NSW GOVERNMENT

Sebastopol Solar Farm

State Significant Development
(SSD 9098)

February 2019

Cover photo

Source: Moree Solar Farm. Moree, NSW. Department of Planning and Environment Image Database (https://images.planning.nsw.gov.au).

Disclaimer

While every reasonable effort has been made to ensure this document is correct at time of printing, the State of NSW, its agents and employees, disclaim any and all liability to any person in respect of anything or the consequences of anything done or omitted to be done in reliance or upon the whole or any part of this document.

Copyright notice

In keeping with the NSW Government's commitment to encourage the availability of information, you are welcome to reproduce the material that appears in this report. This material is licensed under the Creative Commons Attribution 4.0 International (CC BY 4.0). You are required to comply with the terms of CC BY 4.0 and the requirements of the Department of Planning and Environment. More information can be found at: http://www.planning.nsw.gov.au/Copyright-and-Disclaimer.

Executive Summary

ib vogt GmbH Pty Ltd (the Applicant) proposes to develop a new 90 megawatt (MW) solar farm with 144 MW/101 MW-hour (MWh) of battery storage about 17 kilometers (km) south of Temora, in south-west NSW.

Engagement

The Department publicly exhibited the Environmental Impact Statement for the project and received 13 submissions, all from Government agencies. There were no submissions from the general public.

Temora Shire Council and Junee Shire Council support the project, and none of the other Government agencies objected to the project.

Assessment

The key assessment issues for this project are potential impacts to agricultural land and traffic.

The Applicant 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 (248 ha) does not include any mapped BSAL, while the loss of 248 ha of agricultural land represents a small fraction (<0.000027%) of the land being used for agricultural output in the Riverina Murray Region.

The project has been designed to largely avoid impacts on vegetation in the locality and all unavoidable impacts (including 0.27 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.

The potential traffic impacts would largely be short-term, relatively minor in nature and can be managed in accordance with strict conditions requiring adherence to specific construction hours, maintenance of local roads and implementation of a comprehensive Traffic Management Plan.

Summary

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

The project is consistent with the Commonwealth's *Renewable Energy Target* and NSW's *Climate Change Policy Framework* as it would contribute 90 MW of renewable energy to the National Electricity Market, including a battery storage facility with a capacity of 144 MW/101 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 $120 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.

Contents

1. Introduction

ib vogt GmbH Pty Ltd (the Applicant) proposes to develop a new 90 megawatt (MW) solar farm, with 144 MW/101 MW-hour (MWh) of battery storage, approximately 17 kilometers (km) south of Temora, primarily located in the Temora local government area (LGA) with the access road to the site located in Junee 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 90 megawatts (MW) and a battery storage facility with a capacity of 144 MW/101 MWh. 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 be connected to Essential Energy's existing 132 kV overhead line by approximately 1.5 km of new 132 kV overhead cabling.

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 additional information provided during the Department's assessment of the project (see **Appendix C**).

Table 1 | Main Components of the Project

Aspect	Description
Project summary	The project includes: • approximately 308,000 solar panels (up to 4 m high) and approximately 30 lithium-ion batteries housed in inverter/transformer units (144 MW/101 MWh capacity, up to 3 m high); • an on-site 132 kV substation and connection to Essential Energy's 132kV transmission line via approximately 1.5 km of 132 kV overhead cabling; • internal access tracks, car park, maintenance building, vegetation screening, fire breaks and security fencing; and • subdivision of the project site.
Project area	412 ha (with a 248 ha development footprint)
Access routes	Over-dimensional and heavy vehicles would access the site via Goldfields Way and Eurolee Road.
Site entry and road upgrades	• An existing entry point on Eurolee Road would be used to access the site. • Road upgrades are required at the intersection of the Goldfields Way and Eurolee Road.
Operational life	• The expected operational life of the infrastructure is approximately 30 years. However, the project may involve infrastructure upgrades that could extend the operational life. • The project also includes decommissioning at the end of the project life, which would involve removing all infrastructure.
Construction	• Construction would last for up to 12 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 would be undertaken Monday to Friday 7 am to 6 pm, and Saturday 8 am to 1 pm.
Employment	Up to 150 construction jobs, and 3 operational jobs.
Capital investment value	$120 million

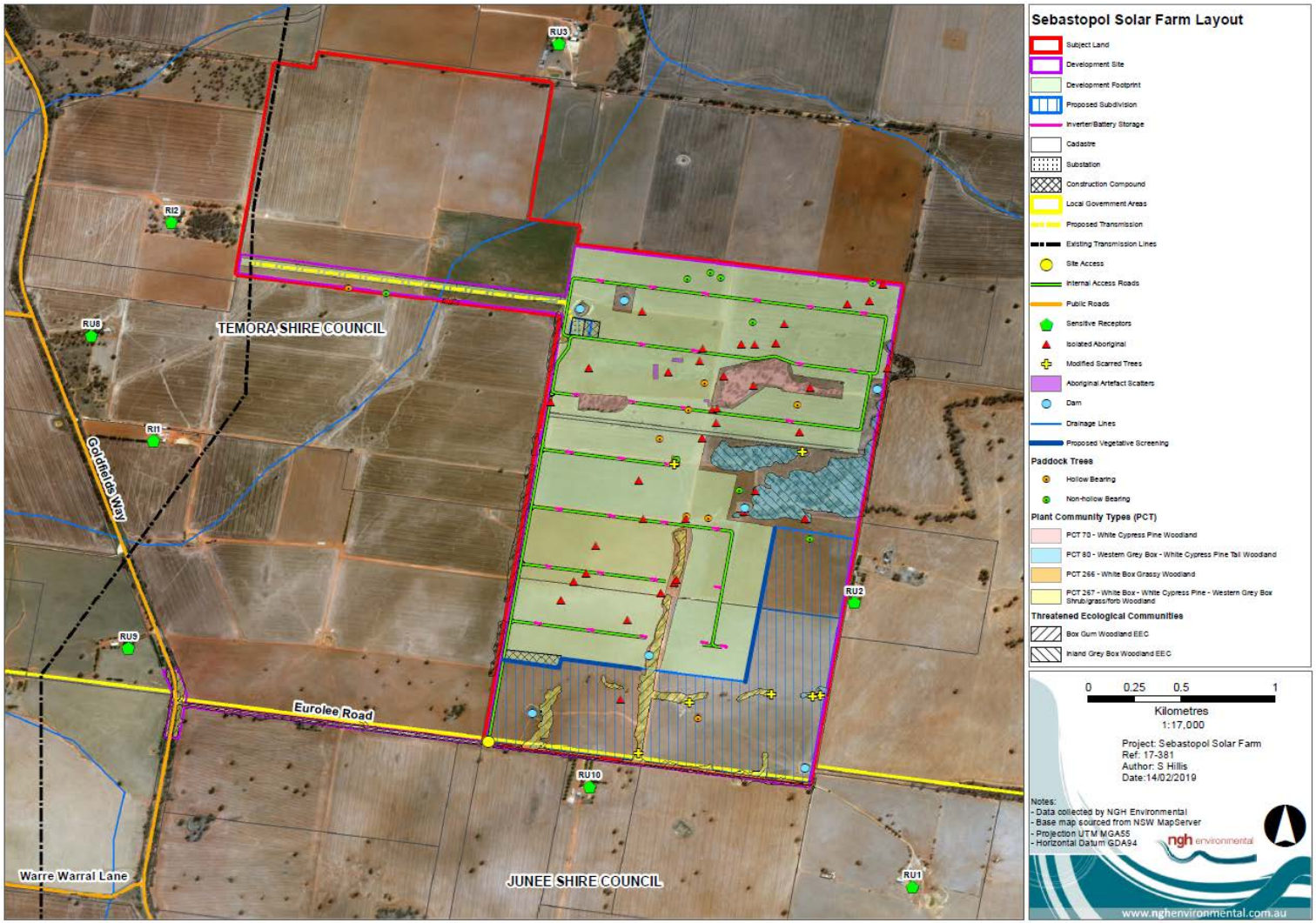

Figure 2 | Project Layout and Constraints

3. Strategic Context

3.1 Site and Surrounds

The project is located on a 412 hectare (ha) site that is currently used for agricultural purposes and comprises of several large paddocks which are generally flat in nature, predominately cleared of vegetation and have historically been used for grazing. The site is zoned RU1 (Primary Production) under the Temora Local Environmental Plan (LEP).

The proposed development footprint is 248 ha and is irregular in shape as it was designed to largely avoid Aboriginal heritage items, remnant native vegetation and watercourses (see **Figure 2**).

The site and surrounding area lies within the Murrumbidgee River Catchment, is gently undulating in nature and has historically been used for agricultural purposes. Eurolee Road runs along the southern boundary of the proposal, with Goldfields Way to the west and Sebastopol Road to the north.

Essential Energy's 132kV transmission line, runs across the western side of the site. The proposed solar farm would connect directly into this transmission line.

Thirteen residences are located within 3 km of the project site, including ten that are not associated with the project, with the two closest dwellings located 410 m and 730 m east and south of the development footprint respectively (see **Figure 2**).

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 four proposed and three approved 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)
Illabo	80	Proposed	35
Bomen	100	Approved	50
Gregadoo	47	Approved	67
Wyalong	160	Proposed	83
Sandigo	100	Approved	86
West Wyalong	120	Proposed	92
Avonlie	200	Proposed	95

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

The closest project (i.e. Illabo Solar) is at an early stage of the assessment process as the Department has not yet received a Development Applicant (DA) or environmental impact statement (EIS) for this project. Bomen Solar and Gregadoo Solar have been approved but have not commenced construction. The remaining four projects (i.e. Avonlie Solar, Sandigo Solar, Wyalong Solar and West Wyalong Solar) are located over 75 km from the project and closer to the large settlements of Narrandera and Wyalong.

In regard to workforce accommodation, the construction workforce for many of these solar projects would be sourced from the local and wider region, including neighbouring towns and local government areas, as discussed further in **section 6.3**.

In regard to construction traffic impacts, while the surrounding regional road network may experience an increase in traffic numbers, the local roads along the Sebastopol Solar Farm's transport route would not experience cumulative impacts, as only the project would be using these roads for construction traffic, as discussed further in **section 6.2**.

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

There would be no cumulative visual or noise impacts due to the distance from the project to other projects in the region.

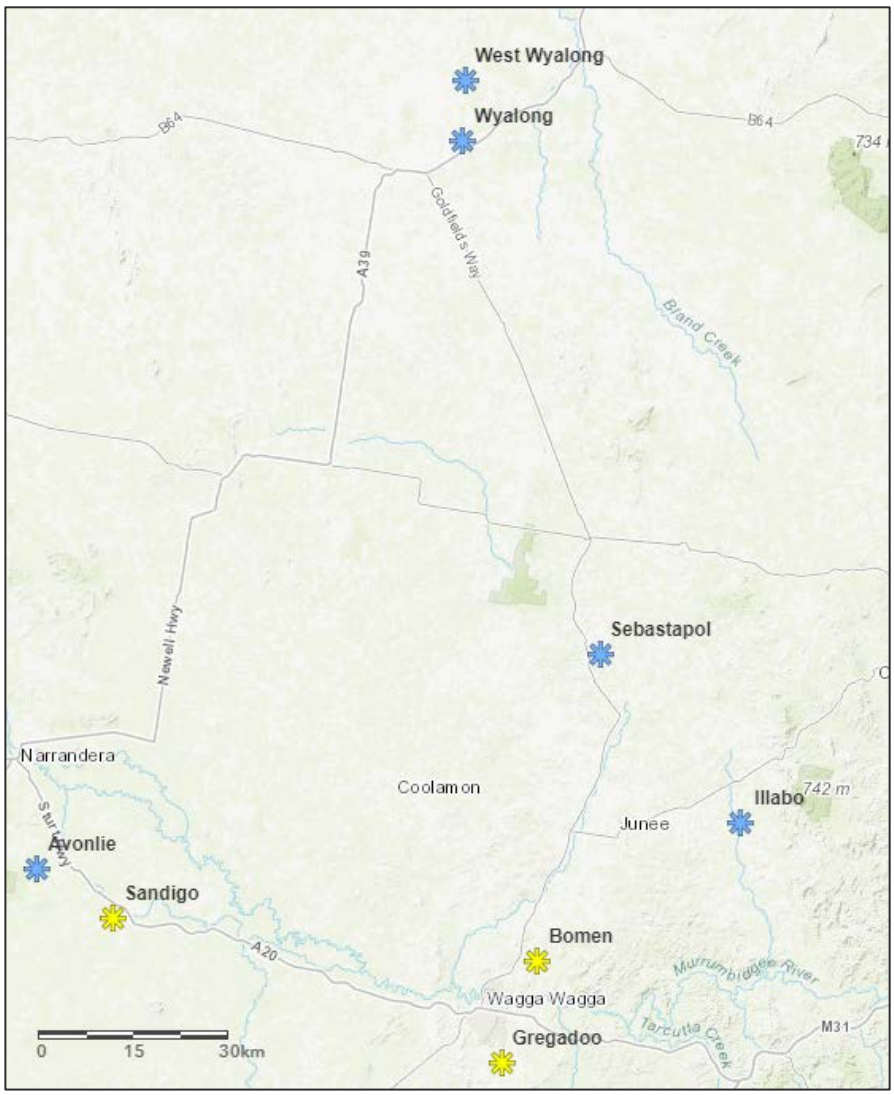

Figure 3 | Nearby Solar Farms

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 currently leading Australia 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.

While the project would not be located in any of the three Priority Energy Zones, it would be located within one of the five Solar Energy Zones. With a capacity of 90 MW, the project would generate enough electricity to power up to 34,000 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 4.38 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 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 project site is located within land zoned RU1 Primary Production under both the Temora LEP and Junee LEP. As a solar farm is not expressly listed as permitted with or without consent within these LEPs, it is a prohibited land use under a strict reading of the respective LEP zoning tables.

The access road to the site is the only aspect of the project that is located within the Junee LGA. Ordinarily, road upgrades are a permissible land use with consent within land zoned RU1 under the Junee LEP. However, as the upgrades required to the access road are ancillary to the project, these works are still considered a prohibited land use under a strict reading pf the LEP zoning table.

Notwithstanding the above, under the *State Environmental Planning Policy (Infrastructure) 2007* (Infrastructure SEPP) electricity generating works are permissible on any land in a prescribed rural, industrial or special use zone. Consequently, the project is permissible as it is located wholly within land zoned RU1 in both the Temora LEP and Junee LEP, which is a prescribed rural zone.

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 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 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 G**).

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 could be 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 the Applicant's consideration of environmental planning instruments in its EIS, as summarised in **section 6** of this report. The Department has also given consideration to the relevant provisions of the environmental planning instruments in **section 4** and **Appendix D**.

5. Engagement

5.1 Department's Engagement

The Department publicly exhibited the EIS from 10 October 2018 until 7 November 2018, advertised the exhibition in *The Leader (Wagga Wagga)* and the *Southern Cross (Junee)*, and notified adjoining landowners. The Department has also consulted with the relevant government agencies throughout the assessment process, including Junee Shire Council and Temora Shire Council.

5.2 Submissions and Response to Submissions

During the exhibition, the Department received a total of 13 submissions from government agencies. None of the government agencies objected to the project and no submissions were received from the general public.

Full copies of the submissions are attached in **Appendix E**. The Applicant provided a response to all matters raised in submissions on the project (see **Appendix F**). The Applicant has also provided additional information during the Department's assessment (see **Appendix C**). This included revising the proposed road and intersection upgrades to satisfy requests from the relevant road authorities, and providing further details of Aboriginal heritage safeguards and mitigation measures.

5.3 Key Issues – Government Agencies

Roads and Maritime Services (RMS) recommended that the Applicant develop a Traffic Management Plan (TMP), complete specific intersection upgrades and upgrade Eurolee Road. These requirements have been incorporated into the recommended conditions of consent.

The **Department of Industry – Lands and Water (DoI L&W)** requested further information on the ability to purchase water from Temora Shire Council. This matter has been addressed through the Response to Submissions (RTS) and is also discussed in **section 6.3**.

The **Office of Environment and Heritage (OEH)** did not object to the project. However, it requested further information on various heritage and biodiversity matters. OEH has confirmed these matters have been appropriately addressed by the Applicant through the RTS and additional information provided. These matters are discussed in **section 6.3**.

Junee Shire Council supports the project, however requested Eurolee Road be upgraded prior to the commencement of works. The Applicant has agreed to upgrading a 380 meter section of Eurolee Road to the satisfaction of Council. These measures have been incorporated into the recommended conditions of consent.

Temora Shire Council supports the project, however noted sections of the Temora Development Control Plan (DCP) 2012 are relevant to the proposal, which the Applicant and the Department have considered.

The **Rural Fire Service (RFS)** and **Fire and Rescue NSW (FRNSW)** 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 that sufficient information has been provided about potential exploration and land use conflicts and that the Applicant has undertaken adequate consultation.

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

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, including the compatibility of the proposed land use and traffic 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 relating to these 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 LEPs

The development site is located wholly within the RU1 Primary Production zone under both the Temora LEP and Junee LEP.

The RU1 zone of these LEPs 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 considered a prohibited land use under a strict reading of the respective LEP zoning tables.

However, the only aspect of the project that is located within the Junee LGA is the access road to the site. While the road upgrades would ordinarily be a permissible land use with consent within land zoned RU1, as they are ancillary to the solar farm project, they are prohibited under the Junee LEP.

Notwithstanding, the Department does not consider that road upgrades are intended to be a prohibited development on this site. The road works have been designed in consultation with Junee Council and involve typical road and intersection upgrades to RMS and Council standards common across the Junee LGA (see **section 6.2**).

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

Firstly, the Temora 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 the diversity in primary industry enterprises and systems appropriate for the area; and
- minimising the fragmentation and alienation of resource lands.

While the Temora 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 development would not fragment or isolate any resource lands during its operation as it has generally low impacts and could be easily returned to agricultural land following decommissioning. Further, both Councils support the development, subject to the implementation of appropriate environmental mitigation measures.

Finally, the project is also consistent with the Department's *Riverina Murray Regional Plan 2036* which identifies the development of renewable energy generation as a future growth opportunity 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 (248 ha) does not include any mapped BSAL, it is currently used for cropping and low intensity grazing. The development of the solar farm would therefore reduce the agricultural output of the site.

However, the loss of 248 ha of agricultural land represents a small fraction (<0.000027%) of the land being used for agricultural output in the Riverina Murray Region and would result in a negligible reduction in the overall productivity of the region.

Additionally, 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.

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.

The Applicant 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.

6.2 Traffic and Transport

Transport Routes and Site Access

All development related traffic (including over-dimensional, heavy and light vehicles, and shuttle buses) would access the site via Goldfields Way and Eurolee Road. The site would be accessed via an existing access point on Eurolee Road, approximately 1.4 km east of Goldfields Way (see **Figure 2**).

Traffic Volumes

During the peak construction period (up to 12 months), there would be up to 90 vehicle movements per day (20 light vehicles, 66 heavy vehicles and 4 over-dimensional vehicles).

During operations, there would be up to 2 heavy vehicle movements per day (primarily associated with water supply and waste removal) and an average of 14 light vehicle movements per day.

The Applicant may upgrade the solar panels and battery storage system over the life of the development, however traffic volumes for these upgrades would be significantly less than the abovementioned construction traffic numbers.

Road Upgrades and Maintenance

RMS and both Councils support the proposed transport route, provided the required road upgrades are undertaken to support the increased traffic, including:

- upgrading the intersection of the Golfields Way and Eurolee Road, including a Basic Right Turn (BAR) and Basic Left Turn (BAL) intersection treatment;
- upgrading Eurolee Road a minimum of 380 m from its intersection with Goldfields Way, to accommodate two-way flow of articulated vehicles and one-way flow of over-dimensional vehicles; and
- upgrading the site access point off Eurolee road with a Rural Property Access type treatment to cater for the largest vehicle accessing the site.

The Applicant has accepted the proposed upgrades and has confirmed they would be designed and constructed to the satisfaction of the relevant roads authority. Additionally, the Applicant has committed to preparing road dilapidation surveys and repairing any damage resulting from the construction traffic.

Recommended Conditions

The Department has recommended conditions of consent requiring the Applicant to:

- undertake the relevant road upgrades prior to the commencement of construction;
- restrict the number of vehicles during construction, upgrading and decommissioning;
- ensure the length of vehicles accessing the site (excluding over-dimensional vehicles) does not exceed 26 m; and
- prepare a Traffic Management Plan in consultation with RMS and the Councils, including provisions for dilapidation surveys and details of the measures that would be implemented to address road safety.

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

6.3 Other Issues

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

Table 3 | Other Issues

Issue	Findings	Recommended Condition
Visual	• The solar panels would be relatively low lying (up to 4 m in height). • The control building and switch room (up to 4 m in height), 132/33 kV power transformer (up to 6 m in height), and circuit breakers (up to 8 m in height), are a similar size to agricultural structures commonly found throughout the local area. • The relatively low height of the infrastructure would limit the visual impact from most viewpoints. • Eleven non-associated residences are located within 3 km of the project site. Of these, the nearest residences are located 20 m east (RU2) and 140 m south (RU10) of the site (see **Figure 2**). • However, the Applicant has increased the setback between the development footprint and residence RU2 to 410 m and residence RU10 to 730 m, and proposed vegetation screening along its eastern and southern boundaries to screen views of the project from these residences.	• Establish and maintain vegetation buffers. • Prepare and implement a Landscaping Plan. • Prohibit any signage or advertising on the development, unless for safety purposes. • Ensure that external lighting is minimised and complies with the relevant Australian Standards.

	• Existing vegetation and topography would partially screen the solar panels from these residences, while the proposed vegetation screening would provide additional screening of the site. • The 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 building surfaces. • The Department considers that following the implementation of mitigation measures there would be no significant visual impacts on the surrounding residences or road users.	
Biodiversity	• The site is mostly comprised of cleared agricultural land, but includes 48 ha of patches of remnant vegetation ranging in size from 7 ha to 21 ha (see **Figure 2**), along with nine hollow bearing trees. • The project has been designed to avoid the majority of impacts to native vegetation and species. • However, the project would disturb: - 0.08 ha of White Cypress Pine woodland an Endangered Ecological Community (EEC) under the *Biodiversity Conservation Act 2016*) (PCT 70); - 0.16 ha of White Box – White Cypress – Western Grey Box EEC (PCT 267); - 0.03 ha of White Box grassy woodland EEC (PCT 266). • The following species were also either identified or assumed to be present on site due to suitable habitat features: Superb Parrot, Grey-headed Flying-fox, Ausfeld's Wattle, A spear-grass, Pine Donkey Orchid, Small Purple-pea, Silky Swainson-pea and Tylophora linearis. • These impacts to native vegetation and native species would generate 14.75 ecosystem credits and 12 species credits under the *Biodiversity Conservation Act 2016* respectively. These credits would be retired via a payment into the Biodiversity Conservation Fund. • The Department and OEH consider that the credits have been calculated correctly.	• Retire the required biodiversity offset credits in accordance with the *NSW Biodiversity Offset Policy for Major Projects*. • 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.
Water and Erosion	• The project would require around 48 megalitres (ML) of water during construction and decommissioning (mainly for dust suppression) and 54 kL of water annually during operation. • The Applicant is proposing to purchase this water from Goldfields Water and Temora Shire Council, with all potable water being provided on site as bottled water. • The project would not have any impact on groundwater sources or groundwater dependent ecosystems. • One natural watercourse crosses the northwest of the proposed development site. However, the project has been designed to avoid direct impacts to this watercourse. • The Department considers that any erosion and sedimentation risk associated with the project can be effectively managed using best practice construction techniques.	• Prohibit water pollution in accordance with Section 120 of the *Protection of the Environment Operations Act 1997*. • Undertake activities in accordance with OEH's *Managing Urban Stormwater: Soils and Construction (Landcom, 2003) manual* and *Guidelines for Controlled Activities on Waterfront Land* (DPI Water).

Noise	• 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). • However, one non-associated residences (i.e. RU2) may be subject to temporary noise up to 3 dB(A) above the 'noise affected' criterion of 45 dB(A) when construction activities are undertaken on site. • These exceedances would be of short duration and temporary in nature, limited to standard daytime construction hours, and similar to noise generated by agricultural machinery such as tractors and harvesters. • Construction noise would be minimised and managed by implementing the noise mitigation work practices set out in the ICNG, including scheduling activities to minimise noise, using quieter equipment, utilising localised barriers, informing the immediately surrounding landowners and establishing a complaints handling procedure. • Construction traffic noise levels would satisfy the *Road Noise Policy 2011* (RNP). • There would be negligible noise during operation.	• Minimise the noise generated by any construction, upgrading or decommissioning activities on site in accordance with best practice requirements outlined in the ICNG, including consultation with nearby landowners. • Restrict construction hours to Monday to Friday 7 am - 6 pm, and Saturday 8 am - 1 pm.
Heritage	• Site surveys identified a total of 53 Aboriginal stone artefacts. These artefacts were found across 37 isolated find sites and three scatters. Seven possible Scarred trees were also recorded. • One isolated stone artefact (AHIMS 50-5-0233) and the seven possible Scarred trees were assessed as having low to moderate significance. The remaining items were assessed as having low significance. • The Applicant has committed to: - the complete avoidance of the seven possible Scarred trees; - salvaging and relocating the 37 isolated finds and three artefact scatters if complete avoidance is not possible; and - a minimum 5 m buffer around isolated finds and artefact scatters. • If Aboriginal artefacts or skeletal material are identified, all work would cease, and an unexpected finds procedure would be implemented. • There are no known items of historic heritage value in the vicinity of the project site. • The Department and OEH consider that the project is unlikely to result in a significant impact on the heritage values of the locality.	• Avoid, or salvage and relocate Aboriginal objects located on site. • Cease works and notify the NSW Police and OEH if human remains are identified over the life of the project. • Prepare a Heritage Management Plan including an unexpected finds procedure.
Battery storage facility hazards	• In response to increasing demands for dispatchable energy, the Applicant is proposing an on-site lithium-ion battery storage system, comprising of up to 30 containerised units, equating to approximately 144MW/101MWh. • The units would contain temperature and voltage monitoring, fire suppression systems, air-conditioning units and auto shutdown capabilities to prevent the batteries from overheating. • The hazard assessment included in the EIS was undertaken in accordance with *State Environmental Planning Policy No 33 Hazardous and Offensive Development*. • The assessment concluded that the implementation of control measures would minimise the potential risks of handling, storing and operating the batteries. These measures include (but are not limited to): - spreading the battery storage units across the site;	• Prepare a Fire Safety Study consistent with the Department's *Hazardous Industry Advisory Paper No. 2, 'Fire Safety Study' guideline and the 'Best Practice Guidelines for Contaminated Water Retention and Treatment Systems'*, and describe the final design of any energy storage plant or equipment. • Prepare an Emergency Plan in consultation with RFS and Fire and Rescue NSW.

	- a 10 m Asset Protection Zone (APZ) around each battery storage unit; - automated monitoring and control systems, with alarm and shutdown capability; and - ensuring adequate isolation between the battery storage units and ancillary infrastructure. • The Department has carefully assessed the proposed battery storage system in consultation with its internal hazards unit and relevant government agencies. The Department notes that the proposed layout would be located away from residences and environmentally sensitive landscapes. • Subject to the recommended conditions, the Department is satisfied that risks associated with the facility would be minimal.	
Other hazards	• The project would comply with the National Health and Medical Research Council standards for electric and magnetic fields. • The site is not mapped as bushfire prone land. • 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.	• Ensure that the development complies with the relevant asset protection requirements in the RFS's *Planning for Bush Fire Protection 2006*. • Prepare an Emergency Plan in consultation with RFS and Fire and Rescue NSW.
Subdivision	• The Applicant proposes to subdivide several lots on which the development footprint is located (i.e. excise the development footprint from existing lots) to facilitate lease agreements with the landowner. • The proposed subdivision would result in 6 new lots, and the consolidation of the remaining lots into two large lots. These lots would range in size from approximately 1 ha to 155 ha. • Two of the reconfigured lots would be prohibited under a strict reading of the Temora LEP as they would not meet the minimum lot size for RU1 land (40 ha). • Notwithstanding, under Section 4.38(3) of the EP&A Act, development consent for the project as a whole can be granted despite the subdivision component of the application being prohibited by the LEP. • The Department is satisfied that the subdivision should be approved as: - it would permit existing agricultural land uses to continue on land that is not required for the development; - it would not result in the addition of any dwelling entitlements on the subdivided lots; and - 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. • Further, Council has not objected to the proposed subdivision.	• Subdivide the proposed lots in accordance with requirements of section 157 of the *Environmental Planning and Assessment Regulation 2000*.
Workforce accommodation	• Up to 150 employees would be required during the construction period. Employees would be drawn from the local community where possible. • In addition to Temora and Junee, the nearby town of Wagga Wagga located approximately 1 hour from Sebastopol would provide a potential source of employees and accommodation options if necessary.	• No specific conditions required.

7. Evaluation

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 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 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.

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.

To address the residual impacts of the project, the Department has recommended a range of detailed conditions, developed in conjunction with agencies and both Junee and Temora Shire Councils, to ensure these impacts are effectively minimised or offset. The Applicant 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 up to approximately 199,000 MWh of clean electricity annually, which is equivalent to power up to 34,000 homes and save up to 191,000 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*.

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; and
- **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 Sebastopol Solar Farm (SSD 9098);
- **signs** the attached development consent and recommended conditions of consent (see **Appendix G**).

Recommended by:

25/2/19

Iwan Davies
A/Team Leader
Resource and Energy Assessments

Recommended by:

25/2/19

Clay Preshaw
Director
Resource and Energy Assessments

9. Determination

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

27/2/2019

David Kitto
Executive Director
Resource Assessments and Business Systems

Appendices

Appendix A – List of Documents

Sebastopol Solar Farm Environmental Impact Statement, ngh environmental, 2018.

Sebastopol Solar Farm Response to Submissions, ngh environmental, 2018.

Sebastopol Solar Farm Additional Information, ib vogt GmbH, 2019.

Appendix B – Environmental Impact Statement

See the Department's website at:
http://www.majorprojects.planning.nsw.gov.au/index.pl?action=view_job&job_id=9098

Appendix C – Additional Information

See the Department's website at:
http://www.majorprojects.planning.nsw.gov.au/index.pl?action=view_job&job_id=9098

Appendix D – 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
Objects of the EP&A Act	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&A Act. 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: • a permissible land use on the subject land; • located in a logical location for efficient solar energy development; • 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 • consistent with the goals of the Renewable Energy Action Plan, and would assist in meeting Australia's renewable energy targets whilst reducing greenhouse gas emissions. 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. The Applicant 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. Consideration of environmental protection (Object 1.3(e)) is provided in **section 6.3** 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. 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. The Department satisfied that any residual impacts on heritage can be managed and/or mitigated by imposing appropriate conditions.

Aspect	Summary
State Significant Development	Under Section 4.38 of the EP&A Act the project is considered a State Significant Development. The Minister for Planning is the consent authority for the development. Under the Minister's delegation of 11 October 2017, the Executive Director, Resource Assessments and Business Systems, may determine the project.
Environmental Planning Instruments	The *Temora Local Environment Plan (LEP) 2010 applies* and is discussed in **sections 4.2** and **6.1** of this report. The *Junee Local Environment Plan (LEP) 2012 applies* and is discussed in **section 6.1** of this report. The project is permissible under the Infrastructure SEPP. The Applicant completed a Preliminary Hazard Analysis for the battery storage facility, in accordance with *SEPP No. 33 – Hazardous and Offensive Development* (SEPP No. 33). The Department's consideration of this analysis is discussed in **section 6.3**. The Department has considered the provisions of *SEPP No. 55 – Remediation of Land*. 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.

Appendix E – Submissions

See the Department's website at:
http://www.majorprojects.planning.nsw.gov.au/index.pl?action=view_job&job_id=9098

Appendix F – Response to Submissions

See the Department's website at:
http://www.majorprojects.planning.nsw.gov.au/index.pl?action=view_job&job_id=9098

Appendix G – Recommended Conditions of Consent

See the Department's website at:
http://www.majorprojects.planning.nsw.gov.au/index.pl?action=view_job&job_id=9098