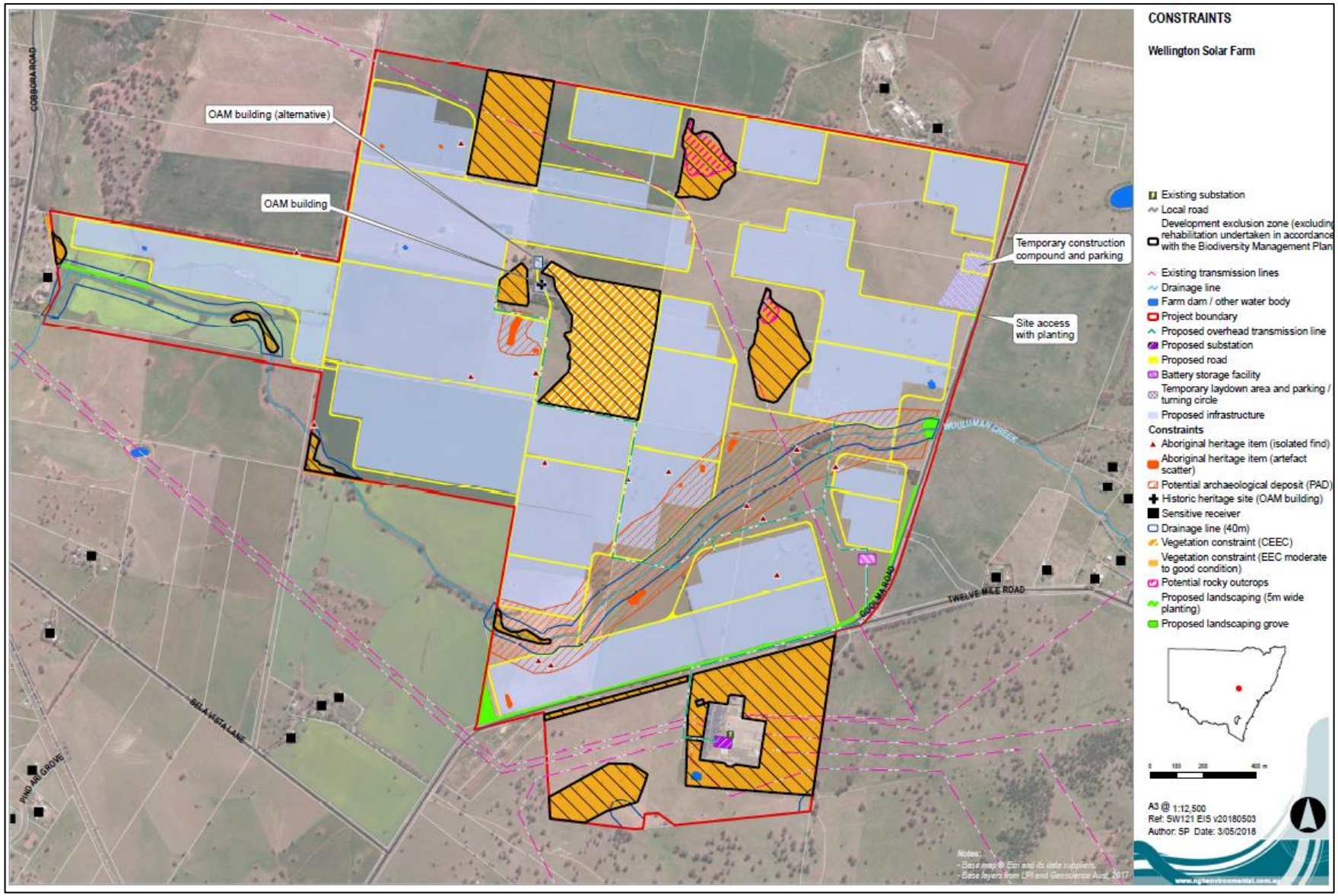

Figure 2: *Project Layout*

2. STATUTORY CONTEXT

2.1 State Significant Development

The project is classified as SSD under Section 4.38 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 (CIV) 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 there were fewer than 25 objections and a political donations disclosure statement has not been made.

2.2 Environmental planning instruments

The project site is located within land that is zoned SP2 - Infrastructure, RU1 - Primary Production and R5 – Large Lot Residential under the *Wellington Local Environmental Plan 2012* (Wellington LEP). The provisions of the Wellington LEP are discussed in **section 4.1** of this report.

Under the *SEPP (Infrastructure) 2007* (Infrastructure SEPP), electricity generating works are permitted with consent within prescribed rural and special purpose zones (including RU1 and SP2), however, only small-scale solar energy generation development (i.e. less than 100 kilowatts) is permissible in prescribed residential zones (including R5). As such, the Infrastructure SEPP does not permit development for the purposes of large-scale solar energy generation on land zoned R5.

However, under Section 4.38(3) of the EP&A Act, development consent may be granted despite the development being partly prohibited by an environmental planning instrument. As such, despite the provisions of the Infrastructure SEPP, consent could be granted for the development on the land zoned R5.

While the consent authority has the power to override a partial prohibition for SSD, it must assess the planning merits of such a decision. This is discussed further in **section 4.1** of this report.

In accordance with the Infrastructure SEPP, the Department has given written notice of the project to TransGrid as the electricity supply authority for the area. The Electricity Transmission Ministerial Holding Corporation provided landowner's consent on behalf of Transgrid for the development.

The Applicant completed a risk screening procedure for the energy storage facility in accordance with *SEPP No. 33 – Hazardous and Offensive Development* (SEPP 33). The Department's consideration of this is discussed in **section 4.3** of this report.

The Department has also considered the provisions of *SEPP No. 55 – Remediation of Land*. A preliminary assessment of the land found no evidence of contamination within the project site. The Department is satisfied that the risk that contamination is present on the project site is low, and as such, the site is suitable for the development.

2.3 Integrated and other approvals

Under Section 4.41 of the EP&A Act, a number of other approvals are integrated into the SSD approval process, and consequently 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 the intersection works under the *Roads Act 1993)*.

The Department has consulted with the relevant government authorities 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 A**).

3. CONSULTATION

The Department publicly exhibited the EIS from 14 December 2017 until 28 January 2018 (45 days), advertised the exhibition in the Wellington Times, Dubbo Mailbox Shopper and Dubbo Daily Liberal, and received seven submissions, including six from government agencies and one from a member of the public.

The Department inspected the site on 17 October 2017.

A summary of the key issues raised in submissions is provided below. A full copy of the submissions is provided in **Appendix C**.

The Applicant provided a detailed response to all matters raised in submissions on the project (see **Appendix D**), as well as a range of additional information to address matters raised by the Department and other agencies during the assessment process (see **Appendix E**).

3.1 Agency submissions

Dubbo Regional Council initially raised concerns on certain aspects of the project including potential developer contributions, bushfire impacts, agricultural productivity, and traffic. These matters have been addressed by the Applicant in the Response to Submissions and are discussed in **section 4** of this report. A letter of support from the Mayor was also included in the Response to Submissions

The **Office of Environment and Heritage** (OEH) recommended that the development footprint be revised to avoid the portion of White Box – Yellow Box – Blakely's Red Gum Woodland ecological community listed under the *Environmental Protection and Biodiversity Conservation Act 1999* (EPBC Act), and provided recommendations regarding the management of the potential archaeological deposits on site. These issues have been addressed by the Applicant in the Response to Submissions and OEH has indicated it is satisfied that any residual matters can be addressed by the recommended conditions of consent.

Roads and Maritime Services (RMS) initially advised that it had insufficient information to enable its assessment of construction traffic impacts. Following receipt of additional information, RMS advised that it has no objection to the project, subject to recommended conditions. These recommendations have been incorporated into the recommended conditions of consent.

Fire & Rescue NSW made a number of recommendations to address the potential fire risks associated with the project, including the requirement for preparation of a comprehensive emergency response plan. These recommendations have been incorporated into the recommended conditions of consent.

The **Department of Industry – Crown Lands and Water Division** (DoI L&W) requested additional information about the proposed water use and the potential impacts of the project's infrastructure on flooding, waterfront land, soil and land capability, and agricultural land use. This was provided by the Applicant, and DoI L&W advised it was satisfied with the additional information.

The **Division of Resources and Geoscience** (DRG) requested that the Applicant undertake further consultation with the relevant mineral exploration licence holders. This was provided by the Applicant, and DRG advised it was satisfied with the consultation undertaken, however, requested the Applicant continue to liaise with the licence holders throughout the project's construction and operation.

3.2 Public submissions

One public submission was received which objected to the proposal and raised concerns about the impact of solar energy and the cumulative impact of renewable energy sources on electricity security and prices in NSW. The matters raised in the submission are addressed in **section 4.5** of this report.

4. 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 below, including the compatibility of the proposed land use and amenity impacts.

The Department has also considered the full range of potential impacts associated with the project and has included a summary of the conclusions relating to these in **section 4.3**.

4.1 Compatibility of the proposed land use

4.1.1 Provisions of the Wellington LEP

The project site is located within land that is zoned SP2 - Infrastructure, RU1 - Primary Production and R5 – Large Lot Residential under the Wellington LEP (see **Figure 3**).

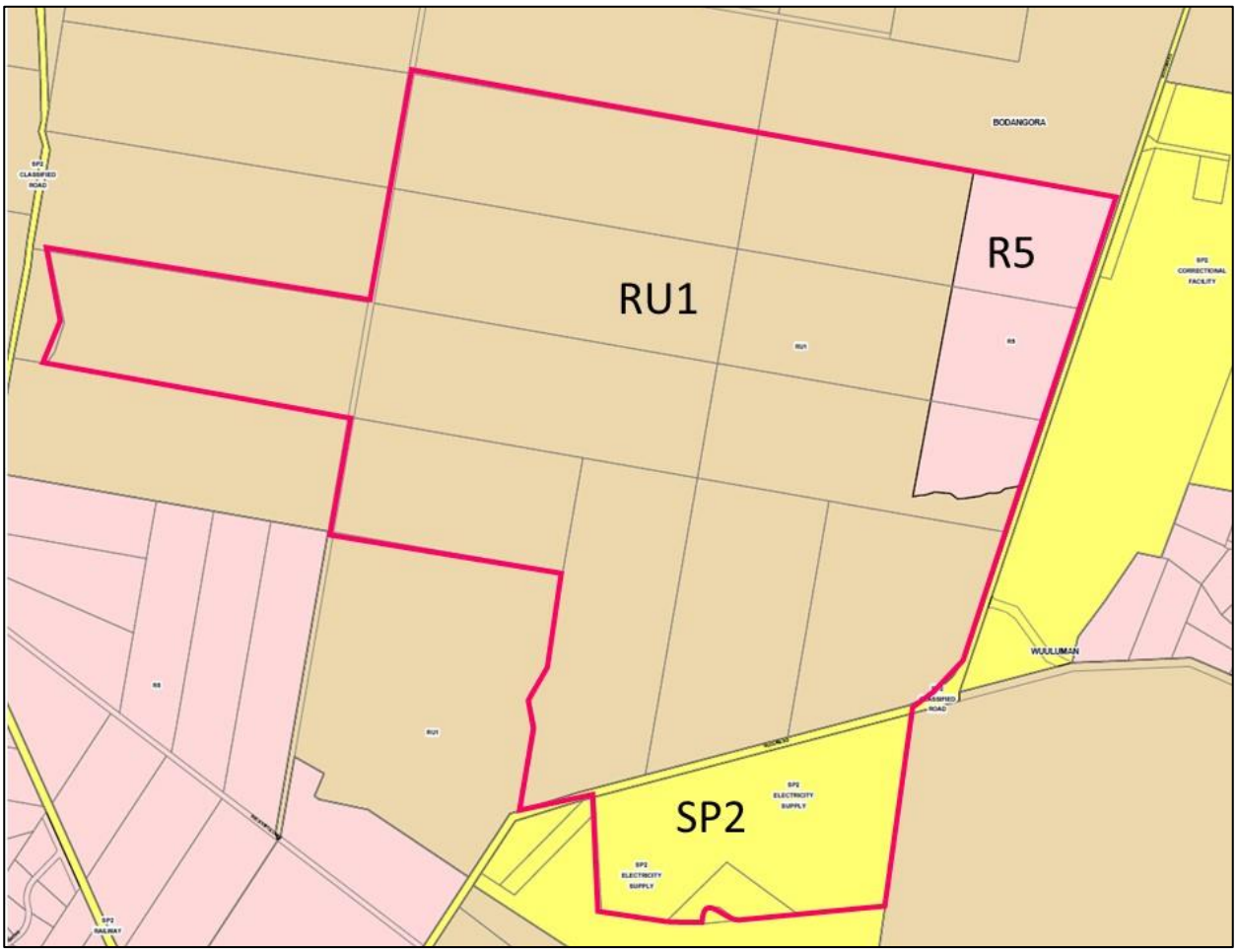

Figure 3: *Project Site Zoning*

SP2 (Infrastructure) land

The SP2 zoned land is designated as 'Electricity Supply' on the Land Zoning Map and the solar farm is permissible with consent in this zone.

RU1 (Primary Production) land

The majority of the site (approximately 80%) is zoned RU1. The RU1 zone includes various land uses that are 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 zoning table.

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

Firstly, the Wellington LEP expressly references the Infrastructure SEPP and acknowledges that electricity generating works are regulated by the Infrastructure SEPP, rather than the LEP. Notwithstanding, a solar farm is permitted with consent under the Infrastructure SEPP.

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

- encouraging diversity in primary industry enterprises; and
- minimising fragmentation and alienation of resource lands.

The proposed development would have limited impacts on the agricultural productivity of the land; the site could be easily returned to agricultural land in the future once the project is decommissioned, and site managed grazing could occur during the operations. Further, Council supports the development of the project, subject to the implementation of appropriate environmental mitigation measures.

Thirdly, while the Dubbo Regional local government area has traditionally relied upon agriculture, 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 help Council meet its broader goals around sustainability, and the future economic growth of the region.

The *Dubbo Economic Development Strategy (2011)* identifies renewable industry development and technology as a key opportunity for economic investment. One of the key actions in the Council's *2016/17 LGA Economic Development Action Plan* is the promotion of alternative energy sources and infrastructure to support initiatives that attract low carbon investment in the local government area.

Finally, the project is consistent with the Department's *Central West and Orana Regional Plan 2036* which identifies the development of renewable energy generation as a future growth opportunity for the region.

R5 (Large Lot Residential) land

The portion of the site zoned R5 comprises approximately 10% of the total site area and the Applicant is proposing solar panels and ancillary infrastructure in this portion of the site. Both the LEP and the Infrastructure SEPP prohibit large-scale solar farms on land zoned R5.

While the consent authority has the power to override a partial prohibition (under Section 4.38(3) of the EP&A Act), it must carefully assess the merits of such a decision, including considering the views of Council and the public interest.

Council has advised the Department that the land was previously rezoned from RU1 to R5 to accommodate possible residential development associated with the Wellington and Macquarie Correctional Centres. However, both Council and the landowner have confirmed that there has never been any strong market interest in the land for small lots, notwithstanding several efforts to attract developers in the past.

The Department notes that there are other residential development opportunities in and around the nearby town centre of Wellington, and there is generally a negative perception of development opportunities in close proximity to the Correction Centres. Consequently, both the Department and Council consider that future residential development on the R5 zoned land is unlikely.

Furthermore, Council has advised the Department that it intends to consolidate the Wellington LEP and *Dubbo Local Environmental Plan 2011* in the future and that it would likely use this process to rezone the R5 land back to RU1.

In summary, neither the Department nor Council have residual concerns about any effect that the proposed development would have on the prospect of residential development in the portion of the site zoned R5, as the land is likely to be rezoned to its original and existing agricultural land use.

4.1.2 Potential impacts on agricultural land

The project site is located within the central region of NSW, which has a strong and diverse agricultural sector.

The site is located on land that is mapped as potential Biophysical Strategic Agricultural Land (BSAL). However, this mapping was done at a regional scale, and does not necessarily mean that individual properties identified as potential BSAL contain "*high quality soils and water capable of sustaining high levels of production*".

Following consultation with DoI L&W, the Department requested that the Applicant undertake a Land Use Conflict Risk Assessment (LUCRA) and soil surveys to determine the biological, chemical and physical attributes of the soil.

In response to this request, the Applicant undertook a LUCRA and additional soil testing. The LUCRA concluded that with appropriate mitigation measures, the risks to existing and adjacent land use would be acceptable.

The additional soil testing demonstrated that the while the site fits the technical classification of BSAL, the soils may not be capable of sustaining intensive cropping or other highly productive agricultural land uses. The Department has consulted with the landowner and notes that the land has not historically been used for intensive cropping, but has mainly been used for less intensive cattle and sheep grazing.

DoI L&W has confirmed that it is satisfied with the level of assessment undertaken for the purposes of its assessment, and that a full soil survey can be completed following the projects determination. Additionally, neither DoI L&W nor Council has raised concerns that the operation of the project would compromise the long-term use of the land for agricultural purposes.

Regardless of the technical capability of the soils, the Department acknowledges that the agricultural output from the site would be reduced by the project. However, the 490 ha of BSAL that would be taken up by the project represents a very small fraction of the region and would result in a negligible reduction in the overall productivity of the region (0.5%).

Furthermore, the inherent agricultural capability of the land would not be affected by the project due to the relatively low scale of the development. Managed grazing may be used to maintain the height of ground cover during operations and the land would be returned to agricultural use following decommissioning. Upon decommissioning of the solar farm, the removal of pile driven posts and small pad footings would cause minimal soil and landscape disturbance.

The potential loss of a small area of agricultural 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; and
- the economic benefits of solar energy in an area with good solar resources and capacity in the existing electricity infrastructure.

Based on these considerations, the Department is satisfied that the proposed solar farm represents an effective and compatible use of the land within the region. In addition, the Department has recommended suitable conditions to maintain the productivity of the agricultural land during the construction and operation of the project and to reinstate the agricultural capability of the land following the decommissioning of the project.

4.2 Amenity

4.2.1 Traffic

The project site would be accessed via an access point off Goolma Road, approximately 4.6 km north of its intersection with the Mitchell Highway. Both Goolma Road and the Mitchell Highway are state roads managed by RMS.

There would be minimal traffic to and from the project site during operation of the project (i.e. up to 1 heavy vehicle and 7 light vehicles per day). Consequently, the only material traffic impacts would occur during construction, decommissioning and major infrastructure upgrades.

The construction period is expected to last up to 12 months, including a peak period of approximately 6 months. During the construction peak, there would be up to 100 heavy vehicle movements per day and up to 200 construction personnel commuting to the site on a daily basis.

Project traffic during decommissioning and major infrastructure upgrades would be similar to construction traffic levels, however for shorter durations.

RMS initially raised concerns about the impacts of the volume of construction related traffic on the safety of Goolma Road, and requested that a minimum of 80% of the daily construction personnel are to be transported to and from the site each day by bus.

In response to RMS's concerns, the Applicant has committed to using shuttle buses and car pooling to transport 80% of construction personnel from nearby towns (i.e. Wellington, Dubbo, Gulgong, Molong), which would reduce light vehicle movements to approximately 40 per day.

As such, RMS supports the proposed site access, subject to road upgrades, including:

- upgrading the intersection of Goolma Road and the site access point with a Basic Right Turn (BAR) and Basic Left Turn (BAL) treatment; and
- sealing the on site access track for 30 m from the site access point.

The Applicant has accepted the proposed upgrades and has confirmed they would be designed and constructed to the satisfaction of RMS.

Nothwithstanding, the Department has recommended conditions requiring the Applicant to:

- undertake the relevant road upgrades prior to the commencement of construction;
- ensure the number of vehicles does not exceed:
    - 100 heavy vehicle movements a day during construction, upgrading or decommissioning; and
    - 5 heavy vehicle movement a day during operations;
- ensure the length of the vehicles accessing the site does not exceed 25 m; and
- prepare and implement a Traffic Management Plan in consultation with the RMS and Council.

Subject to the recommended conditions, the Department, RMS and Council are satisfied that the project would not result in significant impacts on road network capacity, efficiency or safety.

4.2.2 Visual

The project is a relatively low-lying development with the proposed solar panel height up to 4.5 m, and the energy storage facility and alternative operation and maintenance building height up to 3 m. The energy storage facility and alternative operation and maintenance building structures are considered to be a similar size and scale to agricultural sheds commonly utilised in the local area.

There are 19 'non-associated' residences located within 1 km of the project site, with the nearest located approximately 30 m to the west of the site. There are a further 169 non-associated residences located within 2 km of the project, the majority of which are located to the south of the site on the outskirts of Wellington. While none of the nearby residences objected to the project, some were interested in the visual impact mitigation options.

The low height of the infrastructure, undulating topography and existing scattered vegetation would limit views of the project from most residences.

Notwithstanding, the Applicant is proposing a vegetation buffer at strategic locations around the site to screen views of the project from a number of surrounding residences, including the nearest residence located 30 m west of the site (see **Figure 2**).

The Department has recommended conditions requiring the Applicant to establish and maintain a mature vegetation buffer along portions of the western, southern and eastern boundaries. This buffer must:

- be established prior to the commencement of operations;
- consist of species that are endemic to the area; and
- be effective at screening views of the solar panels and ancillary infrastructure (excluding overhead power lines) from surrounding residences within 3 years of the commencement of construction.

Further, the Applicant must prepare a detailed Landscaping Plan for the site, in consultation with RMS, Council and surrounding residences, which includes a detailed description of the measures to ensure the effectiveness of the vegetation buffer, and a program to monitor and report on the effectiveness of these measures.

The Department has also recommended conditions requiring the Applicant to ensure that external lighting is minimised and complies with the relevant Australian Standards, and prohibiting any signage or advertising on the development, unless it is required for identification or safety purposes.

With these conditions in place, the Department is satisfied that there would be no significant visual impacts from the project on surrounding residences.

4.2.3 Noise

The EIS includes a noise impact assessment of both operational and construction noise, including an assessment of the noise impacts associated with construction traffic.

The noise impact assessment concluded that the noise associated with the proposed construction, upgrading and decommissioning activities would be well below the 'highly noise affected' criterion of 75 dB(A) in the EPA's *Interim Construction Noise Guideline* (ICNG) for all 'non-associated' residences.

However, up to two 'non-associated' residences may be subject to temporary noise up to 9 dB(A) above the 'noise affected criterion' of 40 dB(A) when piling installation works for solar panels occur at the project boundary adjacent to these residences. This exceedance would be short term and limited to standard operating hours.

The Applicant has prepared a draft Construction Noise Management Plan, in which it has committed to implementing the noise mitigation work practices set out in Tables 5 and 8 of the ICNG, including scheduling activities to minimise noise, using quieter equipment, informing the immediately surrounding landowners and establishing a complaints handling procedure.

The noise impact assessment concluded that the noise levels from the general operation of the project would comply with the relevant noise criteria of 35 dB(A) established under the *Industrial Noise Policy* at all residences under all scenarios and meteorological conditions.

The Department is satisfied that any noise impacts would be limited to the construction period and would be short-term and minor, and has recommended conditions requiring the Applicant to:

- minimise the noise generated by any construction, upgrading or decommissioning activities on site in accordance with best practice requirements outlined in the ICNG; and
- restrict construction hours to Monday to Friday 7 am to 6 pm and Saturday 8 am to 1 pm, with no works on Sundays and NSW public holidays.

4.3 Other Issues

A summary of the Department's consideration of other issues is provided in **Table 2**.

Table 2: *Other issues*

Issue	***Consideration***	***Recommendations***
Energy Storage Facility	• In response to increasing demands for dispatchable energy, the Applicant is proposing an on-site energy storage facility with lithium-ion battery cells. • The facility is proposed within a cleared and fenced 0.01 ha area in the southeastern area of the project site (see Figure 2). The facility would include up to 6 purpose-built blocks approximately 12.5 m long, 12.5 m wide and 3 m high. Each block would contain a power pack unit which includes battery pods, a thermal cooling system and inverters. • The Applicant's hazard assessment in the EIS assessed risks associated with development and operation of lithium-ion batteries in accordance with *SEPP 33*. • This assessment concluded the Applicant's proposed control measures would minimise the risks from handling, storage and operation of the batteries, including: - maintaining an asset protection zone of 10 m round the facility with a suitable ground cover; - ensuring there is a separation distance of at least 1 m between the power packs;	• Prepare and implement a Fire Safety Study in consultation with Fire & Rescue NSW.

Issue	*Consideration*	*Recommendations*
	- installing a fire detection and suppression system; and - automated monitoring of voltage and temperature, including alarm and shutdown response systems. • The Department's hazard unit agrees with the conclusions of the hazard assessment, and has recommended conditions to ensure the mitigation measures are implemented.	
Energy Security	• One submission raised concerns that the project, or a combination of the project and a range of other renewable energy projects, could have an adverse impact on energy security in NSW, and increase electricity prices. • In particular, the submission contends that renewable energy projects may force the closure of baseload energy suppliers (e.g. coal and gas), leading to higher energy prices as the remaining baseload suppliers may increase prices at times renewable energy cannot be generated. • The Department acknowledges and understands the broad concerns raised in the submission, however any evaluation of these issues must have regard to the broader strategic context. • Firstly, NSW forms part of the National Electricity Market (NEM). The NEM is complex and is governed by a robust statutory framework at both the Commonwealth and State level which covers the regulation of electricity generation, distribution and pricing. • Secondly, there is strong policy support at both the Commonwealth and State level for the increased development of renewable energy projects to ensure that a greater proportion of electricity is generated by renewable sources, and to reduce greenhouse gas emissions associated with any electricity generation. • Thirdly, the Department notes that long-term energy policies are being informed by recommendations in the *Independent Review into the Future Security of the National Electricity Market*, which provides a blueprint for ensuring Australia's energy systems remain affordable, reliable, sustainable and secure. • In the Department's view, the likelihood of the project having an adverse impact on energy security or electricity prices in NSW is extremely low, given that it would only add 174 MW of capacity to the NEM, which at this stage has a total generation capacity of over 54,000 MW. • Further, any incremental or cumulative impacts associated with the potential intermittency of renewable energy projects could be mitigated through the operation of the NEM.	• No specific conditions required.
Biodiversity	• The project site is mostly cleared agricultural land with a long history of cropping and grazing. However, there are patches of remnant native vegetation remaining on the site. • While the project has been designed to avoid most of this remnant vegetation, it would clear around 0.09 ha of the White Box – Yellow Box – Blakely's Red Gum EEC, which is in moderate to good condition. • Under the *NSW Biodiversity Policy for Major Projects*, this clearing generates three ecosystem credits. • Both OEH and the Department are satisfied that the project would not result in any significant biodiversity impacts, subject to the provision of the relevant offsets.	• Retire the required biodiversity offset credits in accordance with the *NSW Biodiversity Offset Policy for Major Projects* within two years of the commencement of construction. • Prepare a Biodiversity Management Plan prior to commencement of construction.
Water and Erosion	• One 3rd order stream (Wuuluman Creek) and an ephemeral drainage line traverse the site. • The Applicant has designed the project to minimise the impacts of the project on flood levels and has setback solar panels a minimum of 40 m from Wuuluman Creek.	• Prepare a detailed Stormwater Plan prior to the commencement of construction. • Undertake activities in accordance with OEH's

Issue	*Consideration*	*Recommendations*
	• However, both the onsite access tracks and overhead transmission line would be required to cross both Wuuluman Creek and the ephemeral drainage line several times (see Figure 2). • Provided the water crossings are designed in accordance with the relevant guidelines, both the Department and DoI L&W are satisfied that the project is unlikely to have significant impacts on flood behaviour. • The project would require around 10 megalitres (ML) of water during construction and decommissioning, and approximately 0.13 ML per year during operation. • During construction, operation and decommissioning, all water demands would be met by trucking water to site. • Any potential erosion and sedimentation risks associated with the project can be effectively managed using best practice construction techniques.	*Managing Urban Stormwater: Soils and Construction* (Landcom, 2004) manual and *Guidelines for Controlled Activities on Waterfront Land* (DPI Water). • Prohibit water pollution.
Aboriginal Heritage	• An Archaeological and Cultural Heritage Assessment was completed in accordance with the relevant guidelines, including consultation with the local Aboriginal community. • 25 Aboriginal heritage items were identified, including 15 isolated stone artefacts and 25 stone artefact scatters. Of these, 21 were assessed as having low significance and four were assessed as having low to moderate significance. • Additionally, two Potential Archaeological Deposits (PADs) were identified with a high potential for subsurface finds (see **Figure 2**). Both of these PAD areas have a high density of surface artefacts and deep soil deposits. • The assessment recommended the Applicant undertake test excavation and salvage for the portion of the PADs that would be impacted, and any disturbed items be recorded, analysed and relocated, in consultation with the Aboriginal stakeholders. • The Applicant has committed to preparing and implementing a Heritage Management Plan which would incorporate the recommendations of the assessment. • With these measures, both the Department and OEH are satisfied that the project would not significantly impact the Aboriginal heritage values of the locality.	• Ensure the development does not cause any direct or indirect impacts on the Aboriginal heritage items located outside the approved development footprint. • Minimise and manage any impacts on the Aboriginal heritage items and PADS within the development footprint, including undertaking test excavation and salvage. • Prepare and implement a Heritage Management Plan in consultation with OEH and relevant Aboriginal stakeholders for the project.
Historic Heritage	• The residence on site, Narrawa Homestead, is of local significance and listed as a historic heritage item in the Wellington LEP. • The Applicant has proposed repurposing this residence for the project's operation and maintenance facility. • Alternatively, the Applicant is proposing to construct a purpose-built operation and maintenance facility adjacent to this residence. • Council advised that repurposing the residence for the projects operation and maintenance facility would not significantly impact the character of Narrawa Homestead. However, if it was to be repurposed, Council advised its classification under the *Building Code of Australia* (BCA) would need to change, and upgrades to facilitate the change in use may be required. • The Department considers that the preferred option should be to repurpose the the Narrawa Homestead, as it would provide public benefits by maintaining the historic heritage values of the building in the long-term and could be returned to its original use once the project is decommissioned. • The Department considers that the Applicant should only be allowed to construct an alternative facility if it has demonstrated that repurposing the Narrawa Homestead is not reasonable or feasible.	• Applicant to use best endeavours to repurpose Narrawa Homestead for use as the project's operation and maintenance facility. Ensure that any alterations or additions to the Narrawa Homestead are constructed in accordance with the relevant requirements of the BCA. • Should the Narrawa Homestead be unable to be repurposed (ie. it is not reasonable or feasible), approval must be sought from the Secretary to use the alternative facility location. In seeking this approval, the Applicant must provide a detailed final layout plan and demonstrate that the heritage values of the building would not be impacted by the alternative facility.

Issue	*Consideration*	*Recommendations*
Other Hazards	• The project would comply with the National Health and Medical Research Council standards for electric and magnetic fields. • The bushfire risks can be suitably controlled through the implementation of standard fire management procedures. • The Applicant has committed to managing the entire site as an Asset Protection Zone and preparing a bushfire management plan to manage fire risk. • The Department is satisfied that the bushfire risks can be suitably controlled through the implementation of standard fire management procedures.	• Ensure that the development complies with the relevant asset protection requirements in the RFS's *Planning for Bushfire Protection 2006.* • Prepare an Emergency Response Plan in consultation with the NSW Rural Fire Service and Fire & Rescue NSW.
Mineral Resources	• DRG initially raised concern that consultation with mineral exploration licence holders and nearby quarry operators had not been adequately addressed. • In response to DRG's concerns, the Applicant undertook further consultation with the licence holders and DRG is satisfied that the proposal would not adversely impact nearby mining or quarrying operations.	• No specific conditions required.
Community Contributions	• Council requested consideration of a voluntary planning agreement to offset construction impacts. • While this project would involve an increase of traffic volumes during construction, there would be no increased demand on Council's public amenities or services as the requisite road upgrades and necessary repairs would be completed at the Applicant's expense. • As such, the Department does not consider a voluntary planning agreement is warranted.	• No specific conditions required.

5. CONCLUSION

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

The Department considers the site to be suitable for a solar farm as it has good solar resources and there is available capacity on the existing electricity network. In addition, the site has been largely cleared for agricultural purposes. None of the nearby landowners have objected to the project.

The project has been well-designed to largely avoid areas with conservation values or hazards, particularly in relation to native vegetation. Any residual impacts would be minor and can be managed through the recommended conditions of consent.

The project would not result in a significant reduction in the overall agricultural productivity of the region. Additionally, the site could be easily returned to agricultural uses after the project is decommissioned and the inherent agricultural capability of the land would not be affected.

Importantly, the project would assist in transitioning the electricity sector from coal and gas-fired power stations to low emissions sources. It would generate up to approximately 174 MW of clean electricity annually, which is enough to power up to 46,000 average NSW homes and save up to 305,000 tonnes of greenhouse gas emissions per year. It is therefore consistent with the goals of the Commonwealth's *Renewable Energy Target* and NSW's *Climate Change Policy Framework*.

The Department is satisfied 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.

6. RECOMMENDATION

In accordance with section 4.38 of the EP&A Act, it is recommended that the Executive Director, Resource Assessments and Business Systems, as delegate of the Minister for Planning:

- **considers** the findings and recommendations of this report;
- **approves** the State Significant Development application for the Wellington Solar Project (SSD 8573); and
- **signs** the attached development consent and recommended conditions of consent (**Appendix A**).

Recommended by:

21/5/18

Eleanor Parry
Environmental Assessment Officer
Resource and Energy Assessments

Recommended by:

21/5/18

Phillipa Duncan
A/Director
Resource and Energy Assessments

7. DECISION

The recommendation is: Approved / Not approved by:

25/5/18

David Kitto
Executive Director
Resource Assessments and Business Systems
as delegate of the Minister for Planning

APPENDIX A:

Recommended Conditions of Consent

See website at http://majorprojects.planning.nsw.gov.au/index.pl?action=view_job&job_id=8573

APPENDIX B:

Environmental Impact Statement

See website at http://majorprojects.planning.nsw.gov.au/index.pl?action=view_job&job_id=8573

APPENDIX C:

Submissions

See website at http://majorprojects.planning.nsw.gov.au/index.pl?action=view_job&job_id=8573

APPENDIX D:

Response to Submissions

See website at http://majorprojects.planning.nsw.gov.au/index.pl?action=view_job&job_id=8573

APPENDIX E:

Additional Information

See website at http://majorprojects.planning.nsw.gov.au/index.pl?action=view_job&job_id=8573