WEE WAA SOLAR FARM

Prepared for:

Providence Asset Group
704/99 Bathurst Street
SYDNEY NSW 2000

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BASIS OF REPORT

This report has been prepared by SLR Consulting Australia Pty Ltd (SLR) with all reasonable skill, care and diligence, and taking account of the timescale and resources allocated to it by agreement with Providence Asset Group (the Client). Information reported herein is based on the interpretation of data collected, which has been accepted in good faith as being accurate and valid.

This report is for the exclusive use of the Client. No warranties or guarantees are expressed or should be inferred by any third parties. This report may not be relied upon by other parties without written consent from SLR.

SLR disclaims any responsibility to the Client and others in respect of any matters outside the agreed scope of the work.

DOCUMENT CONTROL

Reference	Date	Prepared	Checked	Authorised
631.20525-R011	4 March 2021	Rachel Pettitt		
631.20525-R011	19 January 2021	Rachel Pettitt		
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631.20525-R01-v0.2	16 February 2021	Rachel Pettitt	Clare Brennock	Pat Quinlan

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APPENDICES

1 Introduction

This Statement of Environmental Effects (SEE) is submitted to Narrabri Shire Council (Council) in support of a Development Application (DA) for a solar photovoltaic (PV) power generation plant at 3843 Yarrie Lake Road, Wee Waa NSW 2388 (the site).

Specifically, the proposed development includes:

- Establishment of a grid-connected solar photovoltaic (PV) plant including associated electrical generation, supplying no greater than 5 megawatts (MW);
- New 4-5m wide access road from the north boundary of the site;
- Construction of unsealed access road from existing gravel access off Yarrie Lake Road to the development area;
- Earthworks for construction lay-down area, hardstand areas and internal roads;
- High chain link security fencing 2.3m high; and
- Other associated site improvements as shown on the Plans at **Appendix A**.

This SEE has been prepared by SLR Consulting (SLR) on behalf of Providence Asset Group (PAG). It describes the site, its environs, the proposed development and provides an assessment of the proposal in terms of the matters for consideration under Section 4.15 (1) of the Environmental Planning and Assessment Act 1979 (EP&A Act 1979). It should be read in conjunction with the supporting information and Plans prepared by Balance Power and Energy Pty Ltd appended to this report **(Appendix A)**.

1.1 Providence Asset Group

Providence Asset Group (PAG) is an Australian innovation led investment and asset management firm focusing on ethical investment within an environmental, social and corporate governance framework. Through collaborative partnerships, PAG supports and invests in projects aligned to new forms of renewable and clean energy.

PAG have now secured over 30 solar farm sites in regional NSW and Victoria, including a partnership with Manilla Community Renewable Energy Inc. to develop Australia's first community owned solar farm. Once constructed the 5MW Manilla project will be able to power the community of Manilla during daylight hours. The project is also a recipient of a NSW Government grant to develop PAG's a world first energy storage technology which will enable PAG's solar projects to provide stable energy well into the early morning and evening peak electricity consumption periods.

1.2 Consultation with Council

Pre-development advice was provided by Narrabri Shire Council representative Erika Dawson via email on 21 December 2020. Overall, the feedback was positive. Table 1 summarises the matters raised by Council within the pre-lodgement advice email and provides comments on each of the matters raised.

Table 1 Consultation with Narrabri Shire Council

Matters Raised	Comments
Land Affected by the DA • (a) All land affected by the proposed development is to be included in the DA. This includes any land required for access (excluding public roads). • (b) Provide landowners consent for all land affected by the development. • (c) The impact assessment provided should consider the impacts of the development on all land affected by the development. • (d) The development will require access to be constructed over a crown road. Please refer to https://www.industry.nsw.gov.au/lands/access/roads to determine requirements for works on crown roads.	This Statement of Environmental Effects provides and considers all land affected by the proposed development and the impact the development may have on all affected land. Land owners consent has also been provided with this DA lodgement. Upgrades required for the access road are detailed in the Traffic Impact Assessment and are able to comply with the Road Act 1993.
DA Plans The following plans are to be submitted with the DA: • An existing site plan; • A proposed site plan; • A floor plan (of any buildings and structures); • Elevation Plans (of any buildings and structures); and • Plans showing the road works within the Crown road reserve.	The appropriate plans have been included with this report, see **Appendix A.**

Statement of Environmental Effects
• Provides a clear and detailed description of the entire development proposed, and is to include:
  • Details of all construction related works employee numbers, traffic generated, water requirements;
  • Details of all operations, including details on maintenance requirements, vegetation management, employee numbers, traffic generated, water requirements;
  • Any road or other infrastructure upgrade requirements;
  • Details of remediation of the site post use as a solar farm.
• An outline of the grid connection
	This Statement of Environmental Effects provides a detailed description of the proposal during both the construction and operational stages. All required legislation is identified within this report. All identified environmental impacts have been addressed.

Matters Raised	Comments

• Consideration of the applicable Environmental Planning Instruments, DCPs and other applicable legislation. In partial:
  • SEPP 55;
  • Koala Habitat Protection SEPP;
  • Infrastructure SEPP;
  • Narrabri LEP, including Earthworks (clause 6.1), Flood Planning Area (clause 6.2) and Essential Services (clause 6.5)
• Identification of the environmental impacts
• Measures taken to protect the environment or to lessen the expected harm.	

Traffic
A Traffic Impact Assessment (TIA) should be included with any DA, prepared by a suitably qualified consultant in accordance with Austroads Guide to Traffic Management Part 12 Integrated Transport Assessments for Developments.
• Provide an assessment of the existing conditions of the local traffic network to be affected by both construction and operation of the development. This is to include existing traffic volumes (vpd and vph), existing road construction/geometry standards, and safety;
• Outline the traffic generated by the development, including for both construction and operation, including:
  • Identification of transport routes for deliveries,
  • Daily traffic generated and peak hour traffic generated,
  • The size of vehicles required to access the site, including identification of any oversized vehicles required to access the site.
• Consideration of transport impacts of the development including:
  • Impact of development traffic on capacity of local road network and functioning of utilised intersections during the peak hour.
  • Demonstration, via provision of swept paths, that the largest vehicle required to access the site can
	A Traffic Impact Assessment (TIA) has been prepared for the proposal and is located at **Appendix D**. Within the TIA is an assessment of existing conditions of the roads, traffic generation, vehicle access points, manoeuvring and identification of any road upgrade work required.

Matters Raised	Comments
manoeuvre through all intersections in the local road network and the property access driveway. • Identification of any road upgrade works required to facilitate the development from both a geometry perspective and in accordance with Austroads intersection warrants.	
Ecology Advice is to be provided by a suitably qualified ecologist to demonstrate: • Whether the development is likely to significantly affect threatened species or ecological communities, or their habitats, according to the test in section 7.3 of the Biodiversity Conservation Act 2016 (BC Act); • Whether the development exceeds the biodiversity offsets scheme threshold if the biodiversity offsets scheme applies to the impacts of the development on biodiversity values; and • Whether the development is to be carried out in a declared area of outstanding biodiversity value. • If the response to any of the items in (i) to (iii) above is in the affirmative, a Biodiversity Development Assessment Report (BDAR) is to be provided in accordance with the requirements of the BC Act.	Refer to Section 5.4 of this SEE.
Koala SEPP 2019 The following advice is to be provided by a suitably qualified ecologist in relation to State Environmental Planning Policy (Koala Habitat Protection) 2019: • information, prepared by a suitably qualified and experienced person in accordance with the Guideline, to demonstrate that the land subject of the development application— • does not include any trees belonging to the koala use tree species listed in Schedule 2 for the relevant koala management area, or • is not core koala habitat, or • information, prepared in accordance with the Guideline, to demonstrate that the land subject of the development application—	The site is not identified as an area for site investigation for Koala Plans of Management.

Matters Raised	Comments
• does not include any trees with a diameter at breast height over bark of more than 10 centimetres, or • includes only horticultural or agricultural plantations.	
Glare A Glare Analysis prepared by a suitably experienced consultant to consider potential glare impacts from the development on operation of airstrips, residential receptors, road users, rail users, and any airstrips. Noting the DA will likely be referred to CASA.	A Reflectivity Glare Assessment has been conducted for the application and is located at **Appendix E**.
Visual Impact A Visual Impact Assessment prepared by a suitably experienced consultant to consider potential visual impacts from the development on residential receptors and other potentially affected receptors.	A Visual Impact Assessment has been prepared for the proposal and is located at **Appendix F**.
Agricultural Land Impacts An assessment on the impact of the development on productive agricultural land.	The solar array is designed to minimise impacts on existing cropping activities adjacent to the development area. The development site was chosen as it features, in the experience of the owner, less productive soils compared to other lots within the owner's landholdings. The site has also been located on the extremity of the landholdings, maximising access to adjacent lots and minimising impact on planting and harvesting activities. Opportunities for livestock grazing (sheep) is currently being explored with the landowner, which can be easily accommodated through the design proposed.
Staff Amenities If any staff amenities are proposed as part of the development, a waste water treatment report will be required to be submitted with the DA, along with details on the site plan of the location of the effluent management system and land application area.	Temporary construction staff amenities will be provided on site. No permanent staff amenities are proposed given the nature of the ongoing operation.

2 The Site and Surrounds

2.1 Site Description

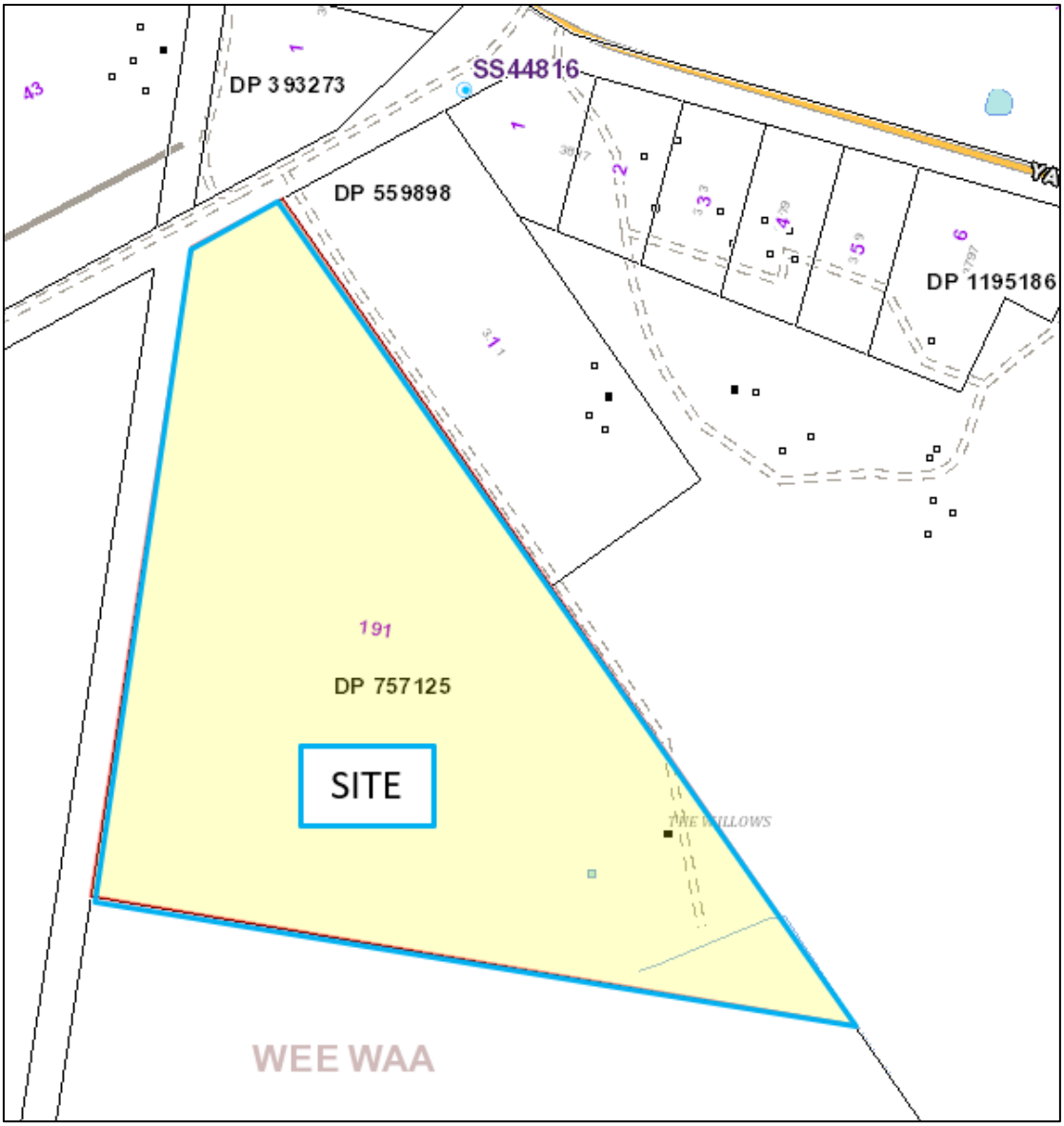
The land is legally known as part Lot 191 DP757125 and is generally referred to as 3843 Yarrie Lake Road, Wee Waa NSW 2388 (refer to Figure 1). The land is currently used for agricultural purposes primarily intensive cultivation activities including sorghum and cotton. In terms of topography, the site is relatively flat with a gradual slope from south-east to north-west.

The proposed lot boundary site is irregular in shape and comprises approximately 41.5 hectares. The site is heavily cropped and has a lack of trees or vegetation in the area.

The proposed development/lease site is a 4-sided polygon shape which is generally flat and comprises approximately 15 hectares. The development site is located in the northern section of Lot 191 DP757125, holding a frontage access off an unnamed gravel access road off Yarrie Lake Road. Vehicular access to the site is proposed via the existing gravel access to the site off Yarrie Lake Road approximately 1.4 km south of Culgoora Road.

Figure 1 Locality Plan (Source: Six Maps)

Figure 2 Cadastral Plan (Source Six Maps)



2.2 Site Location and Context

The site is located approximately 3.3km south-east of Wee Waa town centre, within the Narrabri Shire Council Local Government Area (LGA). The unnamed access road for the site is single lane in each direction, unsealed, unmarked and with no kerb or guttering on either side. The road connects to Yarrie Lake Road.

Surrounding lands are similar to the investigation area consisting of agricultural and primary production land with rural dwellings, sheds, dams, and scattered remnant vegetation. The site is approximately 167m south-west from the nearest dwelling external to the site.

The site is also 1.60km south-west from Cotton Seed Distributors Ltd located on Culgoora Road. The site is located 150m south-east of a nearby private airstrip and 3.8km east of the Wee Waa Aerodrome. Aviation has been considered as part of the reflectivity report completed for the project (refer to **Appendix E**).

3 Project Description

The Wee Waa Solar Farm project is one of PAG's solar initiatives to be rolled out across regional Australia, with multiple benefits for rural and regional communities.

The proposal includes a no larger than 5MW grid-connected solar PV installation. The solar farm will be connected to the existing Country Energy Substation at 23348 Kamilaroi Highway, Wee Waa 8 Stoney which is approximately 1.4km north-east of the proposed development site.

The proposed development aims to erect an estimated 12,572 solar PV panels with a nameplate rating of 540W. Other electrical generation infrastructure is proposed on the site including a power conversion station (PCS) consisting of inverters, transformer switchgear and auxiliary plant. Due to the capacity of the inverter system, the proposed development will produce less than 5MW. Most of the infrastructure would be pre-fabricated off-site, delivered and assembled on-site.

The PV arrangement will consist of 154 ground mounted single axis trackers, refer to Figure 3. The solar PV panels measuring approximately 2.26m by 1.13m with 600mm clearance above the existing ground surface. The panels will be positioned on single axis-trackers oriented north-south with a spacing of 6.3m. The PV mounting structure will comprise steel posts driven to approximately 1.5m below ground using a small pile driver. Additional support structures will be attached to the piles, which would then support the PV panels.

The proposed development will not require the entire removal of vegetation within the development area, it is noted that the site has had extensive land clearing for agricultural purposes (cropping) and remnant native ground cover on the site is negligible. The proposal will not involve clearing of native vegetation that exceeds the Biodiversity Offset Scheme (BOS) threshold for the site. The proposed solar farm, once operational, is expected to re-establish grasslands on site whilst managing dust generation and encouraging continued agricultural activities through livestock grazing. Weed management and control will be included as part of the standard operation procedures of the facility.

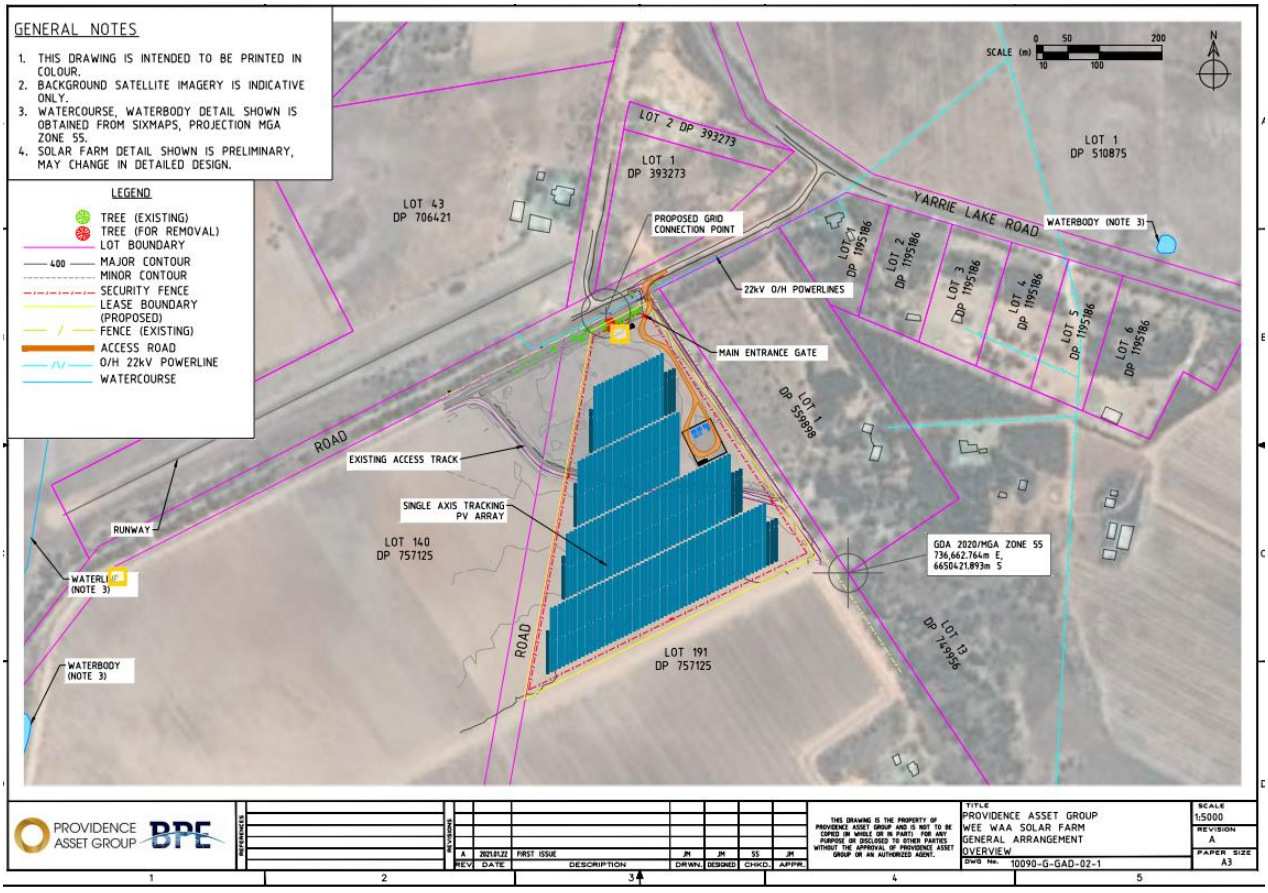
Vehicular access to the site will be via the existing access road off Yarrie Lake Road approximately 3 km south-east of Wee Waa, with the site entrance located in the north-east corner of the site. The solar farm will be fully fenced with a 2.3m security fencing including barbed wire at the top. Gate access is provided on the northern border of the site with emergency access gates on each boundary of the lease area. A temporary construction office area is indicatively shown on the General Arrangement Plan, with expectations that temporary car parking and off load areas are located within the hardstand area, also identified within the general arrangement plan (refer to Figure 3). Motion activated security lighting will be installed at the site.

A stormwater management system is proposed including an onsite detention basin holding a total volume of 154m^3 supported with a low flow outlet. Refer to the Stormwater Management Plans at **Appendix B**. Earthworks for the project are generally limited to the establishment of the access road, drainage swales and batters, laydown area, and detention basin.

The solar PV farm would operate 24 hours a day, 7 days a week, with no permanent staff on site. Maintenance inspections will be undertaken daily or on an as needs basis.

During the construction period there is estimated to be up to 30 personnel on site for up to 6 months.

Figure 3 Proposed Development Layout



4 Relevant Legislation and Planning Controls

The following Environmental Planning Instruments (EPIs) and Development Control Plans (DCPs) are relevant to the proposed development as explored within this Section of the report:

- *Environment Protection and Biodiversity Conservation Act 1999;*
- *Environmental Planning and Assessment Act 1979;*
- *Biodiversity Conservation Act 2016;*
- *Local Land Services Act 2013.*
- *State Environmental Planning Policy (State and Regional Development) 2011;*
- *State Environmental Planning Policy (Infrastructure) 2007;*
- *State Environmental Planning Policy 55 – Remediation of Land;*
- *State Environmental Planning Policy (Koala Habitat Protection) 2019;*
- *Narrabri Local Environmental Plan 2012;*
- *Narrabri Development Control Plan 1993;*
- *New England North West Regional Plan 2036; and*
- *New England North West Strategic Land Use Plan 2012.*

4.1 Environmental Protection and Biodiversity Conservation Act 1999

Consideration of the EPBC Act 1999 revealed that impacts on Matters of National Environmental Significance (MNES) are unlikely to occur. No EPBC listed species, ecological communities, migratory species or important habitat for such entities was identified within the subject site. The assessment determined that impacts to Matters of National Environmental Significance (MNES) are unlikely; therefore, an EPBC referral to the Commonwealth Minister for the Environment is not recommended.

Due to a general lack of natural landscape or habitat features, it is unlikely that the site contains important habitat for any EPBC listed biota. It is unlikely that any future development would require referral to the Commonwealth Department of the Environment and Energy for consideration pursuant to the EPBC Act.

4.2 Environmental Planning and Assessment Act 1979

The proposal, as with all development applications, is subject to the provisions of the Environmental Planning and Assessment Act 1979 (EP&A Act). Section 4.15(1) of the EP&A Act, 1979 provides criteria which a consent authority is to take into consideration, where relevant, when considering a DA. An assessment of the subject DA, in accordance with the relevant matters prescribed under Section 4.15(1), is provided within this SEE.

It is noted, pursuant to Section 4.46 of the EP&A Act 1979, the proposed development does not trigger integrated development.

4.3 Biodiversity Conservation Act

The Biodiversity Conservation Act 2016 (BC Act 2016) aims to maintain a healthy, productive and resilient environment for the greatest well-being of the community, now and into the future, consistent with the principles of ecologically sustainable development. To achieve its goals, the BC Act 2016 governs endangered species and communities and provides a framework for a Biodiversity Offset Scheme.

Desktop research was undertaken by SLR in accordance with Section 7.3 of the BC Act 2016 to determine the potential impacts of the proposed development on any threatened species or communities which are listed within the Act.

No threatened ecological communities or any listed flora or fauna were identified on site with the proposed development unlikely to cause any significant impact to any threatened species, populations or communities listed within the BC Act. Entry into the NSW BOS is not triggered by the proposed development. Further details of the SLR desktop research is provided in Section 5.4 of this Report.

4.4 Local Land Services Act 2013

60H Category 1-exempt land mapping

(1) Land is to be designated as category 1-exempt land if the Environment Agency Head reasonably believes that—

(a) the land was cleared of native vegetation as at 1 January 1990, or

(b) the land was lawfully cleared of native vegetation between 1 January 1990 and the commencement of this Part.

(2) Land is to be designated as category 1-exempt land if the Environment Agency Head reasonably believes that—

(a) the land contains low conservation value grasslands, or

(b) the land contains native vegetation that was identified as regrowth in a property vegetation plan referred to in section 9 (2) (b) of the Native Vegetation Act 2003, or

(c) the land is of a kind prescribed by the regulations as category 1-exempt land.

(3) Land is to be designated as category 1-exempt land if the land is biodiversity certified under Part 8 of the Biodiversity Conservation Act 2016 or under any Act repealed by that Act.

(4) However—

(a) land described in subsection (1) or (2) is not to be designated as category 1-exempt land if section 60I (2) requires the land to be designated as category 2-regulated land, and

(b) land described in subsection (1) (a) is not to be designated as category 1-exempt land if the land was unlawfully cleared of native vegetation after 1 January 1990, and

(c) land described in subsection (2) (a) is not to be designated as category 1-exempt land if the land was unlawfully cleared of native vegetation after 1 January 1990.

(5) The regulations may make provision for the purposes of determining whether grasslands are low conservation value grasslands for the purposes of this Division.

The proposed development area in the subject site of Lot 191 of DP757125 has been under regular cropping, grazing and pasture improvement since prior to 1990. Therefore, in accordance with the Local Land Services Act 2013, the full project development area can be considered as category 1-exempt land.

4.5 State Environmental Planning Policy (State and Regional Development) 2011

Regional development classification applies to both local and designated development applications exceeding certain criteria defined by Schedule 7 of the SEPP SRD.

5 Private infrastructure and community facilities over $5 million

Development that has a capital investment value of more than $5 million for any of the following purposes:

> *(a) air transport facilities, electricity generating works, port facilities, rail infrastructure facilities, road infrastructure facilities, sewerage systems, telecommunications facilities, waste or resource management facilities, water supply systems, or wharf or boating facilities,*
>
> *(b) affordable housing, child care centres, community facilities, correctional centres, educational establishments, group homes, health services facilities or places of public worship.*

The proposed electricity generating works is considered to be private infrastructure with a CIV greater than $5 million (refer to Appendix H) and as a result the development is deemed to be regionally significant development and the application will be referred to the Regional Planning Panel (RPP) for determination.

4.6 State Environmental Planning Policy (Infrastructure) 2007

Division 4 Electricity generating works or solar energy systems

One of the aims of SEPP (Infrastructure) 2007 is to provide greater flexibility in the location of infrastructure and service facilities. This SEPP identifies certain electricity generating works that are permitted with consent, without consent, as exempt development, as complying development and works that are prohibited.

In this Division—

> ***electricity generating works*** *has the same meaning as it has in the Standard Instrument.*
>
> *Note—*
>
> *The term electricity generating works is defined by the Standard Instrument as follows—*
>
> > ***electricity generating works*** *means a building or place used for the purpose of—*
> >
> > *(a) making or generating electricity, or*
> >
> > *(b) electricity storage.*

Clause 34 Development permitted with consent

(1) Development for the purpose of electricity generating works may be carried out by any person with

consent on the following land—

(a) in the case of electricity generating works comprising a building or place used for the purpose of making or generating electricity using waves, tides or aquatic thermal as the relevant fuel source—on any land,

(b) in any other case—any land in a prescribed rural, industrial or special use zone.

Definition:

prescribed rural, industrial or special use zone means any of the following land use zones or a land use zone that is equivalent to any of those zones—

*(a) **RU1 Primary Production**,*

(b) RU2 Rural Landscape,

(c) RU3 Forestry,

(d) RU4 Primary Production Small Lots,

(e) IN1 General Industrial,

(f) IN2 Light Industrial,

(g) IN3 Heavy Industrial,

(h) IN4 Working Waterfront,

(i) SP1 Special Activities,

(j) SP2 Infrastructure.

The Development Area is zoned RU1 Primary Production, the proposed solar PV project is therefore permitted with consent under Clause 34 of SEPP (Infrastructure) 2007.

Clause 45 Determination of development applications—other development

The proposed development will require works to connect to the overhead electricity power lines and as a result constitutes works within 5m of powerlines. Due to the location and nature of the proposed development referral to the electricity supply authority will be required during the assessment period.

Clause 104 - Traffic-generating development

The proposed development will not generate greater than 50 vehicle movements per hour and as such does not trigger traffic generating development under the SEPP. Referral under this clause to Transport for NSW is therefore not required.

4.7 State Environmental Planning Policy No 55 Remediation of Land

This SEPP requires the consent authority to consider the potential contamination status of the land prior to approving a development.

A search of the NSW EPA's 'List of NSW contaminated sites notified to the EPA' and 'POEO Public Register' has been undertaken which revealed no contaminated sites listed on or in the vicinity of the site. A total of 4 licenses have been issued under the Protection of the Environment Operations Act in Wee Waa, however, none are noted within proximity to the site. Environmental protection licenses issued within Wee Waa include:

- Licence 11684 – Cotton Seed Distributors Ltd – CSD Delinting Plant "Shenstone", Culgoora Road, Wee Waa NSW 2388 – No longer in force;
- Licence 10858 – Naomi Cotton Limited – Myall Vale Cotton Gin Spring Plains Road, Wee Waa NSW 2388 – Surrendered;
- Licence 7192 – Hunter and New England Area Health Service – Alma Street, Wee Waa, NSW 2388 – Application Approved; and
- Licence 10862 – Naomi Cotton Limited – Yarraman Cotton Gin Burren Junction Road, Wee Waa NSW 2388 – Issued.

The proposed development is not considered to be sensitive in nature and as a result is considered to be appropriate for the site in its current state in accordance with SEPP55.

4.8 State Environmental Planning Policy (Koala Habitat Protection) 2020

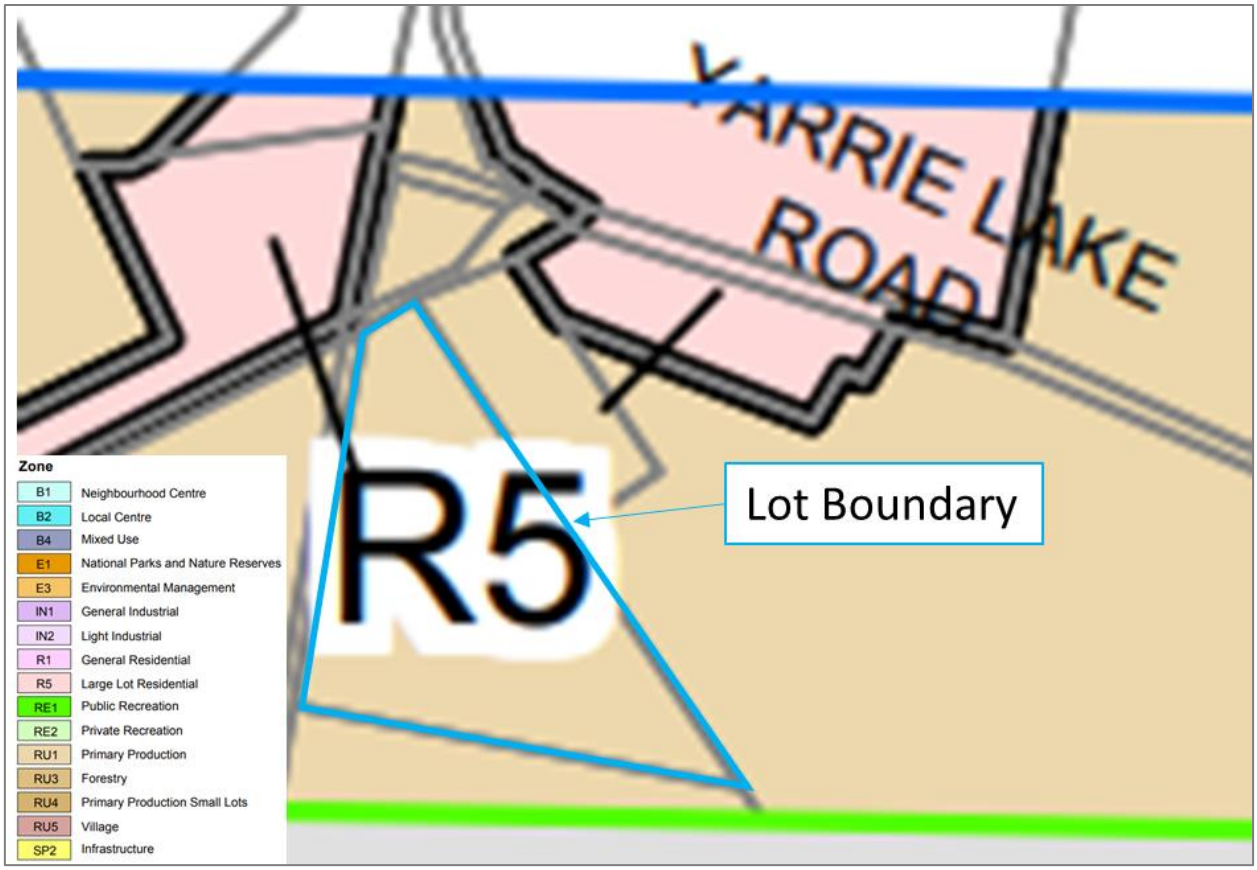
This Policy aims to encourage the proper conservation and management of areas of natural vegetation that provide habitat for koalas through the identification of core koala habitat and by requiring the preparation of plans of management before development consent can be granted in relation to areas of core koala habitat. The SEPP is relevant to the proposal noting that Narrabri is a listed LGA in Schedule 1 and the proposal involves an area more than 1 hectare in size.

Noting that the site is devoid of trees and woody vegetation, it is considered unlikely that the site contains potential koala habitat or core koala habitat. This is discussed further at Section 5.4 within this report.

4.9 Narrabri Local Environmental Plan 2012

The Development Area is zoned RU1 Primary Production under the Narrabri Local Environmental Plan 2012 (LEP 2012), see Figure 4.

Figure 4 Land Zone Extract Narrabri LEP 2012 (LZN_001)



The objectives and land use table of the RU1 Primary Production are as follows:

Zone RU1 Primary Production

1 Objectives of zone

- To encourage sustainable primary industry production by maintaining and enhancing the natural resource base.
- To encourage diversity in primary industry enterprises and systems appropriate for the area.
- To minimise the fragmentation and alienation of resource lands.
- To minimise conflict between land uses within this zone and land uses within adjoining zones.
- To allow for non-agricultural land uses that will not restrict the use of other land for agricultural purposes.

2 Permitted without consent

Building identification signs; Environmental protection works; Extensive agriculture; Farm buildings; Forestry; Home occupations; Intensive plant agriculture; Roads

3 Permitted with consent

Air transport facilities; Airstrips; Animal boarding or training establishments; Aquaculture; Bed and breakfast accommodation; Boat launching ramps; Boat sheds; Camping grounds; Cellar door premises; Cemeteries; Community facilities; Depots; Dual occupancies; Dwelling houses; Environmental facilities; Extractive industries; Farm stay accommodation; Flood mitigation works; Freight transport facilities; Helipads; Home businesses; Home industries; Information and education facilities; Intensive livestock agriculture; Landscaping material supplies; Open cut mining; Plant nurseries; Recreation areas; Recreation facilities (major); Recreation facilities (outdoor); Research stations; Roadside stalls; Rural industries; Rural workers' dwellings; Signage; Turf farming; Water recreation structures; Water supply systems

4 Prohibited

Any development not specified in item 2 or 3

LEP 2012 Definition:

electricity generating works means a building or place used for the purpose of—

(a) making or generating electricity, or

(b) electricity storage.

The proposed land use, defined as electricity generating works, is prohibited within the RU1 as *any other development not specified in item 2 or 3*. As a result, permissibility of the project will require an alternative approval pathway, noting the proposal is permissible under Clause 34 of SEPP (Infrastructure) 2007 as discussed in Section 4.6.

Clause 4.1 Minimum Subdivision Lot Size

The minimum lot size for subdivision across the investigation area is 100 hectares. Subdivision does not form part of the scope of works for the solar PV farm.

Clause 4.3 Height of Buildings

This clause has not been adopted under LEP 2012.

Clause 4.4 Floor Space Ratio

This clause has not been adopted under LEP 2012.

Clause 5.10 Heritage Conservation

The investigation area does not contain a listed heritage item nor are any listed heritage items located in proximity to the area. The area is not mapped as a heritage conservation area under the LEP 2012.

Clause 6.1 Earthworks

The objectives of this clause are:

(1) The objective of this clause is to ensure that earthworks for which development consent is required will not have a detrimental impact on environmental functions and processes, neighbouring uses, cultural or heritage items or features of the surrounding land.

The solar panels themselves retain the natural landform and only minor earthworks are required for the underground cabling and supporting infrastructure (access roads, stormwater management etc). The earthworks proposed will have minimal impact on surrounding lands and will be supported with appropriate sediment and erosion controls.

Clause 6.2 Flood Planning

The investigation area is not mapped within a flood prone land area under the LEP 2012. The Planning Certificate for the site does not conclude definitively if the site is flood prone. Notwithstanding, the nature of the will not increase the flood risk or alter any potential flood behaviour.

Clause 6.3 Airspace Operation

The objective of this clause is to provide for the effective and ongoing operation of the Narrabri Airport and to protect the community for undue risk from that operation. The site is located 150m south-east of a nearby private airstrip and 3.8km east of the Wee Waa Aerodrome. This clause has been duly considered, however, the site is not listed within the Obstacle Limitation Surface Map as per Clause 6.3 of the Narrabri LEP 2012. Aviation has been considered as part of the reflectivity report completed for the project (refer to **Appendix E**).

Clause 6.5 Essential Services

Provision of services relevant to the proposal, such as: water supply, stormwater drainage, and vehicular access suitable for the proposed development will be provided for the site.

In summary, the solar PV farm project is compliant with the relevant clauses and controls contained within NLEP 2012 with the exception of permissibility, which is overridden by SEPP Infrastructure.

4.10 Narrabri Development Control Plan 1993

The Narrabri Development Control Plan (DCP) 1993 applies to all land within the Narrabri Local Government Area (LGA), including the subject site. The project has been assessed against the Industrial Development Code and the Parking Code of the DCP 1993.

A full assessment against the relevant components of the DCP is included in table format at **Appendix C**.

4.11 New England North West Regional Plan

The New England North West Regional Plan 2036 (the Regional Plan) provides an overall strategic plan to manage development in the New England region.

The Regional Plan distinctly highlights the role of renewable energy in the growth of the New England region with the plan's visions outlining the need for the area to harness the solar and wind potential. Goal 1 – A strong and dynamic regional economy identifies renewable energy as a priority growth sector. Direction 5 of the Plan further calls for the promotion and growth of the renewable energy sector, specifically the solar sector through supporting and facilitating smaller-scale renewable solar projects.

Furthermore, the Plan outlines the future economic narrative for Narrabri Shire LGA. The Plan states that a priority for the Narrabri LGA is to improve electricity infrastructure to cater for the forecasted population growth. Direction 2.3 of the Regional Plan seeks to increase opportunities for renewable energy generations such as solar, with the Plan identifying 2 solar farms (120MW & 300MW) that were already being developed in Narrabri.

The proposed development on the subject site will align with the goals of the Regional Plan as it will provide an appropriately sized renewable energy project in a location with ready access to the electrical network which will support the regional development of Wee Waa and the larger Narrabri LGA and New England Region.

4.12 New England North West Strategic Land Use Plan 2012

The New England North West Land Use Strategy aims to guide future development and land use within the New England region for the next 20 years. The preparation of the strategy provides the basis for future planning decisions and provide certainty to the community whilst encouraging favourable development and the protection of the environment.

The New England region has been identified as one of six renewable energy precincts across NSW. Additionally, the Narrabri LGA has been marked to have excellent conditions for solar power farms due to high solar irradiation levels and a suitable average temperature range for photovoltaic systems.

5 Assessment of Planning Issues

The following is an assessment of the environmental effects of the proposed development as described in the preceding sections of this SEE. The assessment considers only those matters under Section 4.15(1) of the EP&A Act 1979 that are relevant to the proposal.

5.1 Compliance with Planning Instruments and Controls

Unless otherwise stated, the proposed development either complies with or is consistent with all relevant planning instruments and controls set out in Section 4 of this SEE, in that:

- The proposed development is permissible under SEPP Infrastructure in the RU1 Primary Production zone;
- The proposed Solar PV Farm is consistent with the relevant objectives of the RU1 zone, including that it will provide a sustainable rural land use whilst maintaining and enhancing the existing natural resource base;
- The proposed solar farm will have minimal to no impact on flora or fauna under the BC Act 2016;
- The development is classified as Regional Development under SEPP State and Regional Development and will therefore be determined by the RPP;
- The proposal complies with the requirements of SEPP Infrastructure and referral to the road authority will not be required as the proposal is not classified as traffic generating development; and
- The proposal is generally consistent with the objectives and relevant controls within Narrabri DCP 1993.

A detailed assessment of the proposed development against the relevant provisions of the DCP is provided in the table at **Appendix C**.

5.2 Traffic, Access, and Parking

Traffic

A Traffic Impact Assessment (TIA) has been undertaken by Intersect Traffic and is attached at **Appendix D**. The anticipated rates of traffic likely to be generated from the proposed development (both during construction and once operational) are discussed in the TIA.

The majority of traffic movements associated with the development will occur during the construction of the solar farm (approximate 6-month period) with the delivery of panels and prefabricated structural supports. Deliveries during construction works would be expected to be within rigid and articulated vehicles and the access road has been designed to safely accommodate these vehicles.

Traffic movements generated during operation would include a single, staff light vehicle movement associated with maintenance inspections and specific maintenance work (on an as needs basis) which would be short term and infrequent. Therefore, the on-site car parking is considered suitable for the construction phase of the development ensuring all vehicle movements to and from the site will be undertaken in a forward direction.

Peak hour construction traffic has been calculated with a predicted peak of 18 vehicle trips per hour consisting of 10 light vehicles, 3 roadwork vehicles, and 2 delivery vehicles. Based on the data collected from traffic surveys the surrounding road network has sufficient capacity to cater to the projected construction traffic with capacity to spare for future development in the area. It is noted that construction traffic is temporary in nature and will be managed through a future Construction Management Plan.

The TIA notes the existing condition of the surrounding road network in particular Kamilaroi Highway and Yarrie Lake Road. At the time of assessment, the aforementioned road networks are considered suitable to cater for the short-term heavy vehicle increase as required during the construction phase. It is considered the local and state road network would be suitable to cater for the expected construction traffic associated with the development.

In summary, the additional traffic anticipated from the proposal has been assigned to the road network where it was found that the surrounding road network (both now and in 10 years) is capable of accommodating the expected additional traffic from the proposal.

Access and Internal Circulation

The proposed vehicular access to the site will be provided via the existing gravel access to the site off Yarrie Lake Road approximately 1.4 km south of Culgoora Road. Deliveries to the site will use the identified delivery road shown on Figure 1 of the TIA, being via Yarrie Lake Road to Narrabri and then the Kamilaroi Highway from the south from Sydney and Newcastle or from the north from Brisbane.

During the construction phase of the development the proposed site access road has an unsealed pavement width in excess of 7 metres wide which allows two heavy vehicles to pass each other at normal speed. The TIA demonstrates that Yarrie Lake Road has a sealed pavement at a minimum of 7 metres wide and therefore complies with Austroads Standards for Rural Roads with more than 500 vtph. Therefore, it is widely considered the proposed transportation route to the site is suitable to carry heavy vehicles and is suitable to cater for the construction traffic from the Solar Farm construction.

Parking

The Narrabri Shire DCP 1993 sets out the relevant on-site car parking rates for land uses within the Wee Waa area.. No gross floor area is proposed as part of the development.

As no DCP rate is provided specifically for a solar farm, adopting the ‘factories’ rates for this project, the relevant on-site car parking provision during the operation is 1.3 spaces per 100m² GFA.

As no buildings are proposed on site on the site and only 1 employee engaged in the day to day operation of the solar farm, the development is not required to provide any on-site parking space under the DCP calculations. However, with a single maintenance vehicle visiting the site between 1 to 5 times per fortnight, at least one vehicle car park within the development is considered to be satisfactory.

Consideration of construction parking demand has also been considered with potential for up to 30 employees projected. A total of 10 car parks are proposed with additional space afforded for potential onsite overflow if required. The car parking area is to comply with the requirements of Australian Standard AS2890.1-2004 Parking Facilities – Part 1 Off-street car parking with parking bay sizes 2.4 m x 5.4 m and aisle widths of 5.8 metres.

5.3 Stormwater, Soil and Erosion Control

The proposed stormwater management system has been designed to reduce post-development flows to align with the pre-development conditions on the site. To achieve this, a detention basin is proposed at the south-east corner of the development area. This basin provides a holding volume of 154m^3 and is supported with a low flow pipe and overflow weir. The stormwater management system proposed has been designed in accordance with best practice as Narrabri Shire Council's Development Plan does not provide specific guidance on developments of this nature. Therefore, DRB Consulting Engineers proposed to '*Limit the Post-Development flow rates from the proposed development to the Pre Development flow rates for all storm events up to and including the 1 in 100 year storm event*'.

The stormwater drainage strategy for the development can be summarised as:

> *(i) All impervious runoff from the proposed photovoltaic arrays will discharge to the existing ground surface where the natural flow regime will be maintained.*
>
> *(ii) Runoff from the proposed gravel/hardstand area catchment will be conveyed via sheet flow and the proposed roadside swale used as an above ground onsite stormwater detention basin.*
>
> *(iii) Discharge from the above ground onsite stormwater detention basing will be limited to the pre-development flow rates*

In accordance with the stormwater drainage philosophy proposed for the site, the Wee Waa Solar Farm will limit the Post-Development peak flows to Pre-Development flow rates for the 1 EY, 10% AEP and 1% AEP events.

Detailed Stormwater Plans and Report including DRAINS modelling have been prepared DRB Consulting Engineers provided at **Appendix B**.

5.4 Flora and Fauna

SLR undertook a desktop research with reference to the EP&A Act 1979 as well as the BC Act 2016 and the EPBC Act 1999.

As noted throughout this report, the site is mainly cleared of vegetation due to previous agricultural development. Due to the extensive land clearing for agricultural purposes (cropping), remnant native ground cover on the site is negligible. Following the establishment of the proposed solar farm, grasslands are expected to be re-established on site, managing dust generation and encouraging continued agricultural activities through livestock grazing. Weed management and control will be included as part of the standard operation procedures of the facility.

The proposed site is not within or in close proximity to any mapped Areas of Outstanding Biodiversity Value and it is therefore, not expected that any EPBC listed species, ecological communities, migratory species or important habitat for such entities would be identified within the Development Area.

The following historical aerial images reflect clearing of native vegetation consistent with a land management activity lawfully undertaken both before and after the commencement of the Act (1 January 1990). The images reflect regular furrows resulting in a concentric square pattern emphasizing ploughing and cropping has been undertaken.

It is considered this evidence supports Clause 52 of the Land Management (Native Vegetation) Code 2018 therefore the proposed development falls under the designation of category 1– Exempt (Local Land Services Act 2013) thus excluding the need for a Biodiversity Development Assessment Report (BDAR) for this proposed development.

There is the capability to review historic images from 1985, however, the quality does not demonstrate evidence of what is on site. It is assumed due to the history that the proposed development area in the subject site of Lot 191 of DP757125 has been under regular cropping, grazing and pasture improvement since prior to 1990. Therefore, in accordance with the Local Land Services Act 2013, the full project development area can be considered as category 1-exempt land.

Photo 1 Historic Aerial Photo: 2012 (Source: Google Earth)

Photo 2 Historic Aerial Photo: 2013 (Source: Google Earth)

Photo 3 Historic Aerial Photo: 2015 (Source: Google Earth)

Photo 4 Historic Aerial Photo: 2018 (Source: Google Earth)

Photo 5 Historic Aerial Photo: 2020 (Source: Google Earth)

Photo 6 Current Site Photo (Source: SLR)

As seen in the historic images above, the site is mainly cleared of vegetation due to previous agricultural development. Due to the extensive land clearing for agricultural purposes (cropping), remnant native ground cover on the site is negligible. The images reflect regular furrows emphasizing ploughing and cropping has been undertaken. Therefore, it is considered that there is no need for a Flora and Fauna assessment or a Biodiversity Development Assessment Report (BDAR) for this proposed development.

5.5 Noise

A Noise Assessment (NA) undertaken by Muller Acoustic Consultants measured and modelled the potential noise generation for the operation (both during construction and once operational) including sleep disturbance noise emissions (refer to **Appendix G**). The report concludes that based on the Noise Assessment results, there are no noise related issues which would prevent approval of the proposed project.

Operational Noise

The results of the NA demonstrate that emissions from the project would satisfy the relevant Project Noise Trigger Levels (PNTL) at all assessed receivers for all assessment periods once the noise controls are implemented. Furthermore, sleep disturbance is not anticipated, as emissions from impact noise are predicted to remain below the EPA screening criterion for sleep disturbance and awakenings.

Based on the NA results, there are no noise related issues which would prevent the approval of the project. The results of the assessment shows compliance with the relevant operational and road noise criteria. Accordingly, no additional ameliorative measures will be required.

Construction Noise

Modelled noise emissions from all four project construction activities identify that relevant noise management levels may be exceeded at a number of receiver locations adjacent to the site. Hence, noise management measures as provided in the enclosed Noise Assessment (refer to **Appendix G**) are to be considered for implementation to reduce potential impacts on surrounding receivers during construction activities. Road noise emissions are predicted to satisfy the relevant Road Noise Policy (RNP) criteria at all receivers along the proposed transportation route. Vibration impacts from the proposed works are considered to be negligible.

Construction noise mitigation measures recommended for consideration include:

- *A construction noise management protocol to minimise noise emissions, manage out of hours (minor) works to be inaudible, and to respond to potential concerns from the community;*
- *Where possible use localised mobile screens or construction hoarding around piling rig/plant to act as barriers between construction works and receivers, particularly where equipment is near the site boundary and/or a residential receiver including areas in constant or regular use (e.g., unloading and laydown areas);*
- *Operating plant in a conservative manner (no over-revving), shutdown when not in use, and be parked/started at farthest point from relevant assessment locations;*
- *Selection of the quietest suitable machinery available for each activity;*
- *Minimise noisy plant/machinery working simultaneously where practicable;*
- *Minimise impact noise wherever possible;*
- *Utilise a broadband reverse alarm in lieu of the traditional high frequency type reverse alarm;*
- *Provide toolbox meetings, training and education to drivers and contractors visiting the site during construction so they are aware of the location of noise sensitive receivers and to be cognisant of any noise generating activities;*
- *Signage is to be placed at the front entrance advising truck drivers of their requirement to minimise noise both on and off-site; and*
- *Utilise project related community consultation forums to notify residences within proximity of the site with project progress, proposed/upcoming potentially noise generating works, its duration and nature and complaint procedure.*

5.6 Landscape and Visual Impact

Visual Impact

It is relevant to consider the visual impact of the proposal given the existing rural landscape character of the area and location of a number of neighbouring properties within 1km radius of the site. SLR Consulting has undertaken a Visual Analysis (VA) to assess the potential visual amenity changes which may occur as a result of the proposed development, see **Appendix F**.

Based on the appraisal and findings of the Visual Analysis, it can be considered the proposed solar farm would have a 'minor' visual impact rating on the existing landscape character and values of the site and its local context. Although the subject site is a relatively short distance from Yarrie Lake Road and Wee Waa town centre, views of the existing site from public viewpoints are very limited due to the presence of obstructions such as topographic features, vegetation and built elements.

The views of the site from public viewpoints were from the adjacent unsealed access road, Yarrie Lake Road and Culgoora Road. Due to the scale of the solar farm in relation to the overall landscape surrounding the site, the degree of change is considered to be relatively low.

Given the distance of the site from notable public vantage points, the visual impacts are relatively low. The existing vegetation along the site boundaries particularly to the north and east, currently screen the site from almost all views from surrounding roads and public locations and thus it is considered that no additional landscaping is required to be implemented on the site. The Visual Analysis advises that given the limited number of users and infrequent number of access areas, the site location, surrounding vegetation and proposed development would suggest that the solar farm would not require any mitigation measures to lessen these already minimal impacts.

5.7 Glare Analysis

SLR Consulting have prepared a Reflective Glare Assessment, refer to **Appendix E** and conclusion of findings below.

Aviation-Related Potential Glare

Quantitative analysis using the FAA-SGHAT software tool has shown that there will be nil glare from the Project at Wee Waa Aerodrome and the nearby Private Airstrip with the solar array in normal tracking mode, i.e., panels tilting ±60°.

There is potential for glare on Private Airstrip Runway 06 if panels need to be left at a near horizontal or slightly westwards fixed tilt angle, e.g., during construction, back-tracking mode, etc. Leaving the solar array with a slight eastwards fixed tilt angle (say 15°) for the 6-month period September to March or instituting an Airstrip Management Agreement with the Private Airstrip Landowner would eliminate this occurrence.

Motorist, Rail Traffic and Residential Glare

There will be nil glare from the Project in relation to road traffic and rail traffic disability glare.

Similarly, there will be minimal risk for nuisance glare from the Project to surrounding residential receivers, even when panels are left horizontal or tilted slightly east or west, given the significant vegetation and trees surrounding the site, which effectively would screen the facility from surrounding ground level receivers.

5.8 Heritage

5.8.1 Indigenous Cultural Heritage

SLR undertook an AHIMS basic search for the site to identify aboriginal heritage at the site and found that no known Aboriginal sites or Aboriginal Places are recorded on AHIMS in the project area. There are no landscape features located on site that would indicate the presence of Aboriginal objects. Further, the lack of features relating to Aboriginal occupation in the proposed project area, makes it unlikely Aboriginal objects would be present.

5.8.2 European Heritage

The site does not contain any listed heritage items under Schedule 5 of LEP 2010, nor is it located within a heritage conservation area. No other heritage items are located in proximity to the site.

5.9 Social and Economic Impacts

The proposed establishment of a solar farm on the site is anticipated to have an ongoing positive social and economic impact on the local Wee Waa area and the broader community.

A review of existing renewable projects along with NSW State Government research reveals support for renewable energy projects is generally favourable within the North West Region (including the broader Wee Waa region). This research revealed:

- 94 per cent of respondents supported using renewables to generate electricity in NSW;
- 81 per cent believed NSW should increase the use of renewables over the next five years; and
- 95 per cent supported the use of solar farms in NSW, 92 per cent in their local region, and 84 per cent within 1–2 kilometres of where they lived.

The most common perceived advantages of renewables included environmental benefits and lower cost of electricity. The most common perceived disadvantages included higher cost and concerns about efficiency and reliability. In the North West, 74 per cent were prepared to use renewables 'provided I don't have to pay more for my electricity' and 22 per cent were prepared to pay more to support them.

The proposed solar farm is predicted to improve intergenerational equity through its beneficial contribution to Australia's Climate Change and greenhouse gas minimisation efforts, specifically:

- Directly contribute to helping Australia in meeting the Renewable Energy Target;
- Reduce greenhouse gas emissions required to meet Australia's international climate conditions; and
- Assist in the transition towards cleaner electricity generation.

This is achieved by the potential to generate up to 5MW of electricity potentially powering 2,000 homes during daylight hours whilst reducing CO2 emissions by around 200,000 tonnes over the lifespan of the project.

Ongoing communication with the community has been highlighted as an imperative to maximise social benefits of the proposed development. Further recommendations include the following:

- Liaison with local industry representatives to maximise the use of local contractors, manufacturing facilities, materials;
- Establish visual screening early to minimise the visual impact on the solar farm. Visual screening should be done in consultation with closest property holders in accordance with Visual Analysis;
- Establish good relations with people living in the vicinity of the proposal site at the beginning of the proposal and maintain; and
- Implement a community consultation plan to manage impacts to community stakeholders, including but not limited to:
  - mitigation measures to reduce potential construction impacts;
  - protocols to keep the community updated about the progress of the proposal and proposal benefits;
  - protocols to inform relevant stakeholders of potential impacts (haulage, noise, air quality etc.);
  - protocols to respond to any complaints received;
  - information on how potential customers can access the renewable energy source; and
  - a process to monitor the predicted social impacts and amend mitigation and management measures as required.

In summary, the proposed establishment of a Solar PV Farm on the site is anticipated to have an ongoing positive social and economic impact on the local area and the broader Wee Waa community. Overall, it is considered that the development:

- Is consistent with the regulatory and business development framework, including state government legislation and the Narrabri Shire Council strategic plans;
- Will have positive impacts intergenerational equity, with the provision of cleaner energy in the future;
- Supports Commonwealth and NSW climate change commitments;
- Will generate enough clean, renewable energy for about 2,000 homes;
- Is an appropriate development in relation to the projected changes to population and demographics in the region;
- Is unlikely to have significant negative social impacts to the locality and region; and
- Would be a benefit contributing to the overall community sustainability of the Wee Waa community.

6 Conclusion

The proposed solar PV electrical generation operation located at 3843 Yarrie Lake Road, Wee Waa NSW 2388 will provide electrical power to support the needs of Wee Waa and the surrounding agricultural operations, along with rural towns and villages. With the growth of the Wee Waa area, the new electrical generator proposed under this DA will greatly assist in meeting the growing electrical demands required to support that growth.

The site has been chosen for its suitability in terms of land use zoning, relatively flat topography, limited trees and vegetation and access to high-capacity transmission lines.

The proposed solar PV electrical generation plant is consistent with the objectives of the RU1 Primary Production zone as it will provide a compatible land use which minimises land use conflict in the area whilst contributing to the land use diversity of the area. The proposal will not increase demand for public services or facilities and will have minimal impact on native vegetation and wildlife corridors or on waterways, wetlands or riparian zones. The development is compliant with the relevant LEP clauses, presenting no variations to any development standard. The proposal is generally compliant with the requirements of Narrabri DCP 1993.

The design of the development incorporates appropriate stormwater management, respects the natural environment, and minimises potential amenity impacts on neighbouring properties.

Due to the use of high-quality solar tracking systems and site buffer distances to surrounding receivers and transport networks, potential for glare impacts on the surrounding area is considered to be negligible.

This SEE has addressed the potential impacts arising from the proposal on surrounding properties including traffic, access and parking, noise, visual amenity, ecological, and waste and water management. Where necessary, mitigation measures are proposed to minimise these potential impacts and reduce potential risk associated with the development.

Given the merit of the design and the absence of any significant adverse environmental impacts or planning issues, the DA is considered to be in the public's interest and worthy of Council's support.

APPENDIX A

DEVELOPMENT PLANS

Balance Power and Energy Pty Ltd

APPENDIX B

STORMWATER MANAGEMENT PLAN

DRB Consulting Engineers Pty Ltd

APPENDIX C

COMPLIANCE TABLE

SLR Consulting Australia Pty Ltd

Table 1 NARRABRI DCP 1993 – INDUSTRIAL DEVELOPMENT

CONTROL	REQUIREMENT	COMMENT	COMPLIANCE
INDUSTRIAL DEVELOPMENT CODE			
4.3 OPEN STORAGE AND WORK AREAS	(a) Where any work or storage of materials is proposed to be undertaken outside the confines of a building, full details of hose parts of the site to be used, and of the materials to be stored, are to be provided with the application.	N/A, no open work or storage areas are proposed.	N/A
	(b) Approved open work and storage areas are to be located at the rear of industrial developments and screened from view by the use of landscaping and screen fencing. Such fencing is to be constructed of masonry materials or pre-coloured metal cladding, having a minimum height of 2.0 metres.	N/A, no open work or storage areas are proposed.	N/A
4.4 SECURITY FENCING	Security fencing should be visually unobtrusive and, wherever practicable, should be located behind the landscape setback area.	A 2.3m high security fence will be located around the site area. It will be visually unobtrusive in design.	Y
4.6.1 SETBACKS	A front building setback of eight (8) metres from the property boundary should be provided. This eight (8) metre front setback is to be intensively landscaped.	A greater than 8m front setback area is proposed from the existing fence onsite to the proposed security fence.	Y
	Side and rear setbacks will be determined by the requirements of Ordinance 70 under the Local Government Act, 1919.	A 10m rear setback is proposed and appropriate side setbacks are proposed, with no development in proximity to the sides of the site.	Y
4.7 LANDSCAPED TREATMENT	(a) To improve the visual quality and amenity of industrial development though the effective landscape treatment of industrial sites;	The site is vacant of vegetation, existing vegetation screens the site from the viewpoints selected in the Visual Analysis at **Appendix F**. Due to the proposed	Y

	(b) To provide a natural buffer between industrial development and adjoining or adjacent non-industrial land uses whilst enhancing the general streetscape and amenity of Narrabri's industrial areas.	development, limited landscaping is proposed. The proposed development is void of natural vegetation. The VIA at **Appendix F** state that the surrounding area is characterised by open, flat, rural land and views of the site are unavailable from Yarrie Lake Road.	Y
4.7.1 AREAS REQUIRED TO BE LANDSCAPED	(a) The front building setback; (b) Side and rear setbacks where visible from a public place or an adjoining residential area; (c) Areas adjacent to building entrances and pedestrian access points; (d) The perimeter of all approved open storage areas and staff/visitor parking areas. (See also Section 4.3 of this Code). Large car parking areas should be interspersed with internal planting bays to reduce the visual impact of larges areas of paved surfaces	N/A – As above.	Y
4.7.2 LANDSCAPE GUIDELINES	(a) Landscaped areas are to be an integral part of the site, and may, due to the size and scale of development proposed, require the incorporation of mounding to add visual relief to the development. (b) Landscaped areas should be planted and maintained with suitable trees, shrubs and ground cover in accordance with a landscape plan, which must be submitted for approval prior to the release of building plans.	No landscaping is proposed. The VIA states that analysis from each of the 2 viewpoints, the height and nature of the solar farm along with the distances from the site will mean that it will have limited visibility within the landscape and from public vantage points. Given the minor visual change to the rural landscape especially from public viewpoints, no mitigation measures are considered necessary.	Y

	(c) Landscaping should be completed in accordance with the approved landscape plan prior to the occupation of the development and shall be suitably maintained throughout the life of the development. (d) Every effort should be made to preserve existing trees on proposed development sites. All existing trees should be shown on the plan submitted with the application, and those which are required to be removed should be clearly highlighted. (e) Trees shall be planted on the Council footpath, 900mm in from the kerb, along the entire frontage of the property, at intervals of approximately 10 metres (making allowance for the location of the driveways). The tree types that can be used are included in Annexure 1 and shall be approved by the Shire Engineer.		
F.4.8.1 ACCESS, PARKING AND OFF - STREET LOADING/ UNLOADING FACILITIES – GENERAL REQUIREMENTS	(a) The design, layout and construction of access, parking and service areas for all industrial development shall be in accordance with the requirements of the Narrabri Shire Parking Code. (b) Council is required to consult the NSW Traffic Authority to obtain advice on traffic and safety aspects for major traffic generating developments. This consultation is a statutory requirement prescribed by State Environmental Planning Policy No. 11.	As above, due to the nature of the development, no prescribed parking rate is applicable. However, the DCP allows for merit-based assessment of parking needs. A Traffic Impact Assessment is provided at **Appendix D** detailing site access. The proposed development is not considered a traffic generating development.	Y Y

	Additional information about the consultation procedure can be obtained by contacting Council's Environmental Services Section. c) Industrial development should be designed to ensure that all vehicles can enter and leave the site in a forward direction. Details of vehicle size and manoeuvring areas should be submitted with the development application to enable an adequate assessment of these aspects. (d) Individual parking bays should be clearly delineated and have minimum dimensions of 2.6 metres x 5.5 metres, except where it is adjacent to a solid obstruction when a 3.0 metre width should be provided.	The proposed access and turning circle proposed for the site will allow all vehicles to enter and exit the site in a forward direction. The proposed parking bay for the site will be constructed according to parking requirements.	Y Y
4.8.2 ACCESS AND ROAD CONSTRUCTION REQUIREMENTS	(a) The following road works are generally required in conjunction with industrial development: -Industrial type vehicular gutter crossings; - Construction of kerb, gutter and road shoulder between the lip of the gutter and the edge of the existing bitumen seal, footway formation and paving and associated road drainage for the fill frontage of the site. (b) Access drives to have a minimum width of six (6) metres; Note – major traffic generating developments may require a greater access width divided at the property line.	Vehicular access to the site will be via the existing access road off Yarrie Lake Road approximately 3 km south-east of Wee Waa. The proposed access driveway width at the combined entry/ exit gate is proposed to be 12.5 metres wide to accommodate swept turning paths during the construction stage. It is considered this is an adequate width for the proposed development type.	Y Y

	(c) The location of access driveways at intersections shall be in accordance with the Traffic Authority of NSW 'Policy, Guidelines and Procedures for Traffic Generating Developments', however the minimum distance shall be 6.0 metres from the intersecting boundaries; (d) Access driveways across the footpath should hard sealed, consisting of either concrete, two coat bitumen seal, asphaltic concrete, paving blocks or other approved material. (e) All driveways, parking areas, loading bays and vehicular turning areas are to be constructed with a base course of adequate depth to suite design traffic, and are to be sealed with either bitumen asphaltic concrete, concrete or interlocking pavers. Full details should be indicated on the plans submitted with The Development Application.	The proposed development is not considered as 'traffic generating development.' Vehicular access to the site will be via the existing access road off Yarrie Lake Road. No access driveway proposed across a footpath.	Y Y
4.8.3 PARKING REQUIREMENTS	On-site car parking should be provided in accordance with Council's adopted Car Parking Code, copies of which are available from Council.	As above, due to the nature of the development, no prescribed parking rate is applicable. However, the DCP allows for merit-based assessment of parking needs.	Y
4.10 SERVICES AND DRAINAGE	(a) To ensure that services provided are adequate for the scale of the development proposed. (b) To ensure adequate drainage facilities are provided within the site to collect and carry stormwater to external drainage systems; (c) To reduce the hazard of flooding and the diversion or concentration of water onto adjoining properties.	A Stormwater Management Plan has been provided at **Appendix B** detailing the stormwater drainage strategy during both pre-development and post-development.	Y

4.10.3 TRADE WASTE	A Trade Waste Application will be required where liquid wastes other than sewerage are to be discharged to Council's sewerage system. Council levees a charge for the disposal of the Trade Waste to the sewer based on the volume and strength of the discharge.	No liquid waste is expected to be produced. A Waste Management Plan is provided at **Appendix I**.	Y
4.10.4 DRAINAGE	(a) Stormwater runoff from roofs and paved areas is to be collected and disposed of to the street drainage or direct to Council's underground system. (b) The Council will not permit the erection of buildings over drainage easements under its control. (c) A contribution towards Downstream Drainage may be required based on the increased run-off generated by the development.	A Stormwater Management Plan has been provided at **Appendix B** detailing the stormwater drainage strategy during both pre-development and post-development.	Y
PARKING CODE NO.1 1993			
CONSTRUCTION	1. All parking areas are to be paved, and the manoeuvring and parking spaces are to be clearly delineated. The parking area is to be drained to Council's stormwater network. 2. Upon an application being lodged, the paving required may be waived, if the applicant can demonstrate that the parking turnover will not adversely affect the proposed pavement.	The provided parking and manoeuvring area will be paved. Further details are provided in the Traffic Impact assessment located at **Appendix D**.	Y
LANDSCAPING	It is suggested that carparking areas be landscaped, especially with shade trees.	N/A - Due to the nature of the development, and the lack of requirement for car parking spaces, the proposed car parking landscaping control is not considered necessary.	Y

PARKING REQUIREMENTS	Parking Rates: Factories: - 1.3 spaces per 100m2 GFA	N/A - As above, due to the nature of the development, no prescribed parking rate is applicable. However, the DCP allows for merit-based assessment of parking needs. As there is no building proposed for the development, no on-site parking is required to be provided under DCP requirements. However, as indicated in the Traffic Impact Assessment located at **Appendix D**, sufficient on-site parking will be provided for construction staff during construction, and the one maintenance vehicle during operation.	Y

APPENDIX D

TRAFFIC IMPACT ASSESSMENT

Intersect Traffic Pty Ltd

APPENDIX E

REFLECTIVE GLARE ASSESSMENT

SLR Consulting Australia Pty Ltd

APPENDIX F

VISUAL ANALYSIS

SLR Consulting Australia Pty Ltd

APPENDIX G

NOISE ASSESSMENT

Muller Acoustic Consulting Pty Ltd

APPENDIX H

QUANTITY SURVEYOR REPORT

RPS Australia East Pty Ltd

APPENDIX I

WASTE MANAGEMENT PLAN

SLR Consulting Australia Pty Ltd

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