2021

Proposed micro solar farm

47R Wellington Road, Dubbo, NSW

Statement of Environmental Effects

Prepared for Dubbo Solar Project Pty Ltd

MJM

CONSULTING ENGINEERS

CIVIL • STRUCTURAL • BUILDING DESIGN • PLANNING

REPORT REFERENCE [210066]

Document Verification Schedule

MJM CONSULTING ENGINEERS
CIVIL • STRUCTURAL • BUILDING DESIGN • PLANNING

Project

Proposed micro solar farm

47R Wellington Road, Dubbo, NSW

Revision	Date	Prepared By		Checked By		Approved By	
Draft	11.02.21	Name	Jenna Amos	Name	Jenna Amos	Name	Jenna Amos
Draft 1.2	19.03.21	Name	Jenna Amos	Name	Michael McFeeters	Name	Michael McFeeters
Draft 1.3	24.03.21	Name	Jenna Amos	Name	Michael McFeeters	Name	Michael McFeeters
Final	26.03.21	Name	Jenna Amos	Name	Michael McFeeters	Name	Michael McFeeters

MJM CONSULTING ENGINEERS

Wagga Wagga
Level 1, 37 Johnston St
(02) 6921 8333

Griffith
Level 1, 130 Banna Ave
(02) 6962 9922

Email **admin@mjm-solutions.com**
Web **www.mjm-solutions.com**

CONTENTS

Tables

Figures

1 EXECUTIVE SUMMARY

The proposal is for development of a micro solar farm at 47R Wellington Road, Dubbo, a site which is zoned RU2 Rural Landscape and is currently utilised for agricultural purposes. Construction of the solar farm would be undertaken over a 6 month period with the site to operate over a 31-year lease period from the beginning of construction.

Although Electricity generating works are prohibited in the RU2 Rural Landscape zone under the Dubbo Local Environmental Plan 2011, the project is permitted with consent under the State Environmental Planning Policy (Infrastructures) 2007 (ISEPP).

The development and its potential impacts are described in detail throughout this report and it is considered that it is permissible due to consistency with the applicable legislation, plans and policies. As demonstrated throughout this report the proposal would not have any significant adverse environmental consequences during either construction or operation which could not be managed on the site. Further to this, the site is ideally located due to the minor number of surrounding sensitive receptors and the proximity to existing Essential Energy infrastructure required for connection to the electrical network which is a requisite for the project to succeed.

It is considered that the development can be approved subject to a merits assessment.

2 INTRODUCTION

2.1 OVERVIEW

This Statement of Environmental Effects (SEE) has been prepared on behalf of Dubbo Solar Project Pty Ltd (the applicant) to form part of a Development Application for a micro solar farm to be developed at 47R Wellington Road, Dubbo, New South Wales (NSW). An aerial image of the site and surrounds is provided in the below figure.

Figure 1 Aerial image of development site and surrounds (Source: NSW Planning Portal)

The micro solar farm model involves the construction of smaller solar farms that integrate into the existing Essential Energy electrical network. As such, the subject site has been chosen due to its abuttal to existing Essential Energy 11kV transmission lines. Due to the existing substation and power lines, the site is immediately proximate to assets that service local population centres and commercial operators which ensures electricity is most efficiently transferred from the source

facility.

The site is currently utilised for agricultural purposes and contains a dwelling and associated farm structures within the south eastern portion. The development would be located within a previously cultivated portion of the site adjacent to the western property boundary as identified in the below figure.

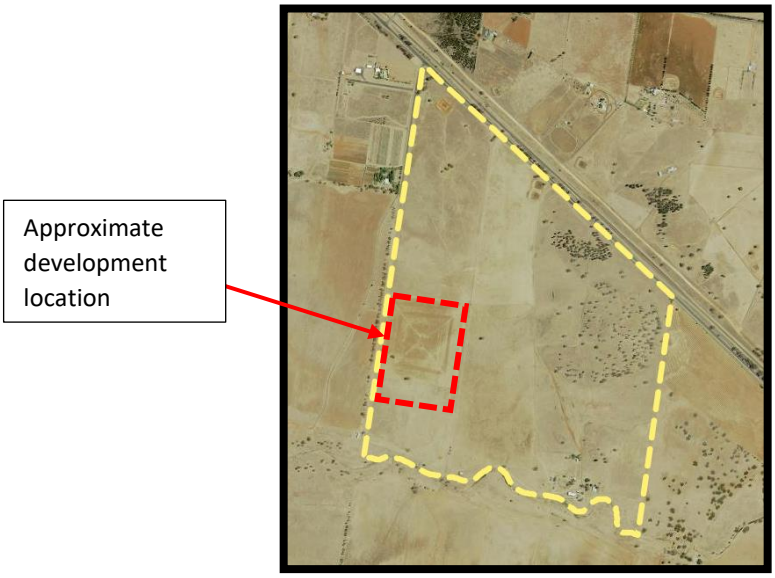

Figure 2 Approximate development proposal area (Source: NSW Planning Portal)

The proposal would include the installation of approximately 16,128 450 watt solar panels which would be mounted on single-axis tracking systems. The solar panels would be supported by ancillary aspects including a power station consisting of an inverter, transformers and switch gear; a HV switchboard consisting of HV switch gear; battery storage; electrical poles; hardstand vehicle areas and site fencing and landscaping.

The solar farm would have a 31 year lifespan from the beginning of construction with the project to be decommissioned and the site rehabilitated at the conclusion of its use which would allow the development footprint area to be re-utilised for agricultural undertakings as appropriate.

2.2 DEVELOPER OVERVIEW

Dubbo Solar Project Pty Ltd (the developer) is a subsidiary of ACEnergy Pty Ltd (ACEnergy). ACEnergy is a company that specialises in renewable energy development and have extensive experience with post renewable projects across most of Australia. In addition to the micro solar farm network, ACEnergy has been involved in other renewable projects which have included solar and wind power stations. They hold a portfolio of utility-scale solar farm projects across regional Australia including Stanhope, Echuca, Girgarre and Numurkah as well as a number of upcoming projects within New South Wales.

2.3 SCOPE OF STATEMENT OF ENVIRONMENTAL EFFECTS

This Statement of Environmental Effects accompanies a development application for the proposed development. It has been prepared on behalf of the client and includes the matters referred to in Section 4.15 of the *Environmental Planning and Assessment Act 1979* (the Act) and the matters required to be considered by the consent authority.

The purpose of this SEE is to:

- Describe the land to which the DA relates to and the character of the surrounding area;
- Describe the proposed development;
- Define the statutory planning framework within which the DA is to be assessed and determined; and
- Assess the proposal against the relevant heads of consideration as defined by Section 4.15 of the *Environmental Planning & Assessment Act 1979.*

3 SITE DESCRIPTION

3.1 DEVELOPMENT SITE

The development site is known as 47R Wellington Road, Dubbo. It is located approximately 10 km south east of the Dubbo township as shown in the below figure.

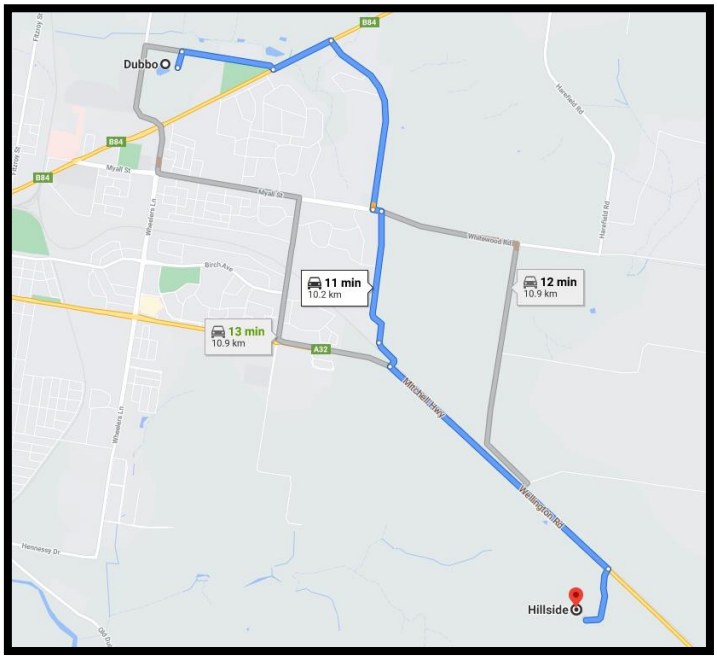

Figure 3 Location of development site from Narrandera township (Source: Google Maps)

It is located on the southern side of Wellington Road (Mitchell Highway) as shown in the below locality plan.

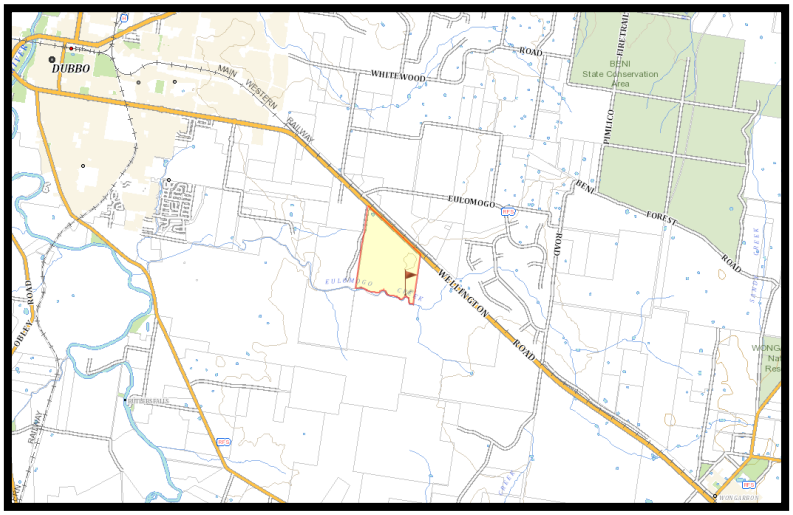

Figure 4 Locality Plan (Source: SixMaps)

The property is legally described as Lot 10 DP754287, Lots 95, 190 & 303 DP754308, and Lots 3 & 4 DP252285. The site is irregular in shape and approximately 183 Ha in size. It has a primary frontage to Wellington Road of approximately 1.5km to the north east, and a secondary frontage of approximately 600m to Basalt Road to the west. The specific lot layout of the property is provided in the below image.

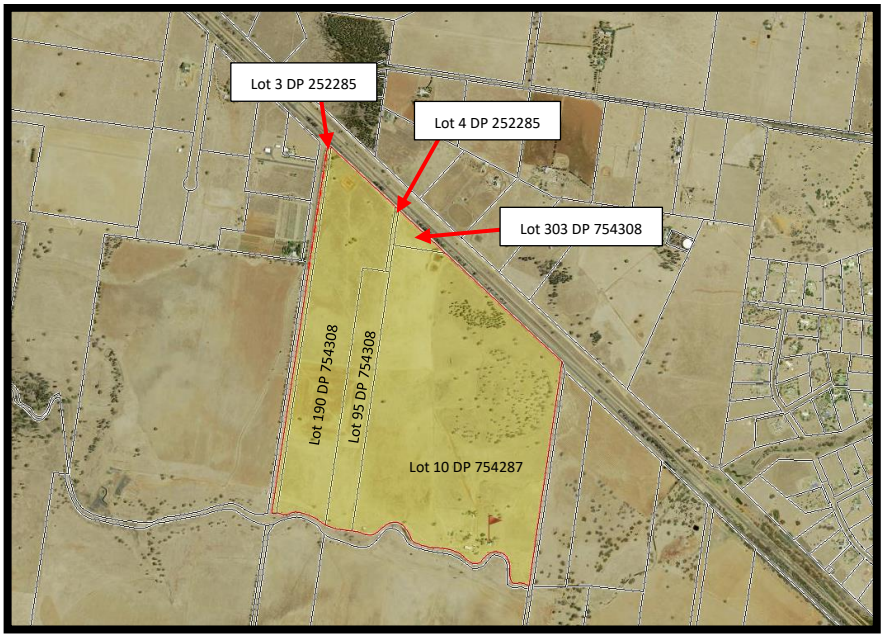

Figure 5 Aerial imagery of development site (Source: SixMaps)

The site is zoned RU2 Rural Landscape, consistent with land located on the adjacent side of Wellington Road to the north. Land adjoining the eastern boundary and located on the adjacent side of the creek bordering the southern property boundary is zoned RU1 Primary Production. A combination of RU2 Rural Landscape and IN3 Heavy Industrial zoned land is located to the west of the site. Land further north and north east is zoned a combination of R5 Large Lot Residential and RE2 Private Recreation. The land zoning described is depicted in the figure on the following page.

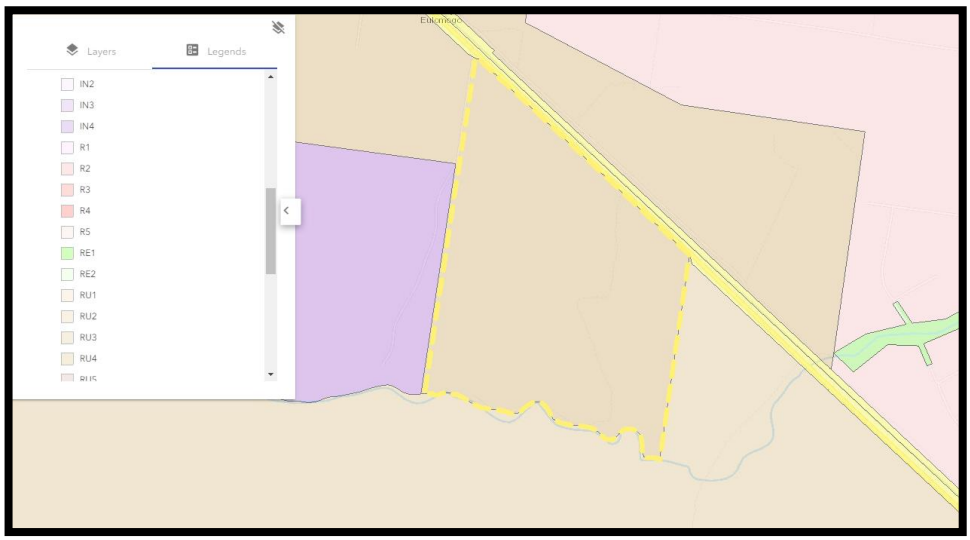

Figure 6 Dubbo Local Environmental Plan 2013 Zoning Plan of subject site and surrounds (Source: NSW Planning Portal)

The property generally has a gentle slope to the south west as shown in the below figure.

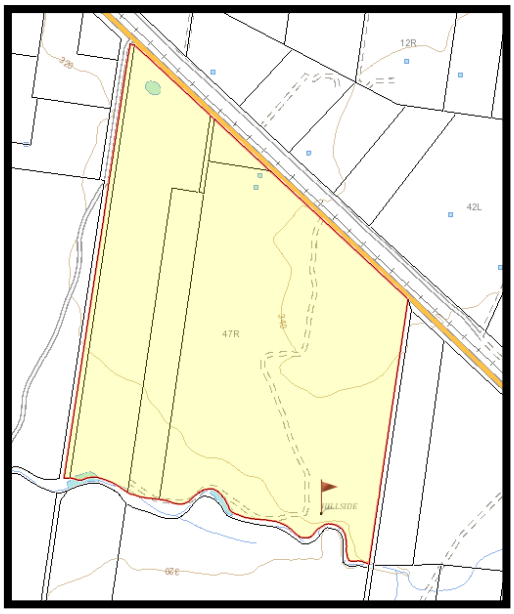

Figure 7 Site topography (Source: SixMaps)

The site is currently utilised for agricultural purposes in the form of grazing and arable cultivation. Due to the past agricultural use the proposal area has been cleared of vegetation excepting two remnant paddock trees as shown on the accompanying proposal plans. The site is not identified as bushfire prone land as shown in the figure on the following page.

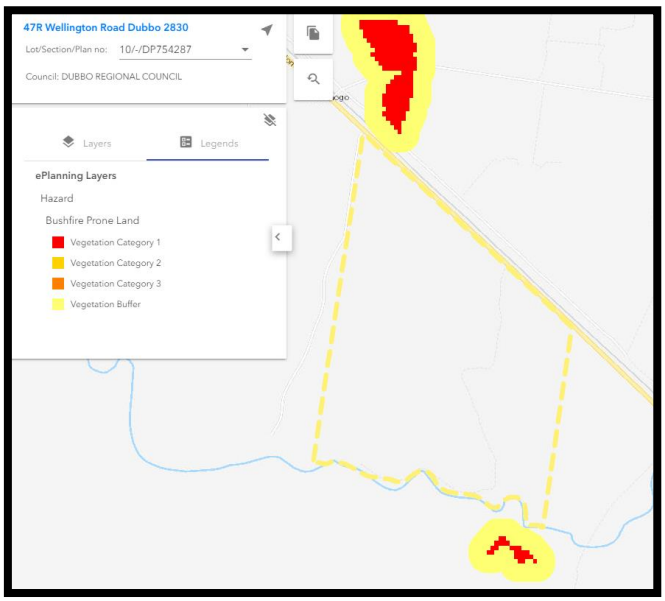

Figure 8 Bushfire prone land map of development site (Source: NSW Planning Portal)

Although the property is not mapped as bushfire prone land, it is noted that the vegetation within 140 metres of the proposal area would be classified as 'grassland' as discussed in the accompanying Bushfire Assessment and Bushfire Emergency Management and Operations Plan.

Available Council flood prone land mapping does not extend to the site and as such a Flood, Drainage and Groundwater Assessment was undertaken by Water Technology. A copy of the assessment accompanies this report as a separate cover attachment. In relation to flooding, the assessment characterised the 1% AEP flood hazard of the site to be H1 which is defined as 'generally safe for vehicles, people and buildings'. The flood assessment is discussed in additional detail further on in this report.

3.2 PROPOSAL AREA

The proposed development would be located on part of Lots 95 & 190 DP 754808. The access track between the property boundary and the proposal area would also cross Lot 3 DP 252285 as shown in the accompanying development plans.

A dwelling is located on the subject property approximately 725 metres south east of the proposal area. The nearest neighbouring dwelling is located on Basalt Road, approximately 520 metres north of the development area as shown in the figure on the following page.

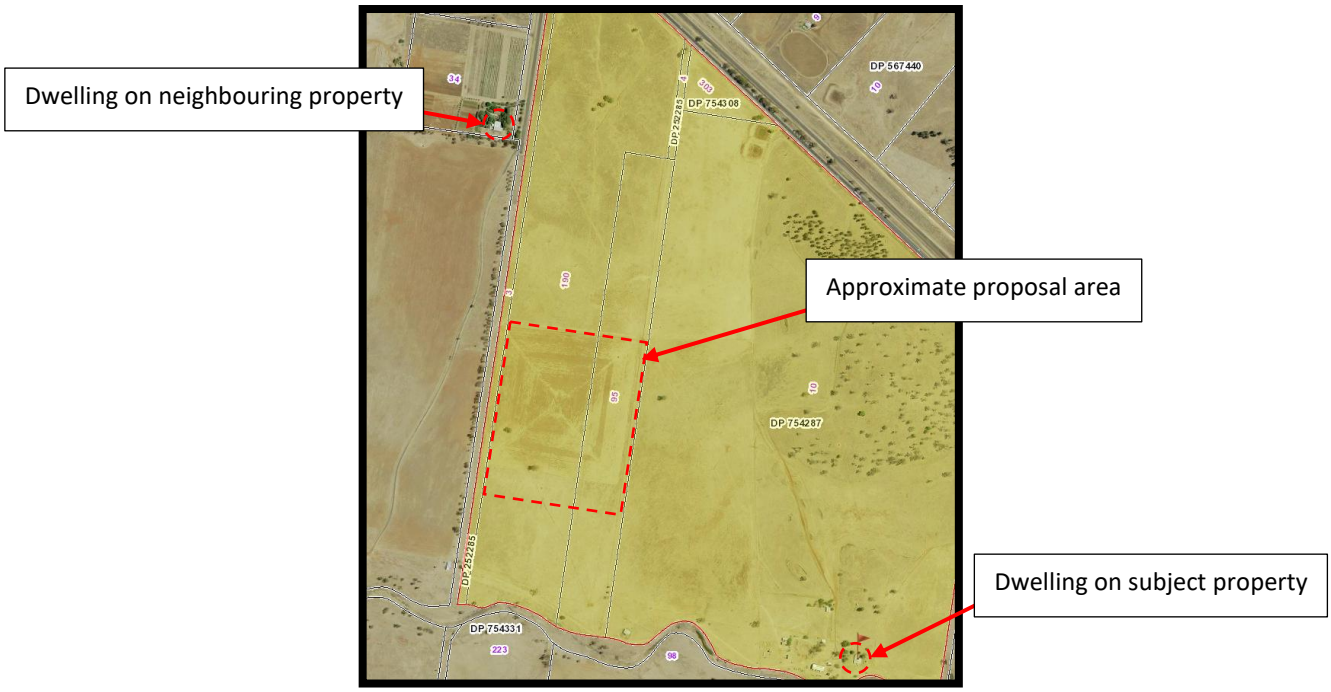

Figure 9 Nearest surrounding dwelling locations (Source: SixMaps)

As shown in the accompanying survey plan, the proposal area has a slight fall to the south west.

The proposal area is not mapped as bushfire prone land however the vegetation within 140sqm of is identified as 'grassland' and as such this hazard is considered in the accompanying Bushfire Assessment and Bushfire Emergency Management and Operations Plan.

3.3 PRESENT AND PREVIOUS USES OF THE SITE

The site is currently utilised, and has been for a number of decades, for agricultural purposes in the form of grazing and arable cultivation. It contains an associated dwelling and other ancillary farm structures.

Although the previous and present uses of the site include agricultural activities, these are limited to grazing and arable cultivation. There is visually no evidence on site of contamination and the land is considered to be in a suitable state for solar farm development.

3.1 LOCALITY

The majority of surrounding land is rural in nature with a total of 13 neighbouring dwellings being located within a two-kilometre radius of the development area as shown in the below figure.

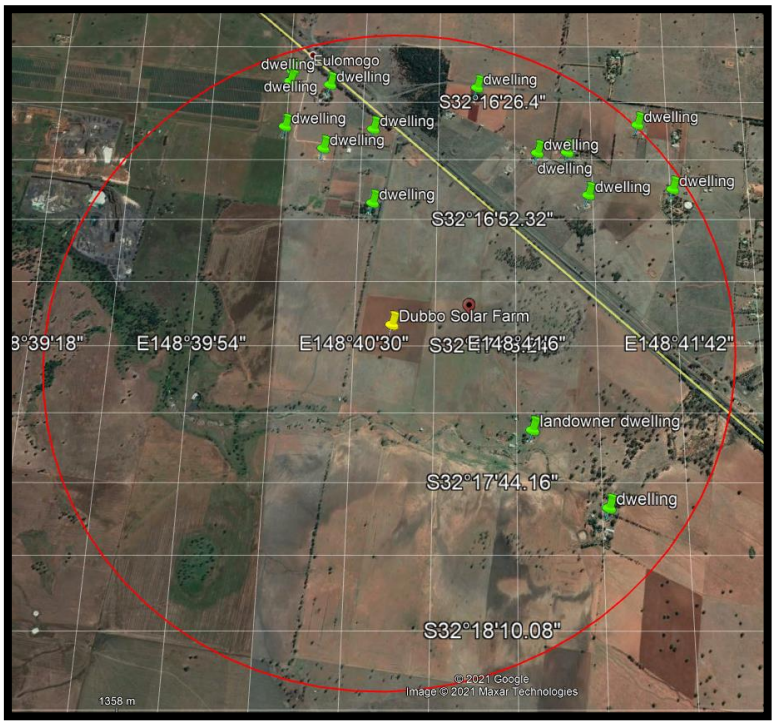

Figure 10 2km Radius from approximate development site (Source: Google Earth Pro)

Wellington Road / Mitchell Highway is located to the north, with almost half of the neighbouring dwellings being located north of the highway. The majority of surrounding dwellings located on the southern side of the highway are located to the north west of the development area.

The nearby rural and industrial land is mostly cleared due to past and / or present agricultural uses with scattered paddock trees throughout. The creek line to the south and further west of the site includes areas of native vegetation. A quarry is located further west partly within the 2km development area radius. There are no other significant land uses within the vicinity of the subject lot.

4 PROPOSED DEVELOPMENT

4.1 DEVELOPMENT OBJECTIVE

The objective of the development is to provide renewable energy to regional Australia, where it is most needed, at a scale which is responsive to the surrounding environment including nearby agricultural and other sensitive land uses. The intention is to functionally generate the equivalent output of larger conventional farms through a network of smaller facilities that can be rolled out in a site-sensitive manner and deliver renewable energy to different regions of New South Wales. These micro sites can be located on rural land without requiring extensive works to be undertaken on the landform and therefore can avoid the most productive agricultural land.

4.2 DEVELOPMENT DESCRIPTION

The development proposal is for a micro solar farm and associated infrastructure including photovoltaic panels and a power station consisting of inverter, transformer and switchgears. The power station would act as the primary conduit for electricity from the facility prior to it being transferred via overhead powerlines to the nearby Essential Energy substation.

A 'micro' solar farm differs from a conventional solar farm in that it occupies less land area and has a maximum output of less than 5 megawatts. The project would include the installation of a total of approximately 16,128 PV panels with the entire development having a footprint of approximately 17 hectares. It is noted that the entire property has an area of approximately 183 hectares and as such the proposal will still allow agricultural land uses to continue to be undertaken on other areas of the property. Further to this, the solar farm would have a life span of 31 years from construction, after which it would be decommissioned and all assets removed from the site. The site would then be rehabilitated as required and the development area could easily be returned to agricultural use should this be desired by the landowner.

The solar farm area would be surrounded by a fully secured 1.8-metre-high steel wire fence with a landscaped vegetation buffer located on the interior. The landscape buffer would take the form of two rows of plantings, row one being offset approximately 3.5 metres from the site fence, and row two being offset approximately 1.5 metres from the site fence. The buffer would have an expected combined width at maturity of approximately 5 metres. The vegetation would include shrubs with a mature height of approximately 3 metres, and understorey plantings with a mature height of approximately 1.5 metres which would assist in lessening visual impacts of the proposal on the nearby residences as shown in the accompanying Landscape plan set.

The solar farm would be remotely monitored allowing for constant surveillance without the requirement of ongoing staff, however a maximum of two staff would attend the site a maximum of three times per month for general inspections and maintenance of equipment or landscaping or for security inspection purposes.

4.2.1 EQUIPMENT

4.2.1.1 TRACKERS AND SOLAR PANELS

A total of approximately 16,128 non-reflective solar panels, with approximate dimensions of 2100mm by 1050mm and a depth of 40mm, would be mounted to array tracking systems. A typical array would comprise approximately 80 – 90 individual solar panels.

The tracking system utilises small electric motors to tilt the arrays to ensure maximum solar radiation is received at all times throughout the day. The solar arrays will be mounted with the central axis being approximately 1.4m from ground level. The array and tilted panel would have a maximum height of approximately 2.5m when tilted to its sharpest angle as shown in the below figure.

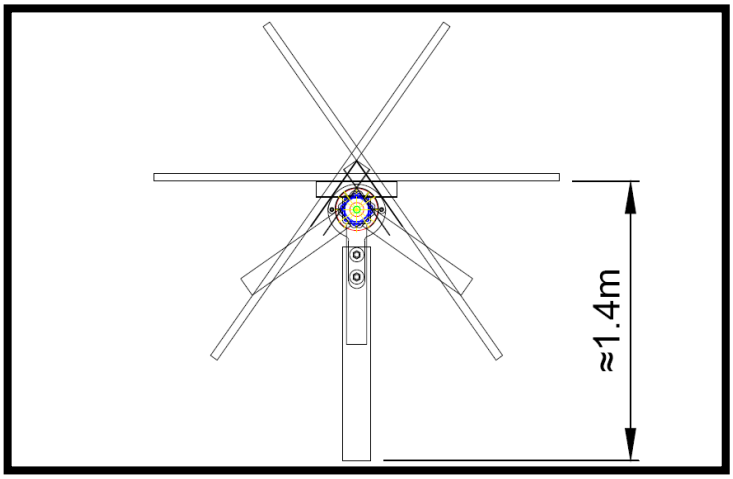

Figure 11 Typical tracker layout (Source: ACEnergy)

A typical solar tracking system including solar panels and arrays is shown in the below figure.

Figure 12 Typical solar tracking system (Source: Google)

4.2.1.2 CENTRAL POWER STATION AND CONNECTIONS

The facility contains a central power station consisting of an inverter, transformer and switchgears similar to that shown in the below figure.

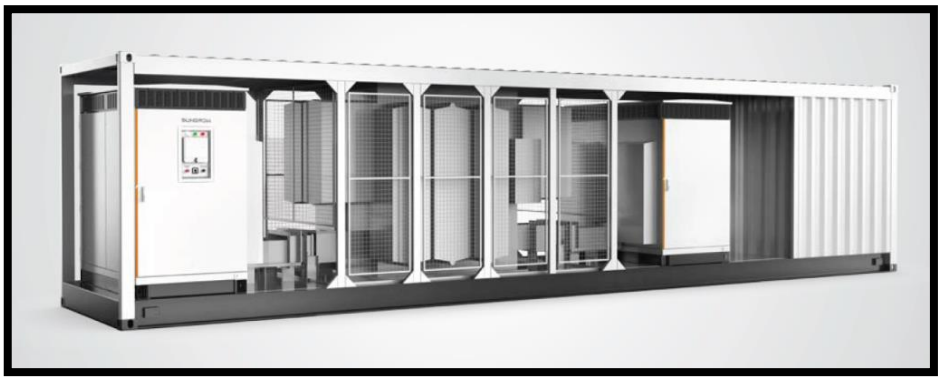

Figure 13 Typical inverter, transformer and switchgears (Source: ACEnergy)

The power station will be prefabricated off-site and have dimensions of approximately 13m long, 2.5m wide and 3m high. It will be located within the compound, as identified in the accompanying ACEnergy development plans, and will be utilised as the primary conduit for electricity generated from the solar panels to the HV switchboard.

The HV switchboard, which would house the HV switch gear and associated safety features, would receive electricity from the power station via underground cables. The HV switchboard platform would measure approximately 5m wide, 5m long and 4m high. The switchboard would be fixed on the platform beams and the platform would be placed on footings as identified in the accompanying ACEnergy plans. The below figure depicts a typical HV switchboard and associated platform.

Figure 14 Typical HV switchboard and platform (Source: AC Energy)

The HV switchboard would connect via underground cables to one of the three new power poles constructed within the compound which would then transfer the electrical load via overhead powerlines to the nearby Essential Energy substation.

As described above, one underground/overhead power pole and two overhead power poles are planned to be installed within the compound, with a fourth single overhead pole being installed to the south of the compound to support the installation of approximately 191 metres of overhead powerlines which would connect the facility to the existing Essential Energy network infrastructure to the south east. Each pole will measure approximately 12 metres in height above ground.

The accompanying development plans prepared by ACEnergy provide additional details of the proposed power station including typical elevations, footings and connection details.

4.2.1.3 ENERGY STORAGE CONTAINERS

Five (5) DC-coupled energy storage containers (ESC) would also be included in the development and would be installed on concrete footings as depicted in the accompanying plans prepared by ACEnergy. They would physically resemble a mounted shipping container measuring approximately 13m long, 2.5m wide and 3m high and will have a powder-coated grey finish similar to that depicted in the below figure.

Figure 15 Typical DC coupled energy storage container (Source: ACEnergy)

The energy storage containers would allow generated energy to be stored as required and utilised during times of high demand. They can also perform grid management functions such as frequency and voltage control.

4.2.2 FENCING AND LANDSCAPING

Although the subject site is fenced by typical rural post and wire fencing, the development area would also be enclosed by a 1.8-metre-high chain mesh fence. A landscape buffer would be included inside the site fencing. The buffer would take the form of two rows of plantings, row one being offset approximately 3.5 metres from the site fence, and row two being offset approximately 1.5 metres from the site fence. The buffer would have an expected combined width at maturity of approximately 5 metres. The vegetation would include shrubs with a mature height of approximately 3 metres, and understorey plantings with a mature height of approximately 1.5 metres which would assist in lessening visual impacts of the proposal on the surrounding area as shown in the accompanying landscape plans prepared by Ground Control Landscape Architecture.

The proposed landscaping is considered appropriate due to the rural location of the development site and would assist in reducing the visual impact on surrounding dwellings and the nearby Mitchell Highway which is discussed further on in this report.

The landscape buffer will be maintained for the duration of operation of the facility as

necessary.

4.2.3 SITE ACCESS

Access to the solar farm would be via a security gate with a width of 8 metres on the northern side of the compound. An all-weather 4-metre-wide internal access track would connect the development area to the Basalt Road access to the north. The property access to the internal track from Basalt Road will be modified as necessary to Council requirements to facilitate the development.

A desktop analysis confirms the access is likely to conform to safe sight distance requirements for vehicles leaving the site due to its location at the southern-most end of the sealed section of Basalt Road. This this would be able to be confirmed at Construction Certificate application stage.

4.2.3.1 LABOUR

Construction is likely to occur over a six (6) month period. Civil earthworks, fencing and landscaping would begin first, with material delivery, installation, testing, commissioning, and site clean up, landscaping and demobilisation to occur in turn.

During the construction period the amount of workers on the site would depend on the stage of works however a maximum of 50 workers would be on site at any one time. Positions would include Project Manager, Construction Manager, Health and Safety Manager, electrical contractors, plant operators, fencing contractors, heavy vehicle drivers, general labourers and the like.

4.2.4 OPERATION

As described previously in this report, once operational the solar farm would be remotely monitored allowing for constant surveillance without the requirement of ongoing staff. A maximum of two staff would attend the site a maximum of three times per month for general inspections and maintenance of equipment or landscaping or for security inspection purposes.

It is noted that the majority of technical issues which could arise during operation are able to be solved remotely by engineers who oversee the remote monitoring of the site. Any aspects which require on site attention would be attended by a local contractor who would also undertake the regular maintenance described above.

4.2.5 DECOMMISSIONING

Decommissioning of the facility would occur at the end of the useful life of the infrastructure, anticipated to be approximately 31 years from commencement of construction. At the end of the project lifecycle the facility will be decommissioned in a manner to ensure the land is left in a suitable state for a return to primary production purposes based on the current zoning.

It would be proposed that no later than 12 months prior to the proposed cessation of operation a decommissioning plan be prepared and provided to Council for review and approval. The objective of such a plan would be to restore the land to its pre-existing state suitable for agricultural use. It would include, but not be limited to, the following details:

- Expected timeline for rehabilitation completion;
- Decommissioning of all solar panels, above and below the ground infrastructure, inverter stations, fencing and any other structures or infrastructure relating to the approved development; and
- Programme of site restoration to return the land back to a suitable state for agricultural production.

4.3 COUNCIL PRE-DA ADVICE

A meeting was held with Council on 5th February 2021 to discuss the proposal. An overview of advice provided by Council and comments in response to this advice is provided in the below table.

Table 1 Pre-DA advice received from Council

COUNCIL ADVICE	COMMENTS
BUILDING	
The subject land is not mapped as being bushfire prone. However, as the land contains grassland which is a bushfire hazard vegetation, the application needs to consider the grassland threat and Clause 8.3.5 of the Planning for Bushfire Protection 2019 namely the provision of a 10m wide Asset Protection Zone (APZ), road access and potentially water supply.	Noted. A Bushfire Assessment and a Bushfire Emergency Management and Operations Plan have been prepared to support the proposal and accompany this report as separate cover attachments.
If lithium ion batteries are intended to be used onsite to store excess electricity generated by the solar farm, it will trigger the need to consult with Fire & Rescue NSW (FRNSW) in relation to that agency's requirements (if any) for the particular threat and hazards of fighting lithium-ion fires.	Noted. Advice has been requested from FRNSW in relation to requirements for threat and hazards of fighting lithium-ion fires however a response has not yet been received. We have been advised to complete a meeting request form and email this to Superintendent John Hawes and we will be advised of whether RFS will attend a site meeting to provide verbal comments. We have submitted this meeting request and are awaiting a response.
ENVIRONMENTAL	
Address flora and fauna impacts in relation to vegetation removal during construction	Noted. A Biodiversity assessment has been undertaken by Premise in relation to the proposal and accompanies this report as a separate cover attachment.
A 'glint and glare' assessment to be undertaken and submitted as part of the development application in relation to adjoining neighbours, highway and	Noted. A Glint and Glare Impact Assessment has been undertaken by Environmental Ethos in relation to the proposal and accompanies this report as a

aircraft	separate cover attachment.
Waste management to be addressed, both during construction and also at the end of the solar farm's lifespan	Noted. The accompanying draft Construction Management Plan includes details on waste management during construction with waste during the operation of the solar farm and the decommissioning process being discussed further on in this report.
Details of decommissioning and rehab to be addressed	Noted. General details in relation to the decommissioning and rehabilitation process are discussed further on in this report.
Demonstrate how the development will operate to ensure no impact on creek and high biodiversity within the site	Noted. A Biodiversity Assessment has been undertaken by Premise in relation to the high biodiversity area identified within the site and accompanies this report as a separate cover attachment. The potential impacts on the creek have been investigated in the accompanying Biodiversity Assessment prepared by Premise, as well as in the Flood, Drainage and Groundwater Assessment prepared by Watertech which accompanies this report as a separate cover attachment.
No known European or Aboriginal heritage on the site however, an Aboriginal Archaeology due diligence assessment is required.	Noted. A Due Diligence Assessment in accordance with the Due Diligence Code of Practice for the Protection of Aboriginal Objects in NSW has been undertaken and is detailed further on in this Statement of Environmental Effects report.
INFRASTRUCTURE	

Access is proposed off Basalt Road.
• *A traffic study demonstrating likely impact of proposed development on Basalt Road and the intersection of Basalt Road and the Mitchell Highway (Wellington Road) is to be submitted with development application.*
  ○ *Maximum sized vehicles (likely to be semi-trailer)*
  ○ *Tuning path requirements etc.*
  ○ *Consultation with residents along Basalt Road will be required and any identified issues/concerns addressed in the Traffic Study*
 	
Council can provide standards for table drains and access construction upon request.
	Noted. A Traffic Impact Assessment has been undertaken by Barnson and accompanies this report as a separate cover attachment.

Development application will be referred to TfNSW for comment in relation to the access being from the	Noted.

highway to Basalt Road.	
PLANNING	
Subject land located within the RU2 Rural Landscape zone	Noted.
Permissible in accordance with SEPP Infrastructure, Clause 34(1(b) and 34(7)	Noted.
Biodiversity Conservation Act • *Minimum lot size is 100ha which allows for up to 1ha of clearing* • *Disturbance of site may be minimised via different construction measures such as the utilisation of piers rather than complete clearing of the site which would trigger offset requirements*	Noted. As discussed previously, a Biodiversity Assessment has been undertaken which considers the clearing required to facilitate the proposed development.
Clause 7.2 of the Dubbo LEP is to be addressed in relation to the high biodiversity identified on the site	Noted. This is addressed further on in this report.
Clause 7.5 of the Dubbo LEP is to be addressed in relation to the groundwater vulnerability identified on the site	Noted. This is addressed further on in this report.
Clause 7.4 of the Dubbo LEP is to be address in relation to the riparian land and waterways mapped on the site	Noted. This is addressed further on in this report.
Chapter 2.4.8 of the Dubbo DCP in relation to other development in rural zones is to be addressed in application	Noted. This is addressed further on in this report.
Landscaping to provide a vegetation buffer may be required along the northern boundaries however, consideration of landscaping to assist in dust mitigation along all boundaries may be appropriate • *water supply and the management of the vegetation during times of prolonged low rainfalls is to be considered as part of the application*	Noted. Landscape Screening Plans have been prepared by Ground Control Landscape Architecture which accompany this application.
Contributions unlikely however will be considered as part of the merit based assessment.	Noted.
Application will be referred to JRPP for determination • *Lodgement of the application shall be via the Planning Portal*	Noted.

5 IMPACTS

5.1 CONTEXT AND SETTING

The site is located in a mainly rural zoned area comprising RU2 Rural Landscape and RU1 Primary Production zoning as shown previously in Figure 6 on page 5 of this report. It is also noted that IN3 Heavy Industrial zoned land is located to the west, and R5 Large Lot Residential zoned land is located further north.

Topographic mapping and the development area level survey confirm the site a has a minor slope to the south west. Fourteen residential dwellings, including one located on the subject site, are located within 2km of the site. These range in distance from the development area with the nearest being located 520 metres to the north and the furthest being located approximately 1.68km to the north east.

The proposal is not considered out of context or incompatible with the setting as agricultural areas have historically been the preferred location for electrical infrastructure, including substations and high voltage overhead transmission lines. Further to this, electrical infrastructure, including renewable energy infrastructure and ancillary structures, are common within rural and agricultural areas.

The proposal, being defined as **electricity generating works**, is permissible within the zone according to *Part 3, Division 4 Electricity generating works or solar energy systems* of *State Environmental Planning Policy (Infrastructure) 2007 (ISEPP)*.

The majority of impacts on surrounding land uses would be experienced during the construction period however these impacts would be managed to minimise impacts as outlined in the Construction Management Plan (CMP), a draft of which accompanies this report as a separate cover attachment. The CMP would be amended as necessary and finalised for submission with a future Construction Certificate application for the project should development consent be forthcoming.

Ongoing operation is unlikely to cause detrimental impacts on the surrounding area due to the nature of the development, separation from other land uses and the inclusion of the proposed landscape buffer. Further to this, all other areas of the property can continue to be utilised for agricultural purposes throughout the life of the development, with the footprint area of the solar farm being able to continue agricultural use following decommissioning of the infrastructure at the end of the 31 year lease period.

It is also noted that heavy industrial land uses are permitted on the adjacent IN3 zoned land to the west, and at least two active quarries are located further west. It is therefore considered that the ongoing operation of the solar farm would have less impact on the setting than these other potential and existing surrounding uses in terms of visual and acoustic impacts and detrimental environmental effects.

The site is suitably located to obtain the required solar access for the facility to operate as intended without resulting in unreasonable impacts on adjacent properties, while also being located in proximity to Essential Energy infrastructure, a core requirement for the project to succeed.

5.2 VISUAL IMPACTS

A Landscape and Visual Impact Assessment (LVIA) was prepared for the proposal by de Witt Consulting. A copy of the assessment accompanies this report as a separate cover attachment. As described in the LVIA, its intention is to provide an assessment of the existing landscape both within the site and the surrounding area to determine the potential visual impacts of the proposal on the landscape and visual receptors.

The LVIA found that the proposal would have an overall low visual impact on landscape receptors and an overall low visual impact on both potential residential receptors and other potential visual receptors. It is noted that the low-level impact is achieved due to the scale and nature of the proposal.

The development was considered to be a stand-alone visual element within the landscape and no visual impacts were envisaged to ensue, therefore no mitigation measures for cumulative effects were considered necessary. No residual impacts were identified or required to be assessed.

The LVIA concluded that the proposal is sympathetic to the existing development within the site and surrounding landscape in terms of bulk and scale and presently harmonious views from visual receptors; that the development will not be a dominant feature in the landscape or change the landscape character; and that the proposal will not pose significant adverse visual impact to potential receptors.

5.2.1 GLINT AND GLARE

A Glint and Glare Impact Assessment Report (GGIAR) was prepared for the proposal by Environmental Ethos. A copy of the assessment accompanies this report as a separate cover attachment. As described in the GGIAR, the desktop assessment considered impacts on dwellings and transport routes within 2km of the project and runway approach paths to Dubbo City Regional Airport.

Based on the assumptions and parameters outlined in the report it was concluded that no glare potential was identified in the assessment modelling due to the use of a single axis tracking system; when the resting angle of the PV modules was set at 45 degrees; and when the PV modules reverted to a 5 degree stowing angle. The report states that under normal operation of the solar farm no glare potential was identified.

5.3 NOISE & VIBRATION

A Construction and Operational Noise and Vibration Assessment (CONVA) was prepared for the proposal by Watson Moss Growcott Acoustics. A copy of the assessment accompanies this report as a separate cover attachment. As described in the CONVA, the purpose of the assessment is to consider the noise emissions associated with electrical infrastructure and associated vehicle activity at the site during general operations and noise and vibration emissions associated with the construction phase of the project.

The assessment concluded that that operational noise and vibration emissions associated with the proposed use will comply with relevant criteria at sensitive receptors without the need for noise mitigation strategies.

In relation to the potential noise, vibration and traffic noise impacts during construction, the report concluded that:

- Due to the significant distance separation between the site boundaries and the sensitive receptor locations, vibration levels are not expected to impact adversely on the receptors.
- The number of traffic movements associated with the construction phase of the project will have negligible impact on the existing traffic noise levels at sensitive receptors generated by vehicle movements along the highly trafficked Wellington Rd / Mitchell Hwy.
- For Basalt Rd, where existing traffic movements are very limited, the additional construction vehicle movements will likely increase the existing noise levels at the sensitive receptors during the peak one hour traffic flows. However, the absolute noise level impact is predicted to be below the criteria nominated within the Road Noise Policy.
- Specific works associated with construction of the entry crossover and site access road will achieve values below the project noise management levels at all sensitive receptors other than the critical R2 receptor located to the north west of the subject site.
- Noise associated with support structure piling within the boundaries of the subject site is predicted to exceed project noise management levels at several receptors pending the location of the piling within the site boundaries.

Due to the predicted exceedance of noise management levels Section 5.4 of the assessment has recommended specific noise control for the proposed piling works, and cross over/access road works. These mitigation and management practices will be included in the final CMP prepared for the proposal which will accompany a future Construction Certificate application for the development should development consent be forthcoming.

5.4 AIR AND MICROCLIMATE

The site is located within Brigalow Belt South Bioregion Riverina Bioregion which includes northern NSW and southern Queensland (QLD). The south eastern section of the bioregion has a subhumid climate with no dry season and a hot summer, while the far west of the bioregion the climate can be described as hot and semi-arid.

The site adjoins the Mitchell Highway along its northern boundary, a state highway located in the central and south western regions of QLD and the northern and central western regions of NSW. Mitchell Highway forms part of the shortest route between Sydney and Darwin, via Bourke and Mount Isa; making it an important road link for the transport of passengers and freight for regional NSW and QLD. Air quality is expected to be impacted in existing conditions by traffic fumes to some extent as well as agricultural practices from the subject and surrounding sites.

Available climate data identifies the region as experiencing generally warm to hot weather with high maximum temperatures in summer but cool winters. The mean daily maximum

temperatures vary from 15.6 degrees Celsius (C) in July to 33.5 degrees C in January. The corresponding mean daily minimum temperatures vary from 3.0 degrees C in July to 18.4 degrees C in January. Rainfall is moderate with average annual rainfall being 569.8 mm which is spread fairly evenly throughout the year with a tendency for higher rainfall from late spring to early autumn.

In previous high-profile solar energy facility developments there has been community concern around the potential heat generated by solar energy facilities leading to a 'micro-climate' in the immediate vicinity. In cases of significantly larger solar facilities of over 100 hectares, the impact of such an effect has been proven to be negligible. In considering the significantly smaller size of this proposal, this is even more so. Additionally, there is very little evidence to support a supposed 'heat island' affect from solar facilities. Any ambient heat from panels would have wholly dissipated by the time it reaches the facility's fence line.

The primary air quality impacts associated with the development are anticipated to be experienced during the construction and decommissioning phases. These impacts would include the potential for dust generation from vehicle movements to, from, and about the site. Potential air quality impacts are considered manageable with the implementation of mitigation measures as outlined in the accompanying draft CMP.

Detrimental air quality impacts are not expected during operation due to the nature of the facility however minor impacts may be experienced via maintenance vehicle movements. Any such impacts are anticipated to be negligible due to limited site attendance.

The impact of the overall development, being solar energy generation, is anticipated to be positive as it would contribute to a reduction in greenhouse gas emissions related to conventional energy generation methods.

Cumulative air quality impacts are expected to be negligible due to the existing use of surrounding land and the relatively limited construction timeframe.

5.5 SOILS AND SURFACE WATER

The potential to impact upon soils and surface water quality on the site is greatest during the construction and decommissioning phases. During these periods the soils will be subject to disturbance associated with site preparation and infrastructure installation/removal. Construction works for the proposed solar farm include removal of minor areas of groundcover and soil during site preparation and minor excavation for footings for the proposed substation, battery energy storage system, access road, vehicle movement areas, temporary laydown area, parking area and underground cabling.

The upper layer of soil would be subject to temporary disturbance which may lead to erosion and potential sedimentation in runoff during periods of rainfall. Extensive cut and fill is not proposed as part of the development. Minor earthworks will be undertaken to form the vehicle movement and unloading areas as well as to clear area for footings of infrastructure containers. These works would not require cut and fill of any areas over a maximum of 300mm and would not require any retaining walls or similar.

The use of fuels, lubricants and herbicides during construction pose a risk of surface water contamination in the event of a spill. Management of contained sewage disposal facilities also pose a risk to surface water quality should spills occur.

During construction and decommissioning, erosion and sediment control mitigation measures will be implemented as required by applicable policies, guidelines and legislation. Standard mitigation measures around refuelling, maintenance and weed clearing will minimise the risk of spills. Water, which will be sourced externally, will be utilised as required for dust suppression.

The potential for the proposed solar farm to impact upon soils and surface water quality during the operational phase, after the disturbed areas and construction compound have been rehabilitated, is minimal. The site will not be staffed during operation with routine maintenance and monitoring being the extent of regular activities which are unlikely to have any impact to surface water quality. During operation the site will be under permanent pasture which will result in lower level of soil erosion relative to the current land use practice of grazing and arable cultivation. A rainwater tank with a capacity of 22,500L is proposed to be located on the site as a static water supply to be utilised for bushfire fighting purposes if required.

Further to the above, the accompanying Flood, Drainage and Groundwater Assessment prepared by Water Technology identifies a number of stormwater quality measures which can be implemented as part of the proposal to ensure the development does not adversely impact the hydrology of the catchment or the sediment loading of the runoff from the catchment.

It is considered that the potential surface water quality impacts do not present any major constraints that cannot be managed. All construction and decommissioning activities for the proposed solar farm will be undertaken in a manner that prevents erosion and sediment impacts at the subject site and those surrounding. Post approval, a Construction Environmental Management Plan (CEMP) will be prepared to identify erosion and sediment control mitigation measures prior to works commencing on the site.

5.6 GROUNDWATER

A Flood, Drainage and Groundwater Assessment was prepared for the proposal by Water Technology. A copy of the assessment accompanies this report as a separate cover attachment. Section 5 of the assessment refers specifically to groundwater.

The assessment considers the proximity of nearby receptors, namely bore users and ecosystems, to provide a high level assessment of the impacts of the proposal given the property is identified as having a moderately high and high groundwater vulnerability.

The assessment considers the legislative framework, scope of the investigation and local hydrogeology. It also reviews groundwater level data and assesses adverse effects to vulnerable groundwater resources. It determines that no further action is required beyond preparation of an appropriate environmental management plan, during the detailed design phase of the project, which takes into account Table 5-1 of the report and the recommendations of Section 6. It is noted that a CEMP will be prepared and provided as

part of a future Construction Certificate Application for the proposal should development consent be forthcoming.

Further to the above it is noted that no groundwater will be used by the development. Limited excavation is proposed for the installation of panel tracking systems and ancillary infrastructure. Panels will be installed on driven piles installed not more than 2.5 m below the ground surface, while minor excavation works will be undertaken for trenching for underground cabling as well as internal access roads and construction of hardstand areas.

5.7 LAND AND SOIL CAPABILITY

Land capability is the inherent physical capacity of the land to sustain a range of land uses and management practices in the long term without degradation to soil, land, air and water resources. Failure to manage land in accordance with its capability risks degradation of resources both on- and off-site, leading to a decline in natural ecosystem values, agricultural productivity and infrastructure functionality.

The development site is identified on the Land and Soil Management Capability Mapping for NSW as Class 3 as shown in the below figure.

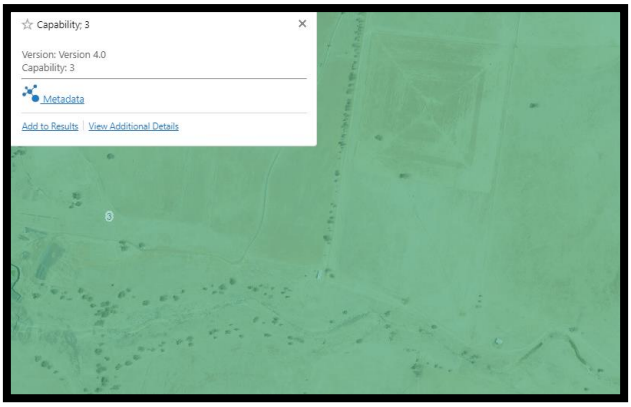

Figure 16 Land capability of development area (Source: NSW SEED Map)

Class 3 lands are described as high capability lands with moderate limitations which must be managed to prevent soil and land degradation. Such lands are generally used for a range of crops including cereals, oilseeds and pulses however also includes other soils with acidification and soil structure limitations that are sufficient to require the application of specific management practices.

It is noted that that groundcover within the development area will be maintained for the life of the solar farm to reduce potential for wind and water erosion. The proposed development will not inhibit the land from being returned to agricultural use in future.

5.8 WASTE AND EFFLUENT DISPOSAL

5.8.1 WASTE

During construction waste is likely to be generated in the form of general waste from materials packaging and general project construction.

All general waste will be collected, sorted and stored appropriately in labelled waste containers. Two waste bins will be located in the management hub area of the site, one of which will house general waste while the other will be for recyclable material only. The bins will be checked and logged daily by assigned personnel and once nearing capacity, these will be collected from the site by a licensed waste contractor and disposed of appropriately.

Mobile wheeled waste bins will also be available on the site to dispose of waste while unpacking materials. Once full, the waste from these bins will be transferred to the bins in the management hub area. The site will be monitored regularly to ensure all waste is disposed of appropriately and not left about the site.

It is anticipated that little waste will be generated during operation due to the site being unstaffed for the majority of the time, excepting monitoring and maintenance contractors as required. Waste management during operation will however be similar to that during construction, with general and recycling waste bins residing on the site with waste logged once per month and the bins collected by a licensed waste contractor when required.

Waste generated during decommissioning is expected to take similar form to that generated during construction, being general in nature. Waste during the decommissioning phase will be dealt with in the same manner as that generated during the construction phase.

5.8.2 EFFLUENT

During construction effluent will be generated from the portable amenities. Effluent from the site facilities will be pumped to a temporary waste holding tank which will be pumped out and serviced regularly by a suitably qualified and licensed local liquid waste contractor. It is anticipated that emptying and maintenance frequency will be dependent on the stage of construction and the associated number of workers on the site at the time.

Effluent will not be generated during operation as the site will be remotely monitored and will not include sanitary facilities as maintenance contractors will only attend the site a maximum of three (3) times per month.

Effluent generation during decommissioning would be similar to that as described above for the construction period and as such it would be managed in the same manner.

5.9 FLORA AND FAUNA IMPACTS

The site has been historically utilised for agricultural purposes including grazing and arable cultivation, including the development footprint area. The property is identified as 'Terrestrial Biodiversity' as shown in the below figure.

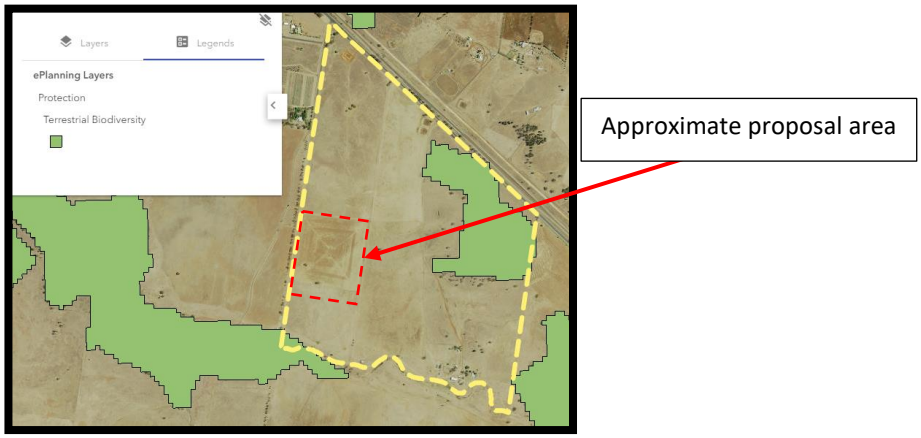

Figure 17 Terrestrial Biodiversity Mapping for property (Source: NSW Planning Portal)

It is however noted that the development footprint area is not within an area identified as Terrestrial Biodiversity. It is however noted that the project would involve the removal of two paddock trees and removal of some groundcover vegetation. As such a Biodiversity Assessment has been prepared for the development by Premise. A copy of the assessment accompanies this report as a separate cover attachment.

The assessment noted that the project will result in the permanent loss of native vegetation in the form of two remnant trees and disturbance to a small area (0.22 ha) of secondary native grassland. Since the potential loss of native vegetation does not exceed the thresholds for entry into the Biodiversity Offsets Scheme, Premise has assessed the impact of the project on biodiversity by undertaking Five Part Tests of Significance.

The assessment concludes that the proposal is not likely to have a significant adverse impact on the life cycle or habitat of either threatened species assessed in the Five Part Test. It states that the potential modification of cleared cropping to restored native grassland over time may beneficially affect foraging habitat for one of the threatened species. It notes that a Species Impact Statement is not required under Section 7.8 of the BC Act, nor does the proposed activity trigger the Biodiversity Offsets Scheme under Section 7.2 of the BC Act.

5.10 HERITAGE

5.10.1 ABORIGINAL CULTURAL HERITAGE

A Due Diligence assessment was undertaken in accordance with the *Due Diligence Code of Practice for the Protection of Aboriginal Objects in NSW*. Step 1 of the Due Diligence process relates to whether the activity will disturb the ground surface. Due to the nature of the proposal the site will be disturbed by the footings of the proposed solar panel trackers and the central inverter, battery containers, overhead electrical poles, material laydown area, and vehicle movement areas including the site access track.

Step 2a requires for a search of the AHIMS database to be undertaken and for any other sources of information of which we are aware to be considered. An AHIMs search was undertaken on 18th March 2021 with a buffer of 1,000 metres. The search concluded that no aboriginal sites are recorded in or near the proposal area, nor have any aboriginal places been declared in or near the proposal area. A copy of the AHIMs search results are attached to this report as Appendix A.

Step 2B advises that regardless of the outcome of an AHIMS search, it still needs to be considered whether aboriginal objects are likely to be in the area of the proposed activity when considering specified landscape features. Specified landscape features include rock shelters, sand dunes, waterways, waterholes and wetlands. It is noted that Eulomogo Creek is located approximately 300 metres south of the proposal area however the site would be classified as 'disturbed land'. The Code of Practice defines disturbed land as "*having been the subject of a human activity that has changed the land's surface, being changes that remain clear and observable*". Due to the extensive past and present agricultural use of the land, it is our opinion that it is clearly observable that the land would be defined as disturbed land. As such, the Code advises it is reasonable to conclude that there are no known Aboriginal objects or low probability of objects occurring in the area of the proposed development and as such the development can proceed with caution.

5.10.2 EUROPEAN HERITAGE

The site is not located in a heritage conservation area, nor does it or any neighbouring properties within a 2km radius contain a heritage item.

5.11 NATURAL HAZARDS

5.11.1 BUSHFIRE

As described previously in this report, the property is not identified as bushfire prone according to bushfire prone land mapping however it is noted that the vegetation located within 140 metres of the proposal area would be classified as 'grassland'. As such a Bushfire Assessment and Bushfire Emergency Management and Operations Plan has been prepared and accompanies this report as a separate cover attachment.

5.11.2 FLOODING

As described previously in this report, available Council flood prone land mapping does not extend to the site and as such a Flood, Drainage and Groundwater Assessment was prepared by Water Technology. A copy of the assessment accompanies this report as a separate cover attachment.

Section 2 of the assessment specifically addressed flooding in terms of the extent to which natural flooding along Eulomogo Creek could impact the site and the impact that development at the site could have on existing overland flow and drainage patterns.

The assessment made a number of recommendations including:

- sensitive infrastructure such as inverters and battery storage etc, be located above the maximum of the 1% AEP flood level with 300 mm freeboard.
- solar panel arrays be designed so that they can be positioned to have the lowest edge of the solar panel above the 1% AEP flood level in times of flood.
- panel post and footings be designed to withstand the flood velocities described in the assessment which are mostly low in the areas proposed for solar panels.
- best practice principles to stormwater and sediment control be incorporated into the design, construction and operation phases of the solar farm site.
- design considerations should be made for the access track to ensure that overland flow paths identified in the assessment are catered for.

Ultimately the assessment found the site to be at a low risk of flooding for both the existing and proposed conditions. It is not subject to inundation from Eulomogo Creek as the layout proposes a significant setback from the flood extent. Minimum changes to the land topography are anticipated due to the nature of solar farm project which will result in low likelihood of changes to the hydraulic flood behaviour of the local catchment or intense storm event. Minimal changes to fraction imperviousness of the site are also expected and it is not anticipated that a storage basin or water quality treatment will be required.

5.12 TECHNOLOGICAL HAZARDS

The development would include battery energy storage in the form of five (5) DC-coupled energy storage containers measuring 13 metres long, 2.5 metres wide and 3 metres high. These would be managed in accordance with *AS/NZS 5139-2017: Electrical installations – Safety of battery systems for use with power conversion equipment* as appropriate.

Electrical equipment of all sizes and voltages produce electric and magnetic fields (EMF). Both fields drop away rapidly with distance from the source, or due to shielding by insulation or earth (in the case of buried installations).

The International Commission on Non-Ionizing Radiation Protection (ICNIRP) has issued Guidelines for Limiting Exposure to Time-Varying Electric and Magnetic Fields. The Australian Radiation Protection and Nuclear Safety Agency (ARPNSA) refer to the ICNIRP guidelines which provide limits for the general public for 50 Hz sources as identified below:

- Electrical Field Strength (E): 5 kilo Volts per metre (kV/m)
- Magnetic Flux Density (B): 200 micro Teslas (µT)

The maximum electric field generated by an 11kV overhead line is depicted in the figure on the following page which shows that the maximum EMF would be emitted between the area directly under the line and 20 metres either side and would measure just over 0.2 kV/m which is well under the ICNIRP EMF guideline limit of 5 kV/m.

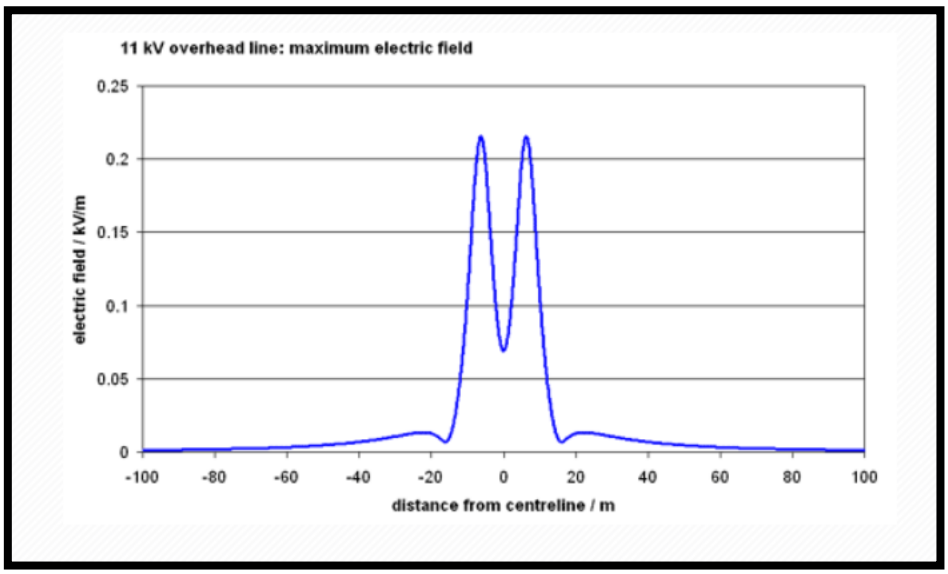

Figure 18 Maximum 11kV overhead line electric field (Source: www.emfs.info/sources/overhead/specific/11-kv)

In relation to magnetic fields produced by 11kV overhead lines, the figure below shows that the maximum EMF would be emitted between the area directly under the line and 20 metres either side and would measure 10μT which is well under the ICNIRP EMF guideline limit of 200μT.

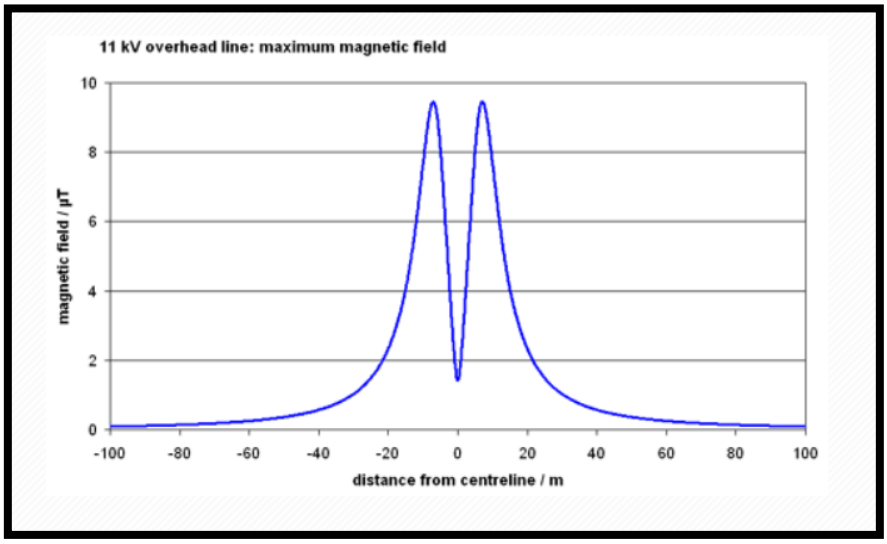

Figure 19 Maximum 11kV overhead line magnetic field (Source: www.emfs.info/sources/overhead/specific/11-kv)

The proposed 11kV overhead lines connecting the facility to the existing Essential Energy infrastructure in the area would be the portion of the development which would emit the most EMF, and as described above, these emissions would be well below the limits specified by the ICNIRP for the general public

5.13 ACCESS AND TRAFFIC

5.13.1 ACCESS

The development would be accessed via an internal access track connecting the compound to a property access at the southern end of Basalt Road as shown in the accompanying plans. This site access would be modified as required to Council standards to support construction traffic in terms of maximum vehicle size and number of expected movements during construction.

5.13.2 TRAFFIC

Traffic will be generated during the 6 month construction period in the form of delivery of materials to site and attendance of construction staff. A maximum of 50 field crew workers would be on site during peak construction, which is proposed to be undertaken between 7am – 6pm Monday – Friday, and 8am – 1pm Sunday. It is expected that arrival and departure of workers to and from the site would be within an hour of the proposed operating hours identified previously.

Minivans will be utilised to transport workers to and from Dubbo and as such the maximum number of vehicle movements expected to and from the site during the peak of construction is 15 vehicles per day, or 12 vehicles per hour.

Material delivery will be undertaken by a number of 5 axle semi-trailers and 3 axle rigid trucks with dimensions as shown in the below figure.

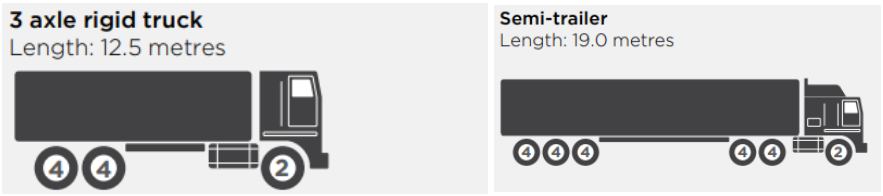

Figure 20 Heavy vehicle lengths (Source: https://www.rms.nsw.gov.au)

The majority of material would be transported to the site via rigid trucks, with only the power station requiring transport via a semi-trailer. The majority of deliveries will be undertaken over a three week period averaging two deliveries per day with the first delivery at approximately 8am. A site traffic controller will ensure materials can be offloaded to the designated material loading zone.

Access to and from the site will be via the access from Baslat Road only as shown in the accompanying plans. Speed signs will be erected on the site fencing to ensure vehicle speeds within the site are limited.

Traffic generation during decommissioning is expected to be similar to that generated during construction. Operational traffic would be limited to one to two small vehicles two to three times per month for maintenance activities only.

5.13.3 TRAFFIC IMPACT ASSESSMENT REPORT

A Traffic Impact Assessment Report was undertaken by Barnson to support the proposal. A copy of the assessment accompanies this report as a separate cover attachment.

The assessment concluded the following:

- During its construction stage, the proposed development will generate no more than 17vph at any given time.
- Traffic generated by the development during its operational stage will be negligible, consisting of 1-2 light vehicle movements per quarter and additional trips as required for repair and maintenance. It will not exceed traffic volumes generated during construction.
- It is recommended that the proponent develops a Traffic Management Plan to be communicated to field crew and delivery drivers prior to arrival on site. This will be prepared as part of a future Construction Certificate application should development consent for the proposal be forthcoming.
- On-site parking is proposed to accommodate all traffic relating to the development, and the driveway is of sufficient length to accommodate any vehicle queuing without impacting public roads.
- Wellington Road is currently operating at an acceptable level of service and will continue to do so during the construction and operational phases of the development.
- It is recommended that deliveries be scheduled outside of existing peak traffic hours on Wellington Road, being 8:00am-9:00am and 4:00pm-6:00pm.
- The observed traffic volumes and projected future traffic on Wellington Road and Basalt Road warrant CHR and AUL turn treatments in accordance with the Austroads Guide to Road Design, Part 4.
- The existing intersection of Wellington Road and Basalt Road generally complies with the dimensions for CHR/AUL treatments as prescribed by the Austroads guidelines. Line marking works should be undertaken to meet the requirements.
- With the implementation of the recommendations provided, the development is unlikely to have any significant impacts on the traffic operations of the existing road network.

5.14 SERVICING

As described previously in this report, the proposal area is located within proximity to existing Essential Energy infrastructure in the form of overhead 11kV powerlines which would provide connection of the proposed development to the energy grid.

The local area has the capacity and catchment to provide sufficient workforce numbers to enable the construction of the solar farm with minimal likelihood of attracting large numbers of external workers.

5.15 PUBLIC DOMAIN

There is the potential for short-term impacts on the public domain related to the public road system as a result of construction traffic, as well as the possibility of visual impacts on the environment from the solar farm itself. It is however noted that construction traffic will involve no more than two heavy vehicle movements per day and no more than thirteen light vehicle movements per day. Given the capacity of Mitchell Highway, this is unlikely to have a negative impact on the public domain noting that the traffic impacts would be short term only.

In relation to visual impacts on the environment, the LVIA discussed previously in this report concluded that the proposal is sympathetic to the existing development within the site and surrounding landscape in terms of bulk and scale and presently harmonious views from visual receptors; that it will not be a dominant feature in the landscape or change the landscape character; and that it will not pose significant adverse visual impact to potential receptors.

It is considered that the proposed structures and the associated changes to landscape character will be generally insignificant for transport corridors (Mitchell Highway) as also concluded in the LVIA. Given the above, the potential impact of the proposal on the public domain is therefore considered to be negligible.

5.16 OTHER LAND RESOURCES

A review of the Minview online database confirms that there are no mineral titles or exploration licenses affecting the subject land. A review of the Biophysical Strategic Agricultural Land (BSAL) map confirms the development site is identified as BSAL land as shown in the below figure.

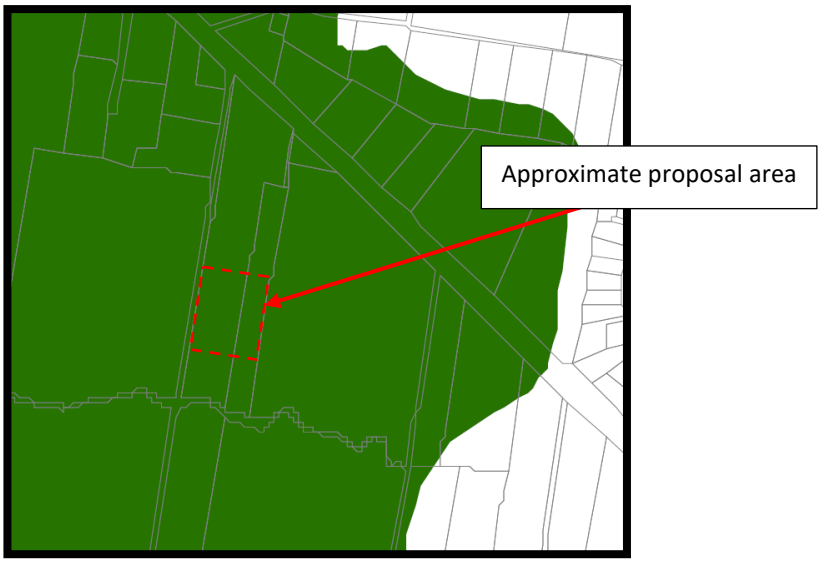

Figure 21 BSAL map of property (Source: Planning NSW)

Biophysical Strategic Agricultural Land (BSAL) is land with high quality soil and water resources capable of sustaining high levels of productivity. BSAL plays a critical role sustaining the State's $12 billion agricultural industry. It is noted that a total of 2.8 million hectares of BSAL has been identified and mapped at a regional scale across the State.

Although the property is identified as BSAL land, it is noted that BSAL mapping is one of a number of measures implemented by the NSW Government to deliver a greater protection to agricultural land from the impacts of mining and coal seam gas activity. Due to the nature of the proposed development, including the fact that the land will be remediated to a suitable state to be re-utilised for agricultural purposes at the end of the solar farm lifecycle, it is considered that the development will not have a negative impact on the soil and water resource quality within the development area and surrounds.

As described previously in Section 5.7 of this report, the land has a land capability of Class 3 which is described as high capability lands with moderate limitations which must be managed to prevent soil and land degradation. Notwithstanding this, it is noted that the site would be returned to a suitable state for continued agricultural use post decommissioning of the facility, expected to occur approximately 31 years from commencement of construction.

Given the above it is therefore considered that the proposal would not result in a loss of any significant land resources.

5.17 SAFETY, SECURITY AND CRIME PREVENTION

The safety, security and crime prevention aspects of the proposal have been assessed against the Crime Prevention Through Environmental Design (CPTED) principles as detailed in the below table.

Table 2 CPTED Principles

PRINCIPLE	COMMENTS
Principle 1: Natural Surveillance *Providing opportunities for effective surveillance, both natural and technical, can reduce the attractiveness of crime targets. Good surveillance means that people can see what others are doing thereby deterring 'would-be offenders' from committing crime in areas with high levels of surveillance.*	The development is consistent with this principle as detailed below: • The property is located within a rural area on private property and it is therefore considered that the opportunity for the facility to be the target of crime to be low. • The facility will be real-time remotely monitored with the site being attended by the operator a few times a month for maintenance and security purposes. • The development would be visible to local traffic utilising the southern portion of Basalt Road and as such would be passively surveyed. • The site entry would be clearly identifiable from the Basalt Road access. • Due to the type of construction (tracker systems) there would be limited places for offenders to hide on the site. • Night vision capable security cameras will be placed at the compound entrance to assist in surveillance of the facility.
Principle 2: Access Control *Physical and symbolic barriers can be used to attract, channel or restrict the movement of people, and in turn, minimise opportunities for crime.*	The development is consistent with this principle through: • Provision of clear signage at the site entry which identifies the site as privately operated. • Provision of a clear entry point from the roadway to the site. • Provision of a clear egress point from the site to the roadway. • Provision of signage to channel users to appropriate areas. • Restriction of access to the site through the provision of one entry point and fencing of the entire development area. • Clear signage to prevent unintended access.
Principle 3: Territorial Reinforcement *This principle relies on the users of spaces or areas feeling that they have some ownership of public space and therefore are more likely to gather and enjoy that space. The ownership of space increases the likelihood that people who*	The development is consistent with this principle through provision of a distinct boundary and clear definition of the proposal area in relation to the overall property which reduces opportunity for illegitimate use or entry.

witness crime in or adjacent to that space will respond by quickly reporting it or by attempting to prevent it.	
Principle 4: Space Management *Public space that is attractive and well maintained is inviting to users and becomes a well used space. Linked to the principle of territorial reinforcement, space management ensures that the space is appropriately utilised and well cared for.*	The development is consistent with this principle through: • Ensuring maintenance of the site area and included landscaping to create a 'cared for' image. • Rapid repair of decaying physical elements throughout the lifecycle of the development.

5.18 SOCIAL AND ECONOMIC IMPACTS

The NSW Government Office on Social Policy defines social impacts as significant events experienced by people as changes in their way of life, their culture, or their community are experienced. The potential social impacts of the development may therefore include impacts on traffic and visual amenity, services, as well as on employment opportunities in the area. Potential traffic and visual impacts have been discussed previously in this report and are considered acceptable.

The proposal would also provide solar energy to the surrounding area, with all electricity generated being utilised within the LGA. Potential impacts on employment, through the short-term creation of a number of jobs during the construction period, is also considered positive.

Potential economic impacts are considered positive in the respect of creation of approximately 50 jobs within the locality over approximately 6 months during construction. Further to this, local contractors will be employed for landscape maintenance and security purposes during the long term operation period.

5.19 SITE DESIGN AND INTERNAL DESIGN

The site and internal design have been carefully determined considering the site constraints and opportunities, as well as those of the surrounding area and existing infrastructure. Given the location and impacts assessed as part of this, and accompanying reports, the internal and site design are considered appropriate for the proposal.

5.20 CUMULATIVE IMPACTS

Cumulative impacts associated with the development could include individual impacts so close in time that the effects of one are not dissipated before the next or so close in space that the effects overlap. They could also include repetitive, often minor, impacts eroding environmental conditions or different types of disturbances interacting to produce an effect which is greater or different than the sum of the separate effects.

In relation to the proposal, the potential cumulative impacts could include cumulative visual impacts associated with the development of multiple solar developments in the general locality; or cumulative noise, air quality or traffic impacts associated with construction.

It is noted that there are no other solar farm developments located within close proximity of the development site nor are there any other developments which would result in cumulative construction impacts including noise, air quality or traffic. It is therefore considered that cumulative impacts associated with the project would be negligible.

6 PLANNING PROVISIONS

6.1 ENVIRONMENTAL PLANNING AND ASSESSMENT ACT 1979

In NSW the Environmental Planning and Assessment Act 1979 (the Act) institutes a system of environmental planning and assessment in NSW and is administered by the Department of Planning & Environment (DP&E). It is noted that the proposed development is consistent with the objectives of the Act.

Section 1.7 of the Act requires consideration of Part 7 of the Biodiversity Conservation Act 2016 (BC Act). Part 7 of the BC Act relates to Biodiversity assessment and approvals under the Planning Act. Due to portions of the property being identified as 'Terrestrial Biodiversity' a Biodiversity Assessment accompanies this report as described previously. It is considered that the requirements of the BC Act have been satisfied through the preparation of this report and its findings.

As consent is required for the proposed development to be carried out, it is noted that Division 4.3 of the Act applies to the proposal.

Other legislation relevant to the proposal includes:

- State Environmental Planning Policy No. 33 – Hazardous and Offensive Development
- State Environmental Planning Policy (Koala Habitat Protection) 2020;
- State Environmental Planning Policy (Primary Production and Rural Development) 2019
- State Environmental Planning Policy (Infrastructure) 2007;
- State Environmental Planning Policy (State and Regional Development) 2011;
- Narrandera Local Environmental Plan 2013; and
- Narrandera Development Control Plan 2013.

The requirements of these are discussed further on in this report.

6.2 STATE ENVIRONMENTAL PLANNING POLICIES

The below table outlines the SEPPs applicable to this development.

Table 3 Relevant State Environmental Planning Policy Requirements

SEPP	COMMENTS
SEPP33 (Hazardous and Offensive Industry)	The proposed micro solar farm does not pose a significant risk to the locality in relation to human health, life or property, or to the biophysical environment and is therefore not defined as a potentially hazardous industry. The proposal will not emit a polluting discharge which would have a significant adverse impact in the locality or on the existing or likely future development on other land and is therefore not defined as a potentially offensive industry.
SEPP (Koala Habitat Protection) 2020	This policy aims to encourage the proper conservation and management of areas of natural vegetation that provide habitat for koalas to ensure a permanent free-living population over their present range and to reverse the current trend of koala population decline. Schedule 1 of the SEPP does not identify the Dubbo Regional Council LGA as an LGA to which it applies. Further consideration is therefore not required.
SEPP55 – Remediation of Land	When assessing an application for development the consent authority must consider whether the land is contaminated, and if so, that it is suitable in its contaminated state (or will be after remediation) for the purposes of the development. As described previously in this report, the subject site is within a rural area and is not identified as contaminated or potentially contaminated land according to available records. It is noted that agriculture is listed as a land use which has the potential to lead to contamination, however the historical agricultural practices have included grazing and arable cultivation. There is no evidence on site of contamination and the land is considered to be in a suitable state for a solar farm development. Further contamination investigation is considered unnecessary for the proposal.
SEPP (Primary Production and Rural Development) 2019	This policy aims, amongst other things, to facilitate the orderly economic use and development of lands for primary production. A review of the provisions of this policy confirms it does not apply to the proposed development and therefore further consideration is not required.
SEPP (Infrastructure) 2007	The aim of this Policy is to facilitate the effective delivery of infrastructure across the State through a number of mechanisms. The proposal would be defined as electricity generating works being a building or place used for the purpose of making or generating electricity or electricity storage. *Part 3, Division 4 Electricity generating works or solar energy systems* is relevant to the proposal. Under this division, development for the purpose of electricity generating works may be carried out with consent on the subject site given its RU1 Primary Production zoning. Clause 45 of the ISEPP relates to the determination of a DA which has the potential to affect an electricity transmission line. Before determining a DA, which meets the relevant criteria provided by Clause 45, the consent authority must first notify the relevant electricity supply authority and consider any comments made by this authority within 21 days of the notice. Clause 104 of the ISEPP relates to development that constitutes traffic generating development. Schedule 3 of the ISEPP provides a list of

	developments that must be referred to the NSW Roads and Maritime Services (RMS). Electricity generating works are not listed as a development in Schedule 3. Section 104 applies where a development has capacity to accommodate 200 or more vehicles. The development would not have capacity to accommodate 200 or more vehicles either during construction or operation and therefore the development does not represent traffic generating development.
SEPP (State and Regional Development) 2011	This policy aims to identify development that is State significant development; State significant infrastructure; critical State significant infrastructure and regionally significant development. It is noted that the development does not meet the criteria to be classified as State significant development, State significant infrastructure or critical State significant infrastructure due to the capital investment value and the fact the development is being proposed by a private developer. Schedule 7 outlines the development types which are declared to be regionally significant development for the purpose of this Act. The schedule identifies development that has a capital investment value of more than $5 million for the purposes of electricity generating works as regionally significant development. As such the consent authority for the proposal is the Western Regional Planning Panel.

6.3 STRATEGIC FRAMEWORK

6.3.1 CENTRAL WEST AND ORANA REGIONAL PLAN

The Central West and Orana Regional Plan 2036 (CWORP2036) provides a strategic framework for development within the Central West and Orana region. The vision for the CWORP2036 is:

The most diverse regional economy in NSW with a vibrant network of centres leveraging the opportunities of being at the heart of NSW

The *vision* is supported by the following four regionally focussed goals:

- The most diverse regional economy in NSW
- A stronger, healthier environment and diverse heritage
- Quality freight, transport and infrastructure networks
- Dynamic, vibrant and healthy communities

These goals are in turn supported by a range of local directions that provide context and detail to the overarching goals. The directions relevant to the proposed development are described in further detail in the below table.

Table 4 Central West and Orana Regional Plan 2036 Directions

DIRECTION	COMMENTS
1: Protect the region's diverse and productive agricultural land	The proposed development will utilise the agricultural land for a set period of time, after which the project will be decommissioned and the land returned to a suitable standard for continued agricultural use as required. The development will therefore be consistent with this direction and relevant associated actions.
9: Increase renewable energy generation	The proposal will facilitate renewable energy supply within the region, located so as to take advantage of ready access to the existing electrical network. The development will therefore be consistent with this direction and relevant associated actions.
11: Sustainably manage water resources for economic opportunities	As noted previously in this report, the subject site is identified as having groundwater sensitivities. As described previously in Section 5.6 on page 21 of this report, the development is considered compatible with the groundwater sensitivities of the site and as such is consistent with this priority and relevant associated actions.
13: protect and manage environmental assets	The proposal is located on a property identified as containing high biodiversity, riparian land and a waterway. The proposal has been located so as to avoid these areas of the site and as such is consistent with this priority and relevant associated actions.
16: Respect and protect Aboriginal heritage assets	The development is located in an area which is not known to contain any Aboriginal heritage assets and as such is consistent with this priority and relevant associated actions.
21: Coordinate utility infrastructure investment	The proposal will provide for additional renewable electrical provision within the region at no cost to Council and therefore is consistent with this priority and relevant associated actions.

The proposal is therefore considered to be consistent with the CWORP2036.

6.3.2 DUBBO LOCAL STRATEGIC PLANNING STATEMENT

The Dubbo Local Strategic Planning Statement (LSPS) plans for the economic, social and environmental land use needs of the community over the next 20 years. It consists of 20 Planning Priorities organised under five themes, the themes being:

- Economy
- Sustainability
- Infrastructure
- Housing
- Liveability

Each Planning Priority includes a number of key actions which provide context and direction for land use decision making in the LGA. The priorities relevant to the proposed development are described in further detail in the below table.

Table 5 Dubbo Local Strategic Planning Statement Priorities

PRIORITY	COMMENTS
3: Promote renewable energy generation	The proposal will facilitate renewable energy supply within the region, located so as to take advantage of ready access to the existing electrical network. The development will therefore be consistent with this priority and relevant associated actions.
5: Protect and enhance our agricultural industries and agribusiness	The proposed development will utilise the agricultural land for a set period of time, after which the project will be decommissioned and the land returned to a suitable standard for continued agricultural use as required. The development will therefore be consistent with this priority and relevant associated actions.
15: Protect areas of high environmental value and significance	The proposal is located on a property identified as containing high biodiversity, riparian land and a waterway. The proposal has been located so as to avoid these areas of the site and as such is consistent with this priority and relevant associated actions.
16: Recognise, protect and celebrate heritage	The proposal is located on a property identified as containing high biodiversity. The proposal has been located so as to avoid these areas of the site and as such is consistent with this priority and relevant associated actions.
18: Develop resilience to climate change	The proposal will facilitate renewable energy supply within the region, located so as to take advantage of ready access to the existing electrical network. The development will therefore be consistent with this priority and relevant associated actions.
20: Protect and enhance rural lands	The proposed development will utilise the agricultural land for a set period of time, after which the project will be decommissioned, and the land returned to a suitable standard for continued agricultural use as required. The development will therefore be consistent with this priority and relevant associated actions.

The proposal is therefore considered to be consistent with the LSPS.

6.4 DUBBO LOCAL ENVIRONMENTAL PLAN 2011

The subject site is zoned RU2 Rural Landscape under the provisions of the Dubbo Local Environmental Plan 2011 (DLEP2011), as detailed previously in Figure 6 on page 5 of this report.

Although electricity generating works are not a listed permitted use within the zone, *Part 3, Division 4 Electricity generating works or solar energy systems* of the ISEPP states development for the purpose of electricity generating works may be carried out with consent on the subject site given its RU1 Primary Production zoning. It is noted that ISEPP takes precedence over the DLEP2011 in this instance.

An extract from the Land Use Table for the RU2 Rural Landscape zone is provided below for information.

> ***Zone RU2 Rural Landscape***
> ***1 Objectives of zone***
> • *To encourage sustainable primary industry production by maintaining and enhancing the natural resource base.*
> • *To maintain the rural landscape character of the land.*
> • *To provide for a range of compatible land uses, including extensive agriculture.*
> ***2 Permitted without consent***
> *Environmental protection works; Extensive agriculture; Home-based child care; Home occupations; Roads*
> ***3 Permitted with consent***
> *Agricultural produce industries; Agriculture; Animal boarding or training establishments; Aquaculture; Boat launching ramps; Camping grounds; Caravan parks; Cellar door premises; Centre-based child care facilities; Community facilities; Correctional centres; Depots; Dwelling houses; Eco-tourist facilities; Educational establishments; Environmental facilities; Extractive industries; Farm buildings; Forestry; Group homes; Health consulting rooms; Highway service centres; Home businesses; Home industries; Industrial training facilities; Information and education facilities; Jetties; Mooring pens; Moorings; Open cut mining; Plant nurseries; Recreation areas; Recreation facilities (outdoor); Research stations; Respite day care centres; Secondary dwellings; Sewerage systems; Signage; Tourist and visitor accommodation; Truck depots; Water recreation structures; Water supply systems; Wharf or boating facilities*
> ***4 Prohibited***
> *Advertising structures; Hotel or motel accommodation; Intensive livestock agriculture; Serviced apartments; Any other development not specified in item 2 or 3*

As shown previously in the zoning map extract (Figure 6) the surrounding area is zoned a combination of RU2 Rural Landscape, RU1 Primary Production, IN3 Heavy Industrial R5 Large Lot Residential and E2 Private Recreation.

The objectives of the RU2 Rural Landscape zone are outlined in the below table.

Table 6 Objectives of the RU2 Rural Landscape zone

ZONE OBJECTIVES	COMMENTS
To encourage sustainable primary industry production by maintaining and enhancing the natural resource base.	This objective is not relevant to the proposal.
To maintain the rural landscape character of the land.	The proposal satisfies this objective as evidenced by this report, and those accompanying, as it does not detrimentally affect the landscape character of the land. Upon the end of the development life the landscape will be returned

	to its current state without any ongoing long term impacts of the development.
To provide for a range of compatible land uses, including extensive agriculture.	The proposal satisfies this objective as it is considered a compatible land use as evidenced by this report and accompanying assessments.

The below table considers the clauses of the DLEP2011 applicable to the subject development.

Table 7 DLEP 2011 clauses applicable to the subject development

PART 2: PERMITTED OR PROHIBITED DEVELOPMENT			
CLAUSE		COMMENTS	APPLICABLE
2.4	*Unzoned Land*	Not applicable.	N/A
2.5	*Additional permitted uses for particular land*	Not applicable.	N/A
2.6	*Subdivision – consent requirements*	Not applicable.	N/A
2.7	*Demolition requires development consent*	Not applicable	N/A
2.8	*Temporary use of land*	Not applicable.	N/A
PART 3: EXEMPT AND COMPLYING DEVELOPMENT			
CLAUSE		COMMENTS	APPLICABLE
3.1	*Exempt development*	Not applicable.	N/A
3.2	*Complying development*	Not applicable.	N/A
3.3	*Environmentally sensitive land*	Not applicable.	N/A
PART 4: PRINCIPAL DEVELOPMENT STANDARDS			
CLAUSE		COMMENTS	APPLICABLE
4.1	*Minimum subdivision lot size*	Not applicable.	N/A
4.1AA	*Minimum subdivision lot size for community title schemes*	Not applicable.	N/A
4.1A	*Minimum subdivision lot size for Zone RU5, Zone R1 and Zone R2*	Not applicable.	N/A
4.2	*Rural subdivision*	Not applicable.	N/A
4.2A	*Lot size exceptions for certain rural zones*	Not applicable.	N/A
4.2B	*Minimum subdivision lot size for strata subdivisions of residential or tourist and visitor accommodation in certain zones*	Not applicable.	N/A
4.2C	*Erection of dwelling houses on land in certain rural and environmental protection zones*	Not applicable.	N/A

4.3	*Height of buildings*	Not applicable.	N/A
4.4	*Floor space ratio*	Not applicable.	N/A
4.5	*Calculation of floor space ratio and site area*	Not applicable.	N/A
4.6	*Exceptions to development standards*	Not applicable.	N/A

PART 5: MISCELLANEOUS PROVISIONS			
CLAUSE		COMMENTS	APPLICABLE
5.1	*Relevant acquisition authority*	Not applicable.	N/A
5.1A	*Development on land intended to be acquired for public purposes*	Not applicable.	N/A
5.2	*Classification and reclassification of public land*	Not applicable.	N/A
5.3	*Development near zone boundaries*	Not applicable.	N/A
5.4	*Controls relating to miscellaneous permissible uses*	Not applicable.	N/A
5.6	*Architectural roof features*	Not applicable.	N/A
5.7	*Development below mean high water mark*	Not applicable.	N/A
5.8	*Conversion of fire alarms*	Not applicable.	N/A
5.10	*Heritage conservation*	Not applicable.	N/A
5.11	*Bush fire hazard reduction*	Not applicable.	N/A
5.12	*Infrastructure development and use of existing buildings of the Crown*	Not applicable.	N/A
5.13	*Eco-tourist facilities*	Not applicable.	N/A
5.14	*Siding Spring Observatory – maintaining dark sky*	Not applicable.	N/A
5.15	*Defence communications facility*	Not applicable.	N/A
5.16	*Subdivision of, or dwellings on, land in certain rural, residential or environmental protection zones*	Not applicable.	N/A
5.17	*Artificial waterbodies in environmentally sensitive areas in areas of operation of irrigation corporations*	Not applicable.	N/A
5.18	*Intensive livestock agriculture*	Not applicable.	N/A
5.19	*Pond-based, tank-based and oyster aquaculture*	Not applicable.	N/A
5.20	*Standards that cannot be used to refuse consent – playing and performing music*	Not applicable.	N/A

PART 6: URBAN RELEASE AREAS			
6.1	*Arrangements for designated State public infrastructure*	Not applicable.	N/A
6.2	*Public utility infrastructure*	Not applicable.	N/A
6.3	*Development control plan*	Not applicable.	N/A
6.4	*Relationship between Part and remainder of Plan*	Not applicable.	N/A
PART 7: ADDITIONAL LOCAL PROVISIONS			
7.1	*Flood planning*	The property is not identified on the Flood Planning Map however the accompanying Flood, Drainage and Groundwater Assessment discussed previous in this report confirms the site is affected by minor flood depths in a 1% AEP flood event. It is however noted that the proposal area is not affected by flooding from Eulomogo Creek to the south, however it is located within minor and shallow overland flow paths which enter the site from the north east. Given the outcome of the flood assessment, discussed in additional detail in Section 5.11.2 on page 25 of this report, it is considered that the proposal is compatible with the flood hazard of the land and it is not likely to significantly adversely affect flood behaviour resulting in detrimental increases in the potential flood affectation of other development or properties. It is not likely to significantly adversely affect the environment or cause avoidable erosion, siltation, destruction of riparian vegetation or a reduction in the stability of river banks or watercourses, nor is it likely to result in unsustainable social and economic costs to the community as a consequence of flooding.	✓
7.2	*Natural resource – biodiversity*	The development property is identified on the Natural resource – Biodiversity map as shown previously in Figure 17 on page 24 of this report. As described previously, a Biodiversity Assessment was undertaken for the proposal which accompanies this application. Although it is noted that the development is not sited within an area of the property identified as biodiversity, the assessment confirmed that the development will not have any adverse impact on a native vegetation community, the habitat of any threatened species,	✓

		population or ecological community, a regionally significant species of plant, animal or habitat, a habitat corridor, wetland, or the biodiversity values within a reserve, including a road reserve or a stock route. The development is considered compatible with the biodiversity identification of the property.	
7.3	*Earthworks*	Earthworks are required to be carried out to construct footings for various inclusions in the proposal and for construction of hardstand areas for vehicle movements. The earthworks are not likely to have detrimental impacts on existing drainage patterns and soil stability on the site. The development will not affect the likely future use or redevelopment potential of the land as it will be decommissioned at the end of the expected 31-year lifespan. Any material excavated from the site is not expected to be of poor quality and would be reused onsite for any filling, if required. The development is not likely to detrimentally affect the amenity of adjoining properties. Any required fill material would take the form of material excavated during works or certified clean fill would be imported if required. It is unlikely that any relics would be discovered within the footprint of the development. Should relics be found during construction works, all works on site would cease until appropriate notification, investigation and reporting had been undertaken to the appropriate authority and advice received as to how to proceed. The proposal would not adversely impact on any waterway, drinking water catchment or environmentally sensitive area. Appropriate sediment and erosion controls would be in place during construction works.	✓
7.4	*Natural resource – riparian land and waterways*	The southern boundary of the property is identified as containing riparian vegetation as depicted in blue in figure on the following page.	✓

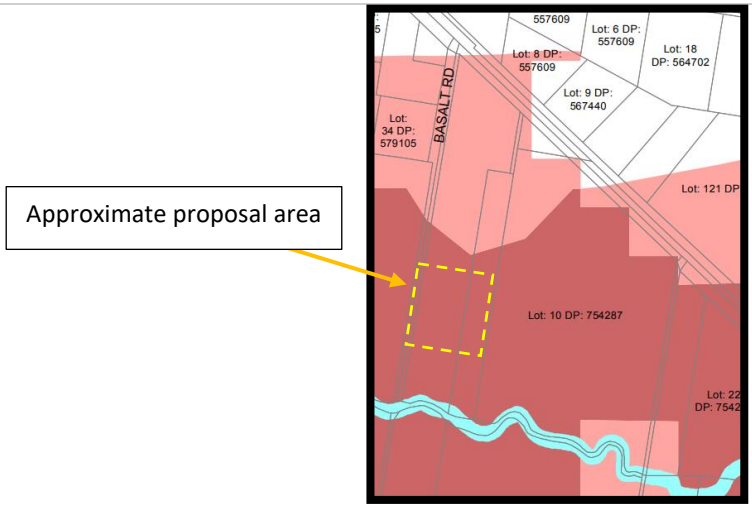

Figure 22 Natural Resource Water Map (Source: DLEP2011)

		The proposal is sited approximately 200 metres north of the riparian vegetation along the Eulomogo Creek and as noted in the accompanying Biodiversity Assessment, the development will not impact on this vegetation. The development will not adversely impact water quality within the waterway, aquatic and riparian habitats and ecosystems, the stability of the bed, shore and banks of the waterway, or the free passage of fish and other aquatic organisms within or along the waterway. It will not adversely affect the habitat of any threatened species, population or ecological community, and will not increase water extraction from the waterway for domestic or stock use.	
7.5	*Groundwater vulnerability*	As shown by the shades of red in Figure 22 Natural Resource Water Map (Source: DLEP2011)Figure 22 of this report, the property is identified as having high and moderately high groundwater sensitivities. Groundwater was discussed previously in Section 5.6 on page 21 of this report. The specific assessment discussed in that section determines that no further action is required beyond preparation of an appropriate environmental management plan at the detailed design phase of the project. It is therefore considered that the development will not cause groundwater contamination or any adverse impacts on groundwater	✓

		dependent ecosystems and that the development will not result in a cumulative impact on groundwater.	
7.6	*Erection of works' dwellings on land in Zoned RU1 and RU4*	Not applicable.	N/A
7.7	*Airspace operations*	Not applicable.	N/A
7.8	*Development in areas subject to aircraft noise*	Not applicable.	N/A
7.9	*Location of sex services premises*	Not applicable.	N/A
7.10	*Dwelling houses in Zone RU4 Primary Production Small Lots*	Not applicable.	N/A
7.11	*Commercial premises in Zone B4 Mixed Use*	Not applicable.	N/A
7.12	*Shops in Zone B1 Neighbourhood Centre*	Not applicable.	N/A
7.12A	*Retail premises on certain land at Boundary Road, Dubbo*	Not applicable.	N/A
7.12B	*Dwelling houses on certain land at Warrie Road, Dubbo*	Not applicable.	N/A
7.12C	*Use of certain land at Camp Road Dubbo*	Not applicable.	N/A
7.13	*Restricted premises*	Not applicable.	N/A
7.14	*Rural and nature-based tourist facilities*	Not applicable.	N/A
7.15	*Maximum number of lots*	Not applicable.	N/A
7.16	*Matter for consideration by consent authority in relation to impacts of salinity on particular land*	Not applicable.	N/A

The development is considered consistent with the relevant sections of the DLEP2011.

6.1 DUBBO DEVELOPMENT CONTROL PLAN 2013

The proposal is considered in relation to the objectives and controls of *Section 2.4 Rural Development and Subdivisions* of the Dubbo Development Control Plan 2013 (DDCP2013) in the below table.

ELEMENT 1: SITE INTEGRATION		
MATTER FOR CONSIDERATION	COMMENTS	CONSISTENT
Amenity	As described in previous sections of this report, the proposal will not have any adverse impacts on amenity or privacy of surrounding land.	✓
Rural landscape	As described previously in Section 5.2 on page 18 of this report, the proposal is considered compatible with the surrounding environment.	✓
Prevailing winds	Not applicable.	N/A
Existing opportunities	The development is ideally located so as to reduce potential impacts on surrounding land uses, while also being provided with the opportunity for connection to the Essential Energy electrical network which is a key requirement of the proposal. It is also noted that the project area will be reinstated to a standard suitable for continued agricultural use following decommissioning of the solar farm at the end of its useful life.	✓
Natural hazards	The accompanying Bushfire Assessment and Bushfire Emergency Management and Operations Plan adequately addresses the relevant bushfire hazard to the proposal. As described previously in Section 5.11.2 on page 25 of this report, the proposal is compatible with the minor flood hazard of the land without requiring evacuation plans to be prepared.	✓
Buffer areas	Noted. Due to the nature of the proposal the location of the development is considered suitable without adversely affecting adjoining zones.	✓
ELEMENT 2: SERVICES		
MATTER FOR CONSIDERATION	COMMENTS	CONSISTENT
Water	A rainwater tank with the required minimum capacity for bushfire firefighting purposes will be provided on the site in accordance with Planning for Bushfire 2019 requirements as necessary.	✓
Electricity	As described throughout this report, the site is ideally located to allow access to the nearby Essential Energy electrical network infrastructure required for the project to succeed.	✓
Telecommunications	Not applicable.	N/A
Service corridors	Noted. The proposal will not require the removal of vegetation for servicing purposes nor will services impact on	✓

	watercourses, wetlands, water bodies or other environmentally-sensitive areas.	
ELEMENT 3: ACCESS		
MATTER FOR CONSIDERATION	**COMMENTS**	**CONSISTENT**
Sight distance	Adequate sight distance is provided at the access to allow safe manoeuvring to and from the property.	✓
All-weather access	All-weather access will be provided from the development to the public road as described in previous sections of this report.	✓
Access in times of flood	As described previously in this report, the flood hazard affecting the site is not such as to reduce access to and from the site in a flood event.	✓
Emergency vehicles	Access for emergency vehicles will be available in times of fire, flood and other emergencies.	✓
Traffic movements and parking	The proposed traffic movements and parking arrangements are identified in previous sections of this report and are considered suitable for the nature of the development.	✓
ELEMENT 4: DESIGN FOR ACCESS AND MOBILITY		
MATTER FOR CONSIDERATION	**COMMENTS**	**CONSISTENT**
Access and mobility provisions for people with a disability	Not applicable.	N/A
ELEMENT 5: FLOODING		
MATTER FOR CONSIDERATION	**COMMENTS**	**CONSISTENT**
Location	The development is located on the site to ensure it is not affected by flooding from the nearby creek. The development will not adversely impede the flow of flood waters.	✓
Flood evacuation plan	N/A	N/A
ELEMENT 6: WASTE MANAGEMENT		
MATTER FOR CONSIDERATION	**COMMENTS**	**CONSISTENT**
Domestic solid waste	N/A	N/A
Domestic liquid waste	N/A	N/A
Agricultural, hazardous and industrial waste	Proposed waste disposal methods are described previously in Section 5.8 on page 23 of this report.	✓

It is noted that elements 7 to 12 inclusive are not relevant to the proposal. The development is considered consistent with the relevant sections of the DLEP2011.

7 Conclusion

This SEE report has been prepared to support a development application for a proposed micro solar farm to be located at 47R Wellington Road, Dubbo.

The proposal has been described and discussed in previous sections of this report, and has been considered in respect of the relevant planning provisions applicable to the proposed development. The proposal is considered to be permissible for the following reasons:

- The proposal satisfies the relevant and applicable legislative and State Environmental Planning Policy provisions;
- The proposal is consistent with the aim and directions of the Central West and Orana Regional Plan 2036 and Council's Local Strategic Planning Statement;
- The proposal is permissible under the provisions of ISEPP;
- The proposal would not have any significant adverse environmental consequences during operation, including adverse air quality or acoustic impacts over and above the existing conditions, as discussed previously in this SEE report; and
- The proposal is not likely to have detrimental effects on the surrounding area.

As demonstrated throughout this report, the development is permissible with consent, subject to a merits assessment.

8 List of Appendices

Appendix A: AHIMs Results

9 List of Separate Cover Attachments

Development Plan set prepared by ACEnergy

Bushfire Assessment and Bushfire Emergency Management and Operations Plan prepared by MJM Consulting Engineers

Draft Construction Management Plan prepared by ACLE Services

Traffic Impact Assessment prepared by Barnson

Biodiversity Assessment prepared by Premise

Landscape Screening Plans prepared by Ground Control Landscape Architecture

Landscape and Visual Impact Assessment prepared by de Witt Consulting

Glint and Glare Impact Assessment prepared by Environmental Ethos

Site Detail Survey prepared by Premise

Construction and Operational Noise and Vibration Assessment prepared by Watson Moss Growcott Acoustics

Flood, drainage and Groundwater Assessment prepared by Water Technology

APPENDIX A: AHIMS RESULTS

Office of Environment & Heritage
NSW GOVERNMENT

AHIMS Web Services (AWS)
Search Result

Purchase Order/Reference : 210066
Client Service ID : 577375

MJM Consulting Engineers
Level 1, 37 Johnston Street
Wagga Wagga New South Wales 2650
Attention: Jenna Amos

Email: jenna.amos@mjm-solutions.com

Date: 18 March 2021

Dear Sir or Madam:

AHIMS Web Service search for the following area at Lot : 190, DP:DP754308 with a Buffer of 1000 meters, conducted by Jenna Amos on 18 March 2021.

The context area of your search is shown in the map below. Please note that the map does not accurately display the exact boundaries of the search as defined in the paragraph above. The map is to be used for general reference purposes only.

A search of the Office of the Environment and Heritage AHIMS Web Services (Aboriginal Heritage Information Management System) has shown that:

0	Aboriginal sites are recorded in or near the above location.
0	Aboriginal places have been declared in or near the above location. *

If your search shows Aboriginal sites or places what should you do?

- You must do an extensive search if AHIMS has shown that there are Aboriginal sites or places recorded in the search area.
- If you are checking AHIMS as a part of your due diligence, refer to the next steps of the Due Diligence Code of practice.
- You can get further information about Aboriginal places by looking at the gazettal notice that declared it. Aboriginal places gazetted after 2001 are available on the NSW Government Gazette (http://www.nsw.gov.au/gazette) website. Gazettal notices published prior to 2001 can be obtained from Office of Environment and Heritage's Aboriginal Heritage Information Unit upon request

Important information about your AHIMS search

- The information derived from the AHIMS search is only to be used for the purpose for which it was requested. It is not be made available to the public.
- AHIMS records information about Aboriginal sites that have been provided to Office of Environment and Heritage and Aboriginal places that have been declared by the Minister;
- Information recorded on AHIMS may vary in its accuracy and may not be up to date .Location details are recorded as grid references and it is important to note that there may be errors or omissions in these recordings,
- Some parts of New South Wales have not been investigated in detail and there may be fewer records of Aboriginal sites in those areas. These areas may contain Aboriginal sites which are not recorded on AHIMS.
- Aboriginal objects are protected under the National Parks and Wildlife Act 1974 even if they are not recorded as a site on AHIMS.
- This search can form part of your due diligence and remains valid for 12 months.

3 Marist Place, Parramatta NSW 2150
Locked Bag 5020 Parramatta NSW 2220
Tel: (02) 9585 6380 Fax: (02) 9873 8599

ABN 30 841 387 271
Email: ahims@environment.nsw.gov.au
Web: www.environment.nsw.gov.au