



Tamworth Solar Farm

State Significant Development Assessment

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Executive Summary

Tamworth Solar Farm Pty Ltd (TSF) proposes to develop a new 65 megawatt (MW) solar farm and 19 MW/MW hour battery energy storage system approximately 20 kilometres (km) west of Tamworth in the New England North West region of NSW.

The project site is in proximity to the Oxley Highway and has direct access to the electricity network via TransGrid's transmission line which traverses the site. The site is in a rural area, with 9 non-associated rural residences within 2 km of the site.

The project is classified as State significant development as it is development for the purpose of electricity generating works with a capital investment value of more than \$30 million. Consequently, the Minister for Planning and Public Spaces is the consent authority for the development. However, the Executive Director, Energy, Industry and Compliance, may determine the development application under delegation from the Minister as Council did not object, there were less than 50 objections from the general public and a political donations disclosure statement has not been made.

Engagement

The Department exhibited the Environmental Impact Statement for the project and received five submissions (one objection, three supporting and one providing comment on the project). Advice was also received from 15 government agencies.

Council supports the project and none of the agencies object to the project, subject to the implementation of appropriate mitigation and management measures.

Assessment

The Department has undertaken a comprehensive assessment of the merits of the project and considered the issues raised in submissions and the advice from agencies, in accordance with the requirements of the *Environmental Planning and Assessment Act 1979*. Based on this assessment, the key assessment matters identified for the project are land use compatibility and the potential traffic and transport issues.

The project site is 206 hectares (ha) and is currently used for agricultural purposes, including grazing and dryland cropping. The development footprint (148 ha) is primarily located on soils are classified as having Class 4 rural land capability under the *Land and Soil Capability Mapping in NSW* (OEH, 2017) with a small portion Class 5 capability. There is no Biophysical Strategic Agricultural Land (BSAL) on the site.

The development footprint of the project combined with the other approved and/or operational SSD solar farms in the New England North West region would be approximately 4,319 ha which represents a very small fraction (i.e. 0.0006%) of the land being used for agricultural output in the New England North West region.

The Department considers that the project would not significantly reduce the overall agricultural productivity of the region and that the inherent agricultural capability of the site would not be affected, and is satisfied that the site could be returned to its full agricultural uses in the future following rehabilitation. TSF is proposing to continue to graze sheep within the development footprint during operation of the project and 29% of the site would be retained solely for other agricultural purposes.

Construction impacts, including potential traffic impacts, would be relatively short-term, minor in nature and can be managed in accordance with applicable government policy. The road upgrades have been designed to satisfy the relevant road safety standards, and the requirements of Council and Transport for NSW. Only the Orange Grove and Gunnedah Solar Farms share sections of the Oxley Highway which is part of the State road network and has sufficient capacity to accommodate the construction traffic. . Further, the Department has recommended strict conditions requiring restricted construction hours, relevant road upgrades and a comprehensive Traffic Management Plan.

The project has been designed to largely avoid impacts on vegetation and threatened species in the locality and all unavoidable impacts (including 19 paddock trees) would be offset in accordance with the *Biodiversity Conservation Act 2016*. The layout of the solar farm has also been designed to avoid impacts on Aboriginal heritage and riparian zones.

To address the residual impacts of the project, including visual, heritage, noise, water and erosion, hazards, land values, decommissioning and rehabilitation and the cumulative impacts of the other solar farms in the New England North West region, the Department has recommended a range of detailed conditions, developed in conjunction with agencies and Council, to ensure these impacts are effectively managed, minimised and/or offset.

Summary

Overall, the Department considers the site to be appropriate for the project as it has good solar resources and available capacity on the existing electricity network and is consistent with the Department's *Large-Scale Solar Energy Guideline*.

The project is also consistent with NSW's *Climate Change Policy Framework* and the *Net Zero Plan Stage 1: 2020 – 2030* as it would contribute 65 MW of renewable energy to the National Electricity Market including an energy storage facility with a capacity of 19 MW. Importantly the energy storage facility would enable the project to store solar energy for dispatch to the grid outside of daylight hours and / or during periods of peak demand, which has the potential to contribute to increased grid stability and energy security.

The project would also provide flow-on benefits to the local community, including up to 200 construction jobs and a capital investment value of \$104 million.

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

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1 Project

Tamworth Solar Farm Pty Ltd (TSF) proposes to develop a new State significant development solar farm at Somerton, approximately 20 kilometres (km) west of Tamworth in the Tamworth Regional local government area (LGA) (see **Figure 1**).

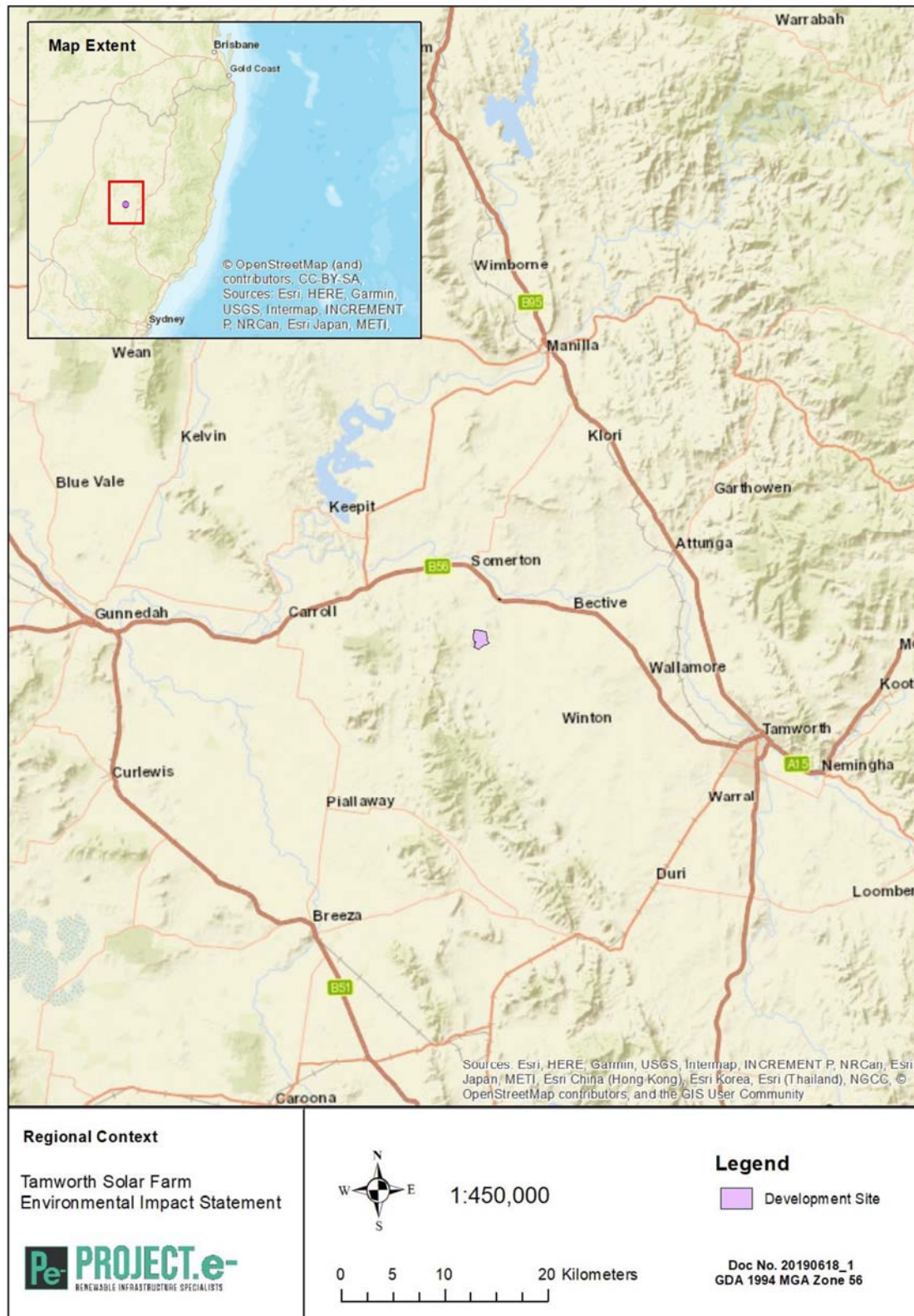


Figure 1 | Regional Context Map

The project involves the construction of a new solar farm with a generating capacity of approximately 65 megawatts (MW) and 19 MW / 19MWh hour battery energy storage. It also involves the upgrading and decommissioning of infrastructure and equipment in the future. While the capacity of the project may increase over time as technology improves, the footprint of the development would not be permitted to increase without further planning approval.

The solar farm would connect to TransGrid's existing 132 kilovolt (kV) overhead transmission line that transects the development site adjacent to the southern boundary.

The solar farm would be constructed over approximately 12 months, with a peak construction period of 6 months.

The key components of the project are summarised in **Table 1**, shown in **Figure 3**, and described in detail in the Environmental Impact Statement (EIS) (see **Appendix B**), Submissions Report (see **Appendix E**) and additional information provided during the Department's assessment of the project (see **Appendix A**).

Table 1 | Main Components of the Project

| Aspect | Description |
|------------------------------|--|
| Project summary | <p>The project includes:</p> <ul style="list-style-type: none"> • approximately 200,000 solar panels (up to 4.6 m high, single axis tracking); • 19 power conversion units (PCU) (up to 3.6m high); • an onsite substation spanning 120m x 60m adjacent to the existing TransGrid 132kV transmission line; • 33kV collector network of underground cables • a lithium-ion battery (19 MW/19 MWh) energy storage system (BESS) (approximately 3.6 m in height) to be installed in a secure compound adjacent to the substation (up to 6 m in height) • substation (120 m x 60 m); • internal access tracks, staff amenities, operations and maintenance buildings (up to 6 m in height), offices, laydown areas, carparking and security fencing; • subdivision of land within the site for the grid substation; and • a visual mitigation bund (3 m high x 103 m long). |
| Project area | <p>Site: 206.65 ha</p> <p><u>Development footprint: 148 ha (including 3 ha of ancillary infrastructure)</u></p> |
| Access route | <p>All vehicles would access the site via Oxley Highway, Babbinsboon Road, Warminster Road and Soldiers Point Road</p> |
| Site entry and road upgrades | <ul style="list-style-type: none"> • Two site entry points off Soldiers Settlement Road: <ul style="list-style-type: none"> - the existing main property access would be sealed; - construction of a gravel road for the proposed substation access during operations. • Upgrades to the intersection of Oxley Highway and Babbinsboon Road to provide an Auxiliary Left Turn with deceleration lane and a Basic Right Turn treatment. • Upgrades to the intersection of Babbinsboon Road and Warminster Road. • Sealing of sections of Babbinsboon Road, Warminster Road and Soldier's Settlement Road. • Installation of signage at the causeways along Babbinsboon Road and Warminster Roads. |

| | |
|------------------------------------|--|
| Construction | <ul style="list-style-type: none"> • The construction period would last for about 12 months with a peak period of 6 months • Construction hours limited to Monday to Friday 7 am to 6 pm, and Saturday 8 am to 1 pm. |
| Operation | The expected operational life of the project is approximately 30 years. However, the project may involve infrastructure upgrades that could extend the operational life. |
| Decommissioning and rehabilitation | The project also includes decommissioning at the end of the project life, which would involve removing all infrastructure. |
| Hours of operation | Daily operations and maintenance would be undertaken on Monday to Friday, 7 am to 6 pm and Saturdays 8 am to 1 pm. |
| Subdivision | Subdivision of the lots on which the proposed grid substation would be located |
| Employment | Up to 200 construction jobs and 2 full-time operational jobs |
| Capital Investment Value | \$104 million |



Figure 2 | Project Site

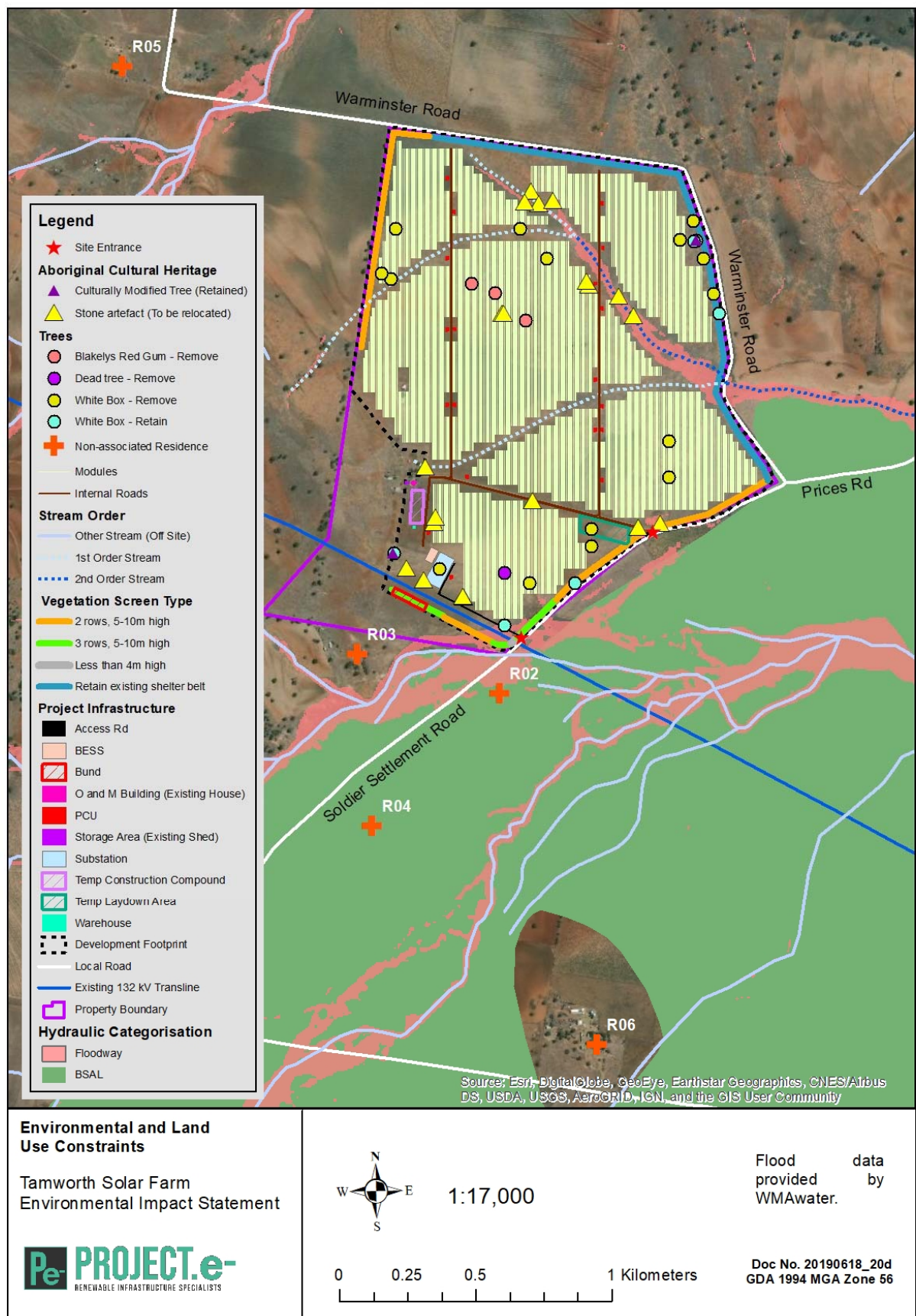


Figure 2 | Project Layout

2 Strategic context

2.1 Site and Surrounds

The project is located on an approximately 207 hectare (ha) site within the New England North West region of NSW. The site is zoned RU1 – Primary Production under the *Tamworth Regional Local Environment Plan 2010* (Tamworth LEP) and is currently used for agricultural purposes, including grazing and dryland cropping. Approximately 29% (59 ha) of the site would continue to be used for agricultural purposes.

The site does not include any mapped Biophysical Strategic Agricultural Land. The soils within the site is primarily classified as Class 4 under the *Land and Soil Capability Mapping in NSW* (OEH, 2017), meaning that the land requires active management to sustain cultivation on a rotational basis. There is also a small portion of land within the site on the north eastern and western boundary classified as Class 5 meaning the land is not capable of sustaining high impact land use and lower impact land uses such as grazing can be managed by readily available practices.

The proposed development footprint is 148 ha and was designed to largely avoid site constraints, including the 132 kV transmission line easement, nearby residences, known Aboriginal heritage sites and remnant native vegetation.

Land within the site is generally mostly agricultural land, cleared of native vegetation. The site includes several scattered, isolated trees generally in poor condition.

There are no permanent watercourses on the site. However, there are three first order waterways and one second order waterway on the site. There are three small dams and three bores (2 within the site) of which one provides water for stock. An existing residential dwelling on the property is proposed to be retained which would be used as a site administration office during operation (see **Figure 3**).

There are no current or pending exploration licences or title applications on the site or within 10 km of the development site.

Land surrounding the site is primarily zoned and is used for agricultural purposes (cropping and grazing). TransGrid's 132 kV transmission line traverses the site, towards the southern boundary of the site. Warminster Road borders the site to the north and north west whilst Soldiers Settlement Road borders the site to the south-east which services the surrounding rural dwellings in the locality. Soldier's Settlement Road provides main access to the Tamworth township via Oxley Highway.

There are nine rural non-associated residences are located within 2 km of the proposed development footprint. The majority of residences (six) are located south of the site (see **Figure 3**). The closest non-associated residence (R02) is located about 320 m south of the development footprint (at its closest point).

TransGrid has confirmed that the proposed connection into the electricity network via the 132 kV transmission line is feasible and has capacity. The solar farm would connect directly into this transmission line.

2.2 Other Solar Farms

The New England region has attracted considerable interest from solar developers given the presence of major transmission lines and existing electricity substations. There are two approved State significant development solar farms within approximately 40 km of the project site (see **Table 2** and **Figure 4**). While there are another six solar farms in the region, they are located significant distances from the proposed project (i.e. between 90 km and 120 km from the site).

Given the distance of Tamworth Solar Farm from all approved and proposed projects in the region, including the Salisbury Solar Farm, there would be no significant cumulative visual or noise impacts (see **Figure 4**). In addition, while the surrounding regional road network may experience an increase in traffic numbers, there would be no significant cumulative impacts on the local roads along the proposed transport route from these projects, as discussed in **section 5.2**.

Table 2 | Nearby Solar Farms

| Project | Capacity (MW) | Status | Approximate distance from the project (km) |
|---------------------------|---------------|--------------|--|
| Orange Grove Solar Farm | 110 | Approved | 24 |
| Gunnedah Solar Farm | 150 | Construction | 27 |
| Middlebrook Solar Farm | 500 | Proposed | 57 |
| Salisbury Solar Farm | 600 | Proposed | 86 |
| New England Solar Farm | 720 | Approved | 90 |
| Narrabri South Solar Farm | 60 | Approved | 100 |

Potential cumulative impacts relate to loss of agricultural land and workforce accommodation.

The potential cumulative impacts on agricultural land in the region is discussed further in **section 5.1**.

In regard to workforce accommodation, Narrabri South Solar Farm is located 100 km north west of the site and closer to Narrabri and does not have any potential for significant cumulative impacts. New England Solar Farm is approved but yet to commence and Salisbury Solar is in the early stages of the application process. New England Solar Farm and Salisbury Solar are close to 90 km north east of the site and closer to Uralla and Armidale.

Gunnedah Solar Farm has commenced construction, Orange Grove Solar Farm is approved but yet to commence and Middlebrook Solar is currently in the assessment process. In regard to workforce accommodation for these solar projects, the construction workforce would be sourced from the local and wider region, including Gunnedah, Tamworth and Armidale, as discussed further in **section 5.3**.

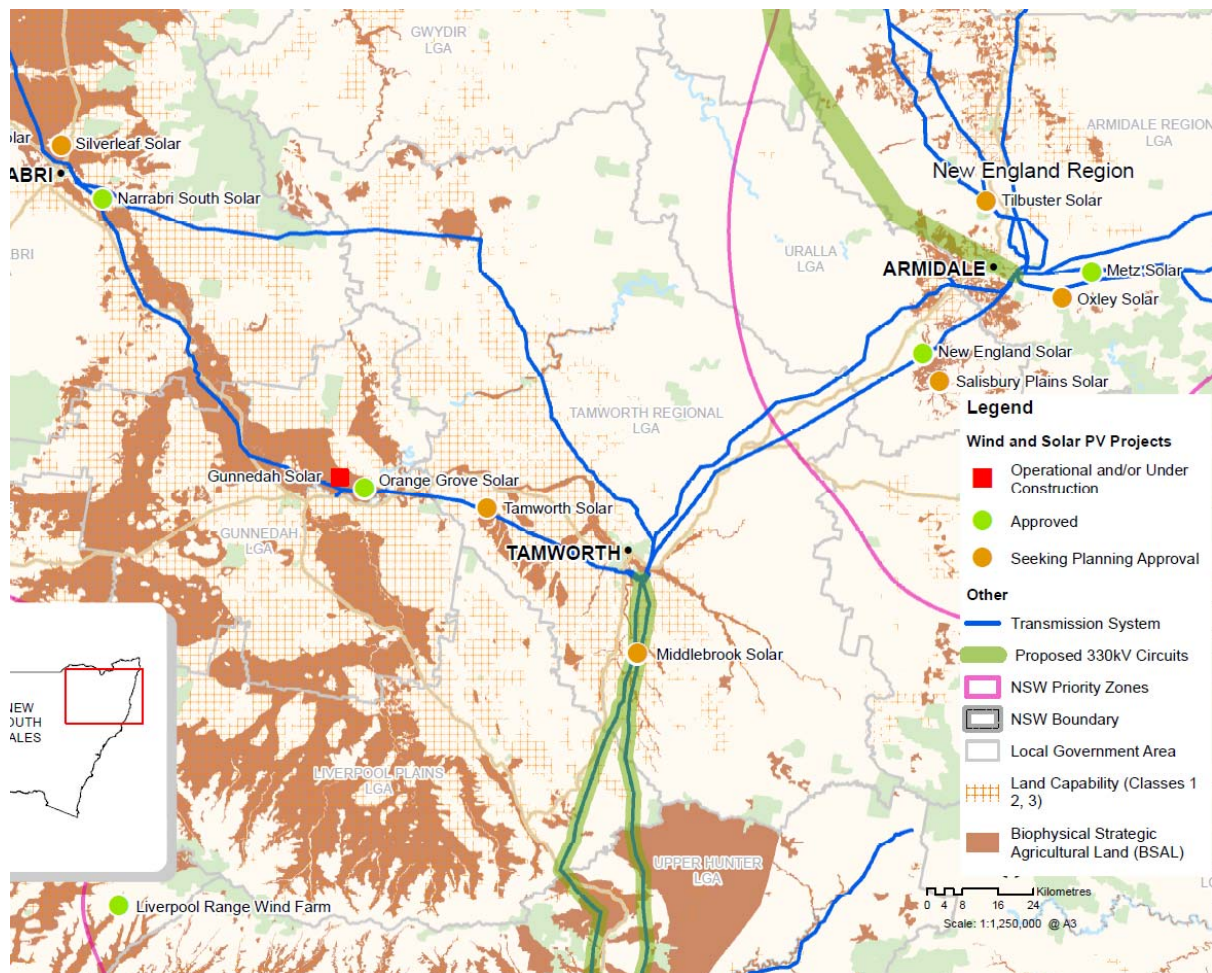


Figure 4| Surrounding Solar Farms

2.3 Energy Context

In 2019, NSW derived approximately 18.7 % of its energy from renewable sources. The rest was derived from fossil fuels, including 76.7 % from coal and 4.1 % 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, solar and pumped hydro, 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.

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 Net Zero Plan Stage 1: 2020 – 2030*, released in March 2020, builds on the framework and sets out how the NSW Government will deliver on this objective, and fast-track emissions reduction over the next decade.

The Department released the *Large-Scale Solar Energy Guideline* in December 2018 to provide the community, industry and regulators with guidance on the planning framework for the assessment of large-scale solar projects and identify the key planning considerations relevant to solar energy development in NSW.

The Guideline aims to support the growth of the solar industry, whilst ensuring that impacts are adequately assessed, effective stakeholder engagement is undertaken, and that attracting investment is balanced with considering the interests of the community. TSF submitted its EIS in February 2019 and its assessment is consistent with the principles of the Guideline.

The Guideline also acknowledges that large-scale solar projects could help to reduce reliance on fossil fuels, thereby contributing to reductions in air pollution and greenhouse gas emissions, whilst also supporting regional NSW through job creation and investment in communities that may not have similar opportunities from other industries.

NSW is one of the nation's leaders in large-scale solar, with 13 major operational projects and eight under construction or planned to be under construction.

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

While the project would not be located in any of the three priority energy zones, the project would have access to the electrical grid at a location with available network capacity. With a capacity of 65 MW, the project would generate enough electricity to power over 30,000 homes, and is therefore consistent with NSW's *Climate Change Policy Framework* and the *Net Zero Plan Stage 1: 2020 – 2030*.

3 Statutory Context

3.1 State Significant Development

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

Consequently, the Minister for Planning and Public Spaces is the consent authority for the development. However, under the Minister's delegation of 9 March 2020, the Executive Director, Energy, Industry and Compliance, may determine the development application as Council did not object, there were less than 50 objections from the general public and a political donations disclosure statement has not been made.

3.2 Permissibility

The site is located wholly within land zoned RU1 – Primary Production under the Tamworth Regional Local Environmental Plan (LEP), the provisions of which are discussed in **section 5.1**. A solar farm is a permissible land use with consent under the LEP zoning table for the RU 1 zone.

3.3 Integrated and Other approvals

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

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

The project requires an approval under the *Roads Act 1993* for the proposed road upgrades.

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

TSF has referred the project to the Commonwealth Minister for the Environment and Energy under the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act) and the Commonwealth has confirmed that the project is not a controlled action.

3.4 Mandatory Matters for Consideration

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

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

The Department has considered all these matters in its assessment of the project, as well as TSF's consideration of environmental planning instruments in its EIS, as summarised in **section 5** of this report. The Department has considered relevant provisions of the environmental planning instruments in **Appendix G** and concluded that the project is consistent with objectives of those instruments.

4 Engagement

4.1 Department's engagement

The Department publicly exhibited the EIS from 29 January 2020 until 26 February 2020, advertised the exhibition in the *Tamworth Northern Daily* and notified landowners adjoining the project boundary.

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

The Department notified and sought comment from TransGrid and Transport for NSW (TfNSW) in accordance with the *State Environmental Planning Policy (Infrastructure) 2007* (Infrastructure SEPP) as discussed further in **section 5.2**.

4.2 TSF's Engagement

TSF undertook engagement with the surrounding community as detailed in the EIS, including community meetings and information sessions, individual meetings with adjacent landowners and made information about the proposal available via a project website. TSF also undertook consultation with the Department, relevant government agencies and Tamworth Regional Council during the assessment process.

4.3 Submissions and Submissions Report

During the exhibition of the EIS, the Department received five public submissions consisting of one objection, three in support and one provided comment on the project.

Advice was received from 15 government agencies, including Tamworth Regional Council

Full copies of the agency advice and public submissions are attached in **Appendix D**.

TSF provided a response to all matters raised in submissions on the project (see **Appendix E**). TSF has also provided additional information during the Department's assessment (see **Appendix A**).

4.4 Key Issues – Government Agencies

Tamworth Regional Council does not object to the project, but initially raised concerns about biodiversity, traffic and dust mitigation. Council also provided recommended conditions on traffic and transport Aboriginal heritage, decommissioning, visual, noise, flooding and stormwater, hazards and risks and developer contributions. These matters have been addressed by TSF in the Submissions Report, are discussed in **sections 6.2** and **6.3** and, where required, incorporated into the recommended conditions of consent.

The **Department's Biodiversity and Conservation Division (BCD)** made no comments with the Biodiversity Development Assessment Report (BDAR) and Aboriginal cultural heritage assessment report and provided recommendations on mitigation measures for biodiversity. This is discussed in **section 5.3**.

The Department's Crown Lands Group (DPIE Crown Lands) raised no issues with the project and provided confirmation that all roads referred to in the project are under the care, control and management of Council as the roads authority. Further, portions of Warminster Road, Soldier Settlement Road and Prices Road that were dedicated as Crown roads were transferred to the authority of Council.

Transport for NSW (TfNSW) did not object to the project but requested further information on the traffic assessment, including transport route, traffic volumes and consistency with relevant guidelines. TSF responded to these issues in its Submissions Report and provided additional information, and TfNSW raised no further issues subject to recommended conditions regarding road upgrades and obtaining relevant permits under the *Roads Act 1993*.

The **Department's Water Group** (DPIE Water) and the **Natural Resources Access Regulator** (NRAR) raised no issues and provided recommended conditions including the requirement to obtain relevant approvals under the *Water Management Act 2000*, and ensure water crossings are designed in accordance with applicable guidelines.

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

The **Environment Protection Authority** (EPA) raised no issues with the project given that the project is not a scheduled activity under the *Protection of the Environment Operations Act 1997* (POEO Act) and does not require an Environmental Protection Licence (EPL).

DPI Agriculture supported TSF's commitment to remove all solar farm components (above and below ground infrastructure) during decommissioning and to return the site to agricultural use, and recommended that this commitment be reflected in the conditions of consent.

Heritage Council NSW raised no issues with the project noting the subject site is not listed on the State Heritage Register (SHR) nor is it in the immediate vicinity of any SHR items and does not contain any known historical archaeological deposits.

WaterNSW and **Regional NSW – Mining, Exploration & Geoscience (MEG)** (formerly known as DRG) raised no concerns and made no recommendations.

TransGrid has confirmed that the proposed connection into the electricity network is feasible and the 132 kV transmission line which traverses the site has sufficient capacity to accommodate the project.

4.5 Key Issues – Community

A total of five public submissions were received. The nearest submitter (1.6 km from the site) objected to the project and the other submissions provided support for the project.

The key issues raised relate to impact on prime agricultural farming land, traffic impacts including local road conditions, impacts of construction traffic on other road users, school bus operations, and ongoing maintenance on Babbins Road, surface water runoff from solar panels, removal of native vegetation and associated visual impacts and impacts of road generated dust on residents adjoining the local transport route.

Section 5 of this report provides a summary of the Department's consideration of these matters and recommended conditions.

5 Assessment

The Department has undertaken a comprehensive assessment of the merits of the project. This report provides a detailed discussion of the two key issues, namely land use compatibility (see **section 5.1**) and construction traffic (see **section 5.2**).

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 matters in **section 5.3**. A list of the key documents that informed the Department's assessment is provided in **Appendix A**.

5.1 Compatibility of Proposed Land Use

Provisions of the Tamworth Regional LEP

The site is located wholly within the RU1 Primary Production zone under the LEP. As discussed in **section 3.2**, a solar farm is a permissible land use with consent under the LEP zoning table.

The project is also consistent with the objectives of the RU1 zone under the Tamworth Regional LEP, particularly in relation to:

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

While the Tamworth Regional LGA has concentrated employment in the retail trade, public administration, construction, health care and social assistance, the introduction of solar energy generation would contribute to a more diverse local economy, and the proposed solar farm would encourage renewable energy development which is consistent with one of the key priorities of the *New England North West Regional Plan 2036* (Regional Plan), specifically to '*identify and promote wind, solar and other renewable energy production opportunities*'. Moreover, the project is also consistent with one of the directions of the Regional Plan, specifically to '*Grow New England North West as the renewable energy hub of NSW*'.

The development would not fragment or alienate resource lands in the LGA, as the land could be easily returned to agricultural land following decommissioning as the inherent agricultural capability of the land would not be affected in the long term.

Further, Council supports the development of the project, subject to implementation of appropriate mitigation measures.

Potential Impacts on Agricultural Land

One submitter (more than 5 km from the project site) raised concerns about the loss of agricultural land.

The project site is in the New England North West region of NSW, which has a strong and diverse agricultural sector, with around 6.7 million ha of the region being used for agricultural output.

The soils within the site are primarily classified as Class 4 Rural Land Capability under the *Land and Soil Capability Mapping in NSW* (OEH, 2017) (see **Figure 5**). As such, the land is suited to restricted cultivation, pasture cropping, grazing, some horticulture, forestry and nature conservation. A small portion of the project site on the north eastern and western boundary classified as Class 5, meaning the land is not capable of sustaining high impact land use and lower impact land uses such as grazing can be managed by readily available practices. There is no BSAL occurring within the site.

The Department notes that as the ‘important agricultural mapping’ of the area has not yet been finalised by DPI Agriculture, exhibited or adopted by NSW Government, it is not directly relevant to the assessment of this project. In addition, the Department notes that DPI Agriculture has not raised any concerns regarding the project, and the Department considers that the information available is sufficient to assess the potential impacts on agricultural land.

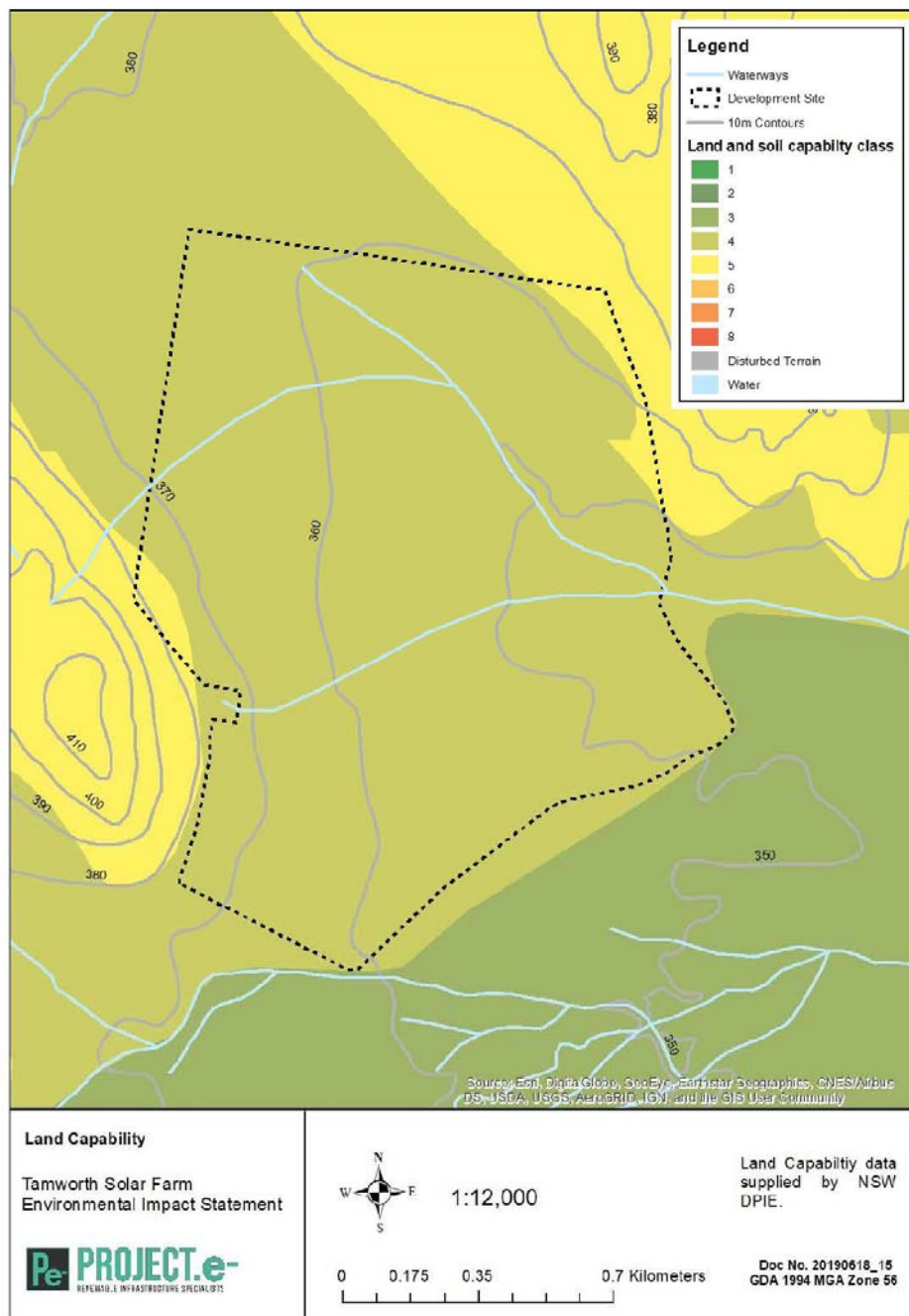


Figure 5| Land and Soil Capability Class

As the site is currently used for grazing and dryland cropping, the Department accepts that the development of the solar farm would reduce the agricultural output of the site while the solar farm remains operational. However, the development footprint occupies 72 % of the site, allowing the current agricultural practices to continue on the remaining 29 % (approximately 59 ha) of the site. The Department also notes that TSF proposes to manage the development footprint through sheep grazing during the operation of the project.

The inherent agricultural capability of the land would also not be affected by the project due to the relatively low scale of the development, and TSF proposes to return the land back to existing levels of agricultural capability once the project is decommissioned. To this end, the Department has included requirements to maintain the current land capability of the site (including ground cover and maintaining grazing within the development footprint) during the construction and operation of the project, and to fully reinstate the agricultural capability of the land following decommissioning of the project, including the requirement to return the development footprint to existing land and soil capability.

The development footprint of the project combined with the other approved and/or operational SSD solar farms in the New England North West region would be approximately 4,319 ha. However, the loss of 4,319 ha of agricultural land represents a very small fraction (~0.0006%) of the 6.7 million ha of land being used for agricultural output in the New England North West region and would result in a negligible reduction in the overall productivity of the region.

The Department also notes that neither Council nor DPI Agriculture raised any concerns about the operation of the project compromising the long-term use of the land for agricultural purposes.

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

- the broader strategic goals of the NSW government 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 available capacity in the existing electricity network; and
- the benefits of dispatchable energy for grid stability and reliability.

Based on these considerations, the Department considers that the proposed solar farm represents a suitable and compatible use of the land within the region.

5.2 Traffic and Transport

Three submissions raised concerns about the potential traffic and road safety impacts on local roads during the construction period.

Traffic Routes and Site Access

It is noted that project related vehicles would access the site via Oxley Highway (state arterial road), Babbinboon Road (local road), Warminster Road (local road) and Soldiers Settlement Road (local road).

Babbinboon, Warminster and Soldiers Settlement Road are local unsealed roads with a width of approximately 6 metres (m), allowing for two-way traffic.

Two site access points are proposed for the project. The main site access to the solar farm during construction and operation would be via the existing property access off Soldiers Settlement Road. This access would also be used to facilitate construction of the substation during the construction phase only. A second new site access would be constructed for use only during operation and maintenance for the substation. (see **Figures 3 and 6**).

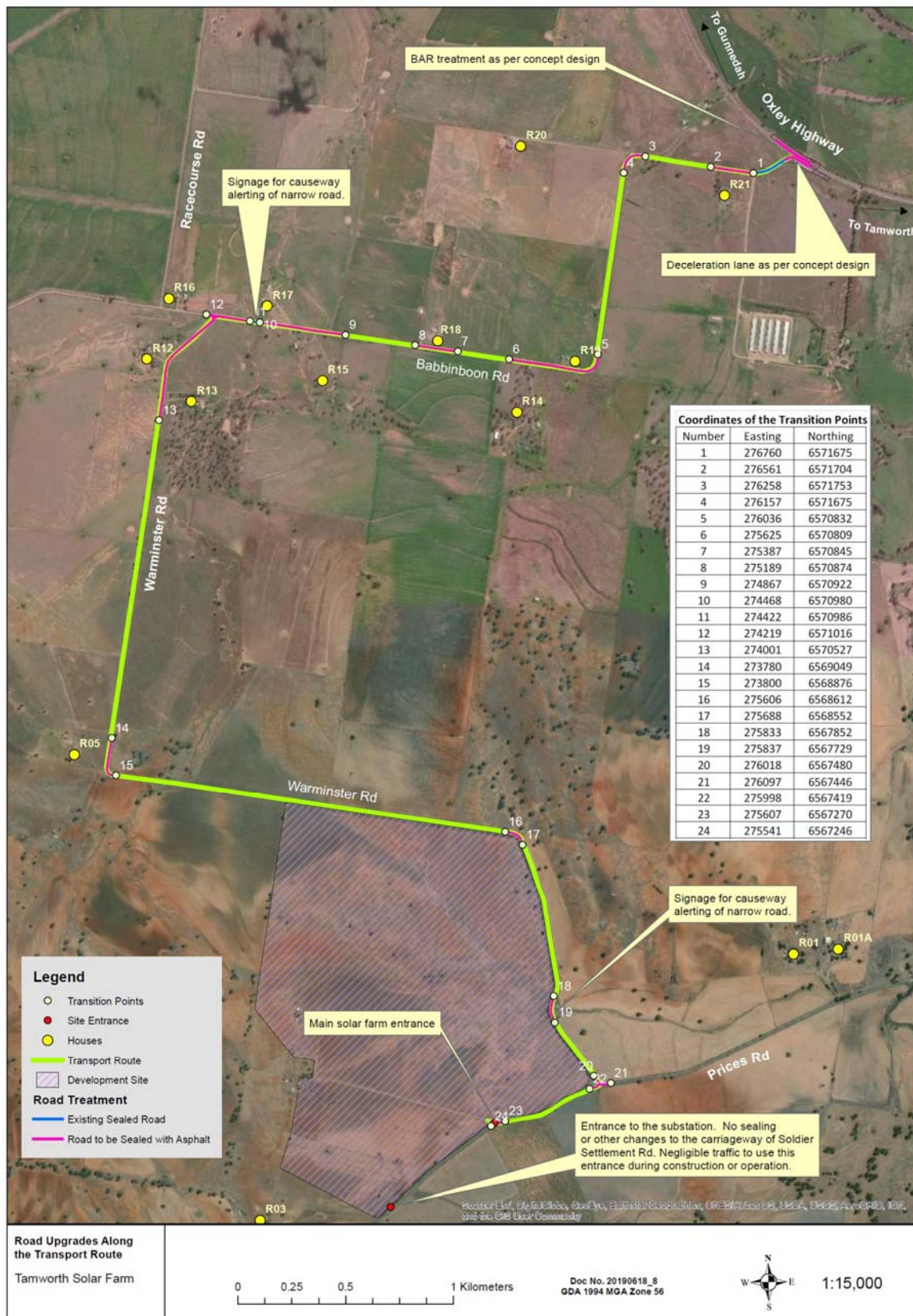


Figure 6 | Access route and road upgrades

Traffic Volumes

The main increase in project related traffic would occur during the 12-month construction period, with a peak period of up to six months. The estimated peak daily vehicle movements are 30 heavy vehicle movements and 100 light vehicle movements. A peak construction workforce of approximately 200 workers (including contractors) would be required onsite.

Additionally, it is anticipated that there would be 10 oversize/over mass vehicle movements during the construction period to facilitate the transportation of the components of the substation. As construction activities would be restricted to daytime hours, construction related vehicles would be using the local road network during the day only.

The Department notes that TSF proposes to use a bus service to transport workers (70%) to and from the site from the nearby township of Tamworth (approximately 20 km west of the solar farm) to minimise light vehicles. The Department has included a requirement within the Traffic Management Plan for TSF to develop measures to ensure employee use of this service, which is supported by TfNSW and Council.

Traffic generation during operations would be negligible (i.e. up to 2 light vehicle and 3 heavy vehicle movements per day).

No other approved or proposed energy projects in the New England and Tamworth regions share a common transport route other than Gunnedah Solar and Orange Grove Solar which share sections of the Oxley Highway, which is part of the State road network and has sufficient capacity to accommodate the construction traffic. For this reason, the Department considers that there would be no material cumulative traffic impacts on the State and local road network as a result of the project.

Road Upgrades and Maintenance

TfNSW and Council support the proposed transport route, provided the requiring road upgrades are undertaken to support the increased traffic associated with the project.

Babbinboon, Warminster and Soldiers Settlement Road are local unsealed roads with a width of approximately 6 m, allowing for two-way traffic. Both Council and public submissions raised concerns about the potential impacts of the project on these roads, including road pavement conditions, dust generation and the cost of road maintenance.

TSF proposed an Auxiliary Left Turn (AUL) treatment with deceleration lane at the intersection of Oxley Highway and Babbinboon Road to improve sight distances in the EIS.

TfNSW expressed concern that the proposed AUL on Oxley Highway would conflict with existing bus standing areas to the north and south of the Oxley Highway adjacent to this intersection and advised that the intersection treatment also required a Basic Right Turn (BAR). TSF proposed a revised intersection treatment with BAR and a revised location for the bus standing area further south of the intersection and a standing area on the northern side of Oxley Highway to accommodate the BAR. TfNSW and Council were satisfied with the proposed design and location of the replacement bus standing areas.

Council also requested a dilapidation survey of the project traffic routes along local road network be undertaken prior to the commencement of construction and throughout construction work, with necessary repairs to be undertaken to maintain the road asset.

The Department has included a requirement for TSF to develop and implement these measures through the Traffic Management Plan (TMP), including the following requirements:

- upgrade the intersection of the site access points off Oxley Highway and Babbinboon Road with a Basic Right Turn (BAR) treatment and Auxiliary Left Turn (AUL-S) treatment with deceleration lane;
- construct new bus standing areas at the intersection of the Oxley Highway and Babbinboon Road;
- upgrade the intersection of the site access points off Babbinboon Road and Warminster Road with road line marking and removal of one tree to improve sight distances;
- seal sections of the transport route along Babbinboon Road, Warminster Road and Soldiers Settlement Road;
- provide appropriate signage on the causeway of Babbinboon Road and Warminster Road;
- seal the main site access point off Soldiers Settlement Road; and
- upgrade the substation access point off Soldiers Settlement Road with gravel.

Additionally, TSF 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 TSF to:

- undertake the relevant road upgrades prior to the commencement of construction;
- restrict the number of vehicles during construction, upgrading and decommissioning to the peak volumes identified in the EIS;
- ensure the length of vehicles (excluding over-dimensional vehicles) does not exceed 19 m; and
- prepare a Traffic Management Plan in consultation with TfNSW and Council, including provisions for dilapidation surveys, details of the measures that would be implemented to address road safety, and details of the employee bus shuttle service.

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

5.3 Other issues

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

Table 3 | Other Issues

| Findings | Recommendations |
|--|--|
| Visual | |
| <ul style="list-style-type: none"> Concerns about visual impacts were raised in one objection, from a submitter located approximately 1.5 km from the solar farm infrastructure. The solar panels would be relatively low lying (up to 4.6 m) and the maintenance buildings and substation would be similar size to agricultural structures commonly found in the area. There are 9 non-associated rural residences within 2 km of the site (see Figure 6 above). R02 is the closest residence to the site (320 m to the south from the solar farm infrastructure). As the residence is on flat land and views to the site are filtered by existing vegetation along the property's boundary fence line, visibility of solar farm infrastructure would be limited. The Department considers that with the existing vegetation, the proposed vegetation buffer along the south-eastern and southern boundaries, the visual impacts are low to negligible. Residence R03, located 360 m to the south east of the site boundary and 400 m to the substation and solar panels, is elevated with respect to the site and would have direct views to the project and in particular the substation. TSF provided an assessment of alternative substation locations within the site and concluded that given the nature of the project site which slopes up towards the north east, proximity to the existing transmission line and impacts on the constructability of the project, the proposed location in the south west corner of the site was the most practical and suitable. The Department accepts this assessment, given TSF's commitment to include a visual mitigation bund (3 m high) with vegetation planting (5 to 10 m high) that would significantly reduce the visual impact on residence R03 to an acceptable level. Although the owner of R03 did not object to the project, the Department consulted with the landowner during the assessment and no concerns were raised about the adequacy of the proposed mitigation and residual impact, providing the vegetation buffer is established and maintained. Residence R04, located 880 m to the south of the site is located on flat land. The visual impact at R04 is unlikely to be significant due to topography, distance from the site and proposed vegetation buffer on the southern boundary of the site and the visual mitigation bund adjacent to the substation. Residence R06, located 1.5 km to the south of the site is located on flat land and sits slightly lower than the project site and would have views of the solar panels across the project site which is undulating and slopes up to the north. The solar panels appear in a line formation | <ul style="list-style-type: none"> Establish and maintain vegetation buffers. Prepare and implement a Landscape Plan. Ensure that external lighting is minimised and complies with <i>Australian/New Zealand Standard AS/NZ 4282:2019 – Control of Obtrusive Effects of Outdoor Lighting</i> and the <i>Dark Sky Planning Guideline</i> (DPIE 2018), or their latest versions. Prohibit any signage or advertising on the development, unless it is for safety purposes. |

in the distance from the residence. The visual impact of the project is unlikely to be significant due to intervening topography, existing vegetation and the proposed vegetation buffer along the southern boundary.

- Residence R05, located 1 km to the north east of the site on Warminster Road, is slightly elevated and would have views of solar infrastructure. However, the Department considers with the proposed vegetation buffer along the north western boundary, and the distance from the solar infrastructure, the visual impact on this residence would be low.
- Residence R01 and R01A, are located around 1.1 and 1.3 km respectively to the west of the site. However, the Department considers that with the retention of existing vegetation along the southern side of Warminster Road adjacent to the project boundary, the visual impact on these residences would be low.
- This existing roadside vegetation would also minimise visual impacts to vehicles travelling towards the site along Prices Road.
- Existing vegetation, the relatively low height of the infrastructure, the presence of existing transmission line infrastructure, and the proposed vegetation buffer along the western, south and south eastern boundaries, would limit the visual impact of the project from other residences and most public viewpoints within 2 km.
- While photovoltaic panels are designed to absorb rather than reflect sunlight, the Department recognises that some project components have the potential to generate glare or reflection, including the galvanised steel used for the solar panel mounting framework, but that this diminishes over time.
- The setback distances from nearby receivers, topography, existing well-established intervening vegetation and the proposed vegetation screening would shield or minimise views of the development from surrounding residences, including views of infrastructure with the potential to create glare or reflection. In addition, any glint or glare experienced by nearby receivers would be temporary, depending on the time of day and receiver location.
- The Department has recommended conditions requiring the applicant to minimise the off-site visual impacts of the development, including the potential for any glare or reflection, and to ensure the visual appearance of all ancillary infrastructure (including paint colours) blends in as far as possible with the surrounding landscape.
- The project is located about 184 km from the Sliding Spring Observatory, therefore falls inside the Dark Sky Region covered by the NSW Government's *Dark Sky Planning Guideline*. A consent authority must consider this guideline for a project that is likely to impact the night sky and is within 200 km of the Observatory.
- There would be no permanent night lighting installed within the project site. It is noted that lighting would be used during maintenance and during emergency situations. Consequently, the Department is satisfied that the project would not affect the observing conditions at the Observatory.

Findings

- The Department considers the visual impacts of the project on the surrounding residences and road users would be minimal.

Recommendations

Biodiversity

- The project site comprises of mostly cleared agricultural land with small patches of remnant native vegetation.
 - The road upgrades are mostly cleared with exotic grasses and do not trigger biodiversity offsets.
 - The project site includes 22 White Box trees (*Eucalyptus albens*), and 3 Blakely's Red Gum (*Eucalyptus blakelyi*). A total of 16 White Box and 3 Blakely's Red Gum, all hollow bearing, would be removed.
 - All native vegetation to be removed is assumed to represent White Box grassy woodland plant community type (PCT) 433 for the purpose of calculating credit offset requirements. This approach is supported by BCD.
 - White Box grassy woodland is a threatened ecological community listed under the *Biodiversity Conservation Act 2016* (BC Act) and the impact to this vegetation would generate 19 credits under the BC Act.
 - TSF would be required to retire these credits in accordance with the NSW Biodiversity Offset Scheme.
 - Subject to the recommended conditions and offsets, the Department and BCD consider that the project is unlikely to result in a significant impact on the biodiversity values of the locality.
- Retire required offset credits in accordance with the NSW Biodiversity Offsets Scheme for Major Projects prior to commencing the development.
 - Prepare a Biodiversity Management Plan in consultation with BCD.

Heritage

- Site surveys identified a total of 22 Aboriginal sites within the project site and road upgrades, including 11 isolated finds, 2 culturally modified trees and 9 open camp sites. One culturally modified tree (CMT3) has moderate level of significance and would be avoided. All other sites are considered to be of low significance.
 - 11 Aboriginal sites (6 isolated finds and 5 open camp sites) would be directly impacted by the project. Of the sites that would be impacted, the overall impact of the development on the heritage values of these sites is low, as these sites exist within a highly disturbed landscape.
 - One culturally modified tree (CMT1) is located on a neighbouring property and outside the project site.
 - Whilst 11 sites are at risk of inadvertent impact (5 isolated finds, 4 open camp sites and 2 culturally modified trees), 7 of these sites are considered unlikely to be impacted by the project and 4 may be indirectly impacted.
 - No historic heritage items were found on site.
 - TSF has committed to preparing an Aboriginal Cultural Heritage Management Plan (ACHMP) in consultation with Registered Aboriginal Parties (RAPs).
 - If Aboriginal artefacts or skeletal material are identified during construction of the project all work would cease and an unexpected finds procedure would be implemented.
 - With these measures, the Department and BCD consider that the project would not significantly impact the heritage values of the locality.
- Ensure the development does not cause any direct or indirect impacts on any items located within exclusion zones or outside the approved development footprint.
 - Salvage and relocate Aboriginal items to suitable alternative locations, in consultation with RAPs.
 - Prepare and implement an Aboriginal Cultural Heritage Management Plan, including procedures for unexpected finds, in consultation with RAPs and BCD.

Findings

Recommendations

Noise

- Noise generated by the proposed construction, upgrading and decommissioning activities associated with the project would be below the 'highly noise affected' criterion of 75 dB(A) in EPA's *Interim Construction Noise Guideline* (the ICNG) at all nearby residences.
 - One non-associated receiver (R02) is predicted to experience noise levels above the 'noise affected criterion' of 45 dB(A) in the ICNG, however these exceedances would be short term and limited to standard construction hours but below the highly noise affected criterion:
 - during construction noise levels are predicted to be 50 dB(A) but only for a period of up to 2 weeks due to piling work at the southern panel array area; and
 - during decommissioning noise levels are predicted to be 55 dB(A) but would be for short periods (30 minutes) when foundations are being demolished.
 - Notwithstanding, TSF has committed to implement the noise mitigation work practices set out in the ICNG, including scheduling activities to minimise noise, limiting operation of multiple items of significant noise generating equipment at one time to remain within 5 dB of the NML and establishing a complaint handling procedure.
 - Noise during operation is expected to be negligible and would comfortably comply with the applicable criteria in the *Noise Policy for Industry*.
- Minimise the noise generated by any construction, upgrading or decommissioning activities on site in accordance with best practice requirements outlined in the ICNG.
 - Restrict construction hours to Monday to Friday 7am – 6pm, and Saturday 8 am – 1pm.

Water and Erosion

- The project would require around 10 megalitres (ML) of water during construction (mainly for dust suppression) and a nominal amount during operation. A static water supply (20,000 litres) would be established and maintained on the site for fire protection.
 - Water demands during construction and decommissioning would be met by the existing dams and/or potable water being trucked to the site. During operations, water would be sourced on site via water rainwater tanks connected to the staff amenities building, existing dams and wastewater would be managed onsite. .
 - The site has three first order streams and one second order stream. Both waterways are ephemeral in nature. The site has three small dams and three bores, one of which provides water for stock.
 - One public submission raised concerns about surface water runoff.
 - The site is not mapped as flood prone or groundwater vulnerable land and the project is not expected to have any impact on flood liable land or change the behaviour of flood waters. Given the topography and historic land clearing for agriculture, the onsite streams resemble broader drainage areas rather than streams within a defined bed and banks.
 - TSF has designed the footprint to avoid the waterways. The proposed security fencing on the eastern boundary would also be designed to allow water to pass freely. TSF has also committed to establish control
- Prohibit water pollution in accordance with Section 120 of the *Protection of the Environment Operations Act 1997*.
 - Undertake activities in accordance with *Managing Urban Stormwater: Soils and Construction* (Landcom, 2004) manual, *Guidelines for Controlled Activities on Waterfront Land* (DPI Water, 2018), and *Why Do Fish Need to Cross the Road? Fish Passage Requirements for Waterway Crossings* (2004).

Findings

measures including cut-off drains to divert water away from the disturbed area and ensure runoff volumes and velocity are controlled.

- As such, the Department considers the project is unlikely to have a significant effect on surface water behaviour.
- The project would also not have any impacts on groundwater sources or groundwater dependent ecosystems.
- DPIE Water, WaterNSW, BCD and Council raised no concerns about groundwater, sedimentation or salinity.
- The Department considers any erosion and sedimentation risks associated with the project can be effectively managed using best practice construction techniques.

Recommendations

Hazards

- The project would comply with the International Commission on Non-Ionizing Radiation Procedure (ICRNP) guidelines for electric, magnetic and electromagnetic fields.
 - TSF completed a preliminary risk screening in accordance with SEPP No. 33 and concluded that the project would not exceed any of the screening thresholds.
 - The site is not mapped as bushfire prone land.
 - TSF has committed to maintaining a 20 m asset protection zone around all infrastructure and preparing an Emergency Response Plan to manage fire risk.
 - TSF intends to manage ground cover and its associated fire hazard on site by using sheep grazing.
 - The Department is satisfied that the bushfire risks can be suitably controlled through the implementation of standard fire management procedures and recommendations made by the RFS and FRNSW, including:
 - managing the site as an Asset Protection Zone (APZ), including a defendable space of at least 10 m around the perimeter of the solar array areas;
 - a 20,000 litre water supply tank, fitted with a 65 mm Storz fitting and a FRNSW compatible suction connection, located adjacent to the internal access road; and
 - the development and implementation of a comprehensive Emergency Plan.
 - The site is not mapped as flood prone under the LEP and the undulating topography allows surface water to drain from the site without ponding or causing flooding.
 - Further, DPIE Water, BCD and Council raised no concerns about flooding.
- Ensure that the development complies with the relevant requirements in the RFS's *Planning for Bushfire Protection 2019* and Standards for Asset Protection Zones.
 - Ensure the defendable space and solar arrays are managed as an APZ and the development is suitably equipped to respond to fires including water supply tank and appropriate connectors.
 - Prepare and implement an Emergency Plan in consultation with RFS and FRNSW.

Land Values

- One public submission raised concerns about the impacts of the project on land values.
 - The Department notes that:
 - property values are influenced by several factors;
- No specific conditions required

Findings

Recommendations

- there is no clear evidence to suggest that solar farms in NSW are adversely affecting property values;
- the project is permissible with development consent under the Tamworth Regional LEP and the Infrastructure SEPP;
- a detailed assessment of the merits of the project has found that the project is unlikely to generate any significant economic, environmental or social impacts;
- the impacts of the project can be further minimised by imposing suitable conditions on the project, and requiring a range of standard mitigation measures, such as vegetation screening, to be implemented in accordance with a detailed Landscape Plan; and
- the Department considers the visual impacts of the project on the surrounding residences and road users would be minimal.
- Accordingly, the Department considers the project would not result in any significant or widespread reduction in land values in the areas surrounding the solar farm.

Workforce Accommodation

- Up to 200 workers would be required during the construction period and TSF estimate approximately half would be sourced from the local and regional community where possible.
 - TSF undertook an assessment of accommodation availability in the Tamworth Regional LGA, which indicated there is likely to be sufficient accommodation to house workers during the construction period, even if multiple solar farm projects are constructed in the region concurrently.
 - The project would generate direct and indirect benefits to the local and regional economy, including:
 - up to 200 jobs during the 12-month construction period;
 - expenditure on accommodation, goods and services in the local area;
 - ; and
 - upgrading of roads used by project related traffic.
 - The Department is satisfied that the proposal would prioritise the employment of local workers and that there is adequate accommodation, infrastructure and services within the Tamworth Regional LGA to accommodate the workforce required for the proposed development.
- No specific conditions required

Subdivision

- As with the vast majority of solar energy projects, TSF proposes to subdivide a portion of the existing lot for the grid substation only and to facilitate the transfer ownership of the proposed substation to TransGrid. This proposed subdivision would result in a new lot with an approximate area of less than two hectares.
 - The lot would be under the minimum lot size of 400 ha and prohibited under a strict reading of the LEP.
- Subdivide the proposed lots in accordance with requirements of section 157 of the *Environmental Planning and Assessment Regulation 2000*.

Findings

Recommendations

- Notwithstanding, under Section 4.38(3) of the EP&A Act, development consent for the project 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:
 - is necessary for the operation of the substation;
 - would not result in any additional dwelling entitlements on the subdivided lots; and
 - is consistent with the key objectives of the RU1 zone as it would encourage diversity and primary industry enterprises and minimise conflict between land uses.
- The Department notes that Council raised no concerns about the proposed subdivision.

Decommissioning and Rehabilitation

- The Department has developed standard conditions for solar farms to cover this stage of the project life cycle, including clear decommissioning triggers and rehabilitation objectives such as removing all above and below ground infrastructure and restoring land capability to its pre-existing agricultural use (i.e. at least Class 4 Land Capability).
- With the implementation of these measures, the Department considers that the solar farm would be suitably decommissioned at the end of the project site, or within 18 months if operations cease unexpectedly, and that the site would be appropriately rehabilitated.
- Include rehabilitation objectives requiring the site to be rehabilitated within 18 months of cessation of operations.

Community Contributions

- Council advised that if TSF intends to enter into a Voluntary Planning Agreement (VPA), further discussions with Council are required. TSF and Council have not entered into a VPA at this stage.
 - Council requested a development contribution of 1% of the capital investment value of the project under Section 7.12 of the EP&A Act, which would equate to \$1.04 million.
 - The Department considered the need for developer contributions in its assessment of this project and whether it would create any additional demand on public services and infrastructure.
 - The assessment found that the only material additional demand on services and infrastructure related to roads.
 - As such, the Department requests that TSF carry out the required road upgrades to the satisfaction of the relevant roads authority. A detailed Traffic Management Plan is also required to be prepared prior to commencing the development, in consultation with TfNSW and Tamworth Regional Council which must include details of the road upgrade works required and protocols for the undertaking of independent dilapidation surveys to assess the existing condition and repair of roads along the transport route. These conditions have been agreed with TfNSW, Council and TSF.
 - Given the relatively low level of employment generated once it is operational (up to 2 workers), the project is unlikely to result in
- No specific conditions required.

Findings**Recommendations**

significant additional demand on community services and infrastructure during the operational stage of the project.

- It is noted that Council has a Section 94A Development Contributions Plan. Whilst the Contributions Plan is a relevant matter for consideration by the consent authority, it is not binding on State significant developments. The plan includes proposed road works, open space works in residential areas located in the LGA. Further, as outlined above, the Department has considered the demand on public services and infrastructure and is satisfied that its recommended conditions address the only material impact of the project on these matters (i.e. roads). Consequently, the Department does not consider that a Section 7.12 levy is either necessary or warranted in this case.

6 Recommended Conditions

The Department has prepared recommended conditions of consent for the project (see **Appendix F**).

The Department consulted with TSF and the relevant agencies on the conditions for the project, particularly Council and TfNSW in regard to the road upgrades and maintenance requirements, and BCD to determine the appropriate biodiversity offset requirements for the project.

These conditions are required to:

- prevent, minimise, and/or offset adverse impacts of the project;
- ensure standards and performance measures for acceptable environmental performance;
- ensure regular monitoring and reporting; and
- provide for the ongoing environmental management of the project.

The recommended conditions use a risk-based approach that focuses on performance-based outcomes. This reflects current government policy and the fact that solar farms require relatively limited ongoing environmental management once the project has commenced operations.

In line with this approach, the Department has recommended operating conditions to minimise traffic, biodiversity, amenity, heritage, water and bushfire impacts, and that the following management plans be prepared and implemented:

- Traffic Management Plan
- Biodiversity Management Plan
- Heritage Management Plan; and
- Emergency Plan.

The recommended conditions also require TSF to provide detailed final layout plans to the Department prior to construction.

Other key recommended conditions include:

- *roads* – requiring relevant road upgrades are undertaken prior to the commencement of construction;
- *biodiversity offsets* – retiring biodiversity offset credits in accordance with the NSW Biodiversity Offsets Scheme;
- *operating hours* – undertaking construction, upgrading or decommissioning activities on-site during standard construction hours, unless these activities that are inaudible at non-associated receivers;
- *roads* – requiring relevant road upgrades are undertaken prior to the commencement of construction, and maintenance and repair of any damage during construction, upgrades or decommissioning activities; and
- *fire* – ensure that the development complies with the relevant asset protection requirements in the RFS's *Planning for Bushfire Protection 2019*.

7 Evaluation

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

The project site is located in proximity to the Oxley Highway and has direct access to the electricity network via TransGrid's transmission line, which traverses the site. The site is in a rural area, with the nearest non-associated dwelling located about 320 m south of the site.

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.

Views from surrounding residences and roads would be screened by topography, existing vegetation, supplemented by vegetation screening and minimised by distance from the site.

The project has been designed to largely avoid key constraints, including remnant native vegetation, Aboriginal heritage, riparian zones and nearby residences.

Given the distance of Tamworth Solar Farm from all approved and proposed projects in the region there would be no significant cumulative impacts.

Both the Department and Council consider a solar farm development to be a suitable land use for the site. The project would not result in any significant reduction in the overall agricultural productivity of the region and TSF intends to graze sheep on the site during operation of the project. Additionally, the site could be returned to agricultural use 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 Council, to ensure these impacts are effectively managed, minimised and/or offset. TSF has reviewed the conditions and does not object to them.

The Department also considers that with the proposed conditions of consent, the issues raised in the community submissions regarding use of agricultural farming land, traffic impacts, removal of native vegetation and amenity impacts including visual and dust, the residual impacts can be appropriately addressed.

Importantly, the project would assist in transitioning the electricity sector from coal power stations to low emission sources. It would generate up to approximately 138,000 megawatt hours (MWh) of clean electricity annually, which is enough to power up to 30,000 homes and save up to 131,000 tonnes of greenhouse gas emissions per year. It is therefore consistent with the goals of the NSW *Climate Change Policy Framework* and *Net Zero Plan Stage 1: 2020 - 2030*.

Further, the project includes an energy storage facility, with a capacity of 19 MW, that would enable the project to store solar energy for dispatch to the grid outside of daylight hours and / or during periods of peak demand, which has the potential to contribute to increased grid stability and energy security.

The Department considers that the project achieves an appropriate 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, including up to 200 construction jobs and a capital investment of approximately \$104 million.

On balance, the Department recommends 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 and Public Spaces:

- **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** for the application in respect of Tamworth Solar Farm (SSD 9264); and
- **signs** the attached development consent and recommended conditions of consent (see **Appendix F**).

Recommended by:



27/11/20

May Patterson
Team Leader
Energy Assessments

Recommended by:



27/11/20

Nicole Brewer
Director
Energy Assessments

9 Determination

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



30/11/20

Mike Young

Executive Director

Energy, Industry and Compliance

Appendices

Appendix A – List of Documents

Tamworth Solar Farm – Environmental Impact Statement, Project e (2020)

Tamworth Solar Farm – Submissions Report, Project e (2020)

Tamworth Solar Farm – Response to Request for Information received from Project e and Tamworth Solar Farm Pty (April 2020) and addendum (May, July, August, September and October 2020)

Appendix B – Environmental Impact Statement

See the Department's website at:

<https://www.planningportal.nsw.gov.au/major-projects/project/14721>

Appendix C – Additional Information

See the Department's website at:

<https://www.planningportal.nsw.gov.au/major-projects/project/14721>

Appendix D – Submissions

See the Department's website at:

<https://www.planningportal.nsw.gov.au/major-projects/project/14721>

Appendix E – Submissions Report

See the Department's website at:

<https://www.planningportal.nsw.gov.au/major-projects/project/14721>

Appendix F – Recommended Conditions of Consent

See the Department's website at:

<https://www.planningportal.nsw.gov.au/major-projects/project/14721>

Appendix G – 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 considerations of 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 | <p>The objects of most relevance to the Minister's decision on whether or not to approve the project are found in Section 1.3(a), (b), (c), (e) and (f) of the EP&A Act.</p> <p>The Department considers the project encourages the proper development of natural resources (Object 1.3(a)) and the promotion of orderly and economic use of land (Object 1.3(c)), particularly as the project is:</p> <ul style="list-style-type: none">• a permissible land use on the subject land;• located in a suitable 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 <i>NSW Net Zero Plan Stage 1: 2020 – 2030</i>, and would assist in meeting Australia's greenhouse gas emission reduction targets. <p>The Department has considered the encouragement of ESD (Object 1.3(b)) in its assessment of the project. This assessment integrates all significant socio-economic and environmental considerations and seeks to avoid any potential serious or irreversible environmental damage, based on an assessment of risk-weighted consequences.</p> <p>In addition, the Department considers that appropriately designed SSD solar development, in itself, is consistent with many of the principles of ESD. TSF has also considered the project against the principles of ESD, particularly the principle of <i>intergenerational equity</i>, concluding that the proposal would benefit future generations by reducing the reliance on energy sources derived from non-renewable resources, which produce greenhouse gas emissions.</p> <p>Consideration of environmental protection (Object 1.3(e)) is provided in section 5 of this report. TSF has applied both the precautionary principle and the <i>conservation of biological diversity</i> and <i>ecological integrity</i> have undertaken careful evaluation and assessment to avoid serious or irreversible damage to the environment where practicable. Following its consideration, the Department considers that the project can 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</p> |

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 5.3** 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 is satisfied that any residual impacts on heritage can be managed and/or mitigated by imposing appropriate conditions.

State Significant Development

Under Section 4.36 of the EP&A Act and the *State Environmental Planning Policy (SEPP) (State and Regional Development) 2011* the project is considered a State Significant Development. The Minister for Planning and Public Spaces is the consent authority for the development.

Under the Minister's delegation of 9 March 2020, the Executive Director, Energy, Industry and Compliance, may determine the project.

Environmental Planning Instruments

The *Tamworth Regional Local Environment Plan* (LEP) 2010 applies and is discussed in **sections 3.2, 5.1** and **5.3** of this report, particularly regarding permissibility, land use zoning and subdivision. The project is permissible with consent under the LEP.

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 and owner of the existing transmission line transecting through the site; and
- Tamworth Regional Council as the relevant roads authority for road upgrades (Section 95A).

TSF completed a preliminary risk screening in accordance with SEPP No. 33 – Hazardous and Offensive Development. The Department's consideration of this analysis is discussed in section 5.3.

The Department has considered the provisions of the *State Environmental Planning Policy No.44 – Koala Habitat Protection*, however Tamworth Regional Council is not listed under SEPP No.44.

The Department has considered the provisions of the *State Environmental Planning Policy (Primary Production and Rural Development) 2019*. Of relevance to the project, the SEPP aims to facilitate the orderly economic use and development of lands for primary production, to reduce land use conflict and sterilisation of rural land and to identify State significant agricultural land. While the 'important agricultural land' mapping has not been finalised by DPI Agriculture, the Department has considered potential impacts on agriculture based on current land capability mapping and other site specific information in **section 5.1** of this report.

The Department has considered the provision 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.
