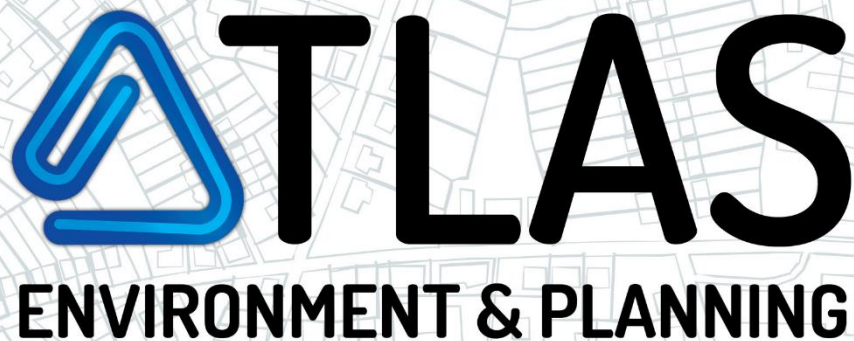




Statement of Environmental Effects
for the Proposed Solar PV Power Generation
Plan, 33 Blain Road, MUDGEE, being Lot 289
DP756894 Lot 90 and 91 DP756897

prepared for
Mid-Western Regional Council

Oct 2021



Emma Yule t/a Atlas Environment and Planning (Atlas), responsible for the preparation and contents and information provided within this report declare that there is no current benefit nor expect to have a beneficial interest in the study area of this project and will not benefit from any of the recommendations outlined in this report.

The preparation of this report has been in accordance with the project brief provided by the client and has relied upon the information, data and results provided or collected from the sources and under the conditions outlined in the report.

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VERSION AND AMENDMENT CONTROL HISTORY

VERSION	DATE	DESCRIPTION	QA/QC
001	JUNE 2021	DRAFT FOR CLIENT REVIEW	CLIENT
002	OCT 2021	FINAL	EY



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Supporting Documents referenced in the preparation of this report:

- Plans of the Proposal prepared by ENGIE.
- Land Use Conflict Risk Assessment.
- Traffic Assessment Report prepared by Triaxial Consulting.
- Visual Plan prepared by Triaxial Consulting.
- Stormwater Management Plan prepared by Triaxial Consulting.
- Noise and Vibration Impact Assessment prepared by Spectrum Acoustics.
- Geotechnical Investigation Report prepared by Macquarie Geotech.



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1 INTRODUCTION

1.1 OVERVIEW

Atlas Environment and Planning has been engaged by Mid-Western Regional Council to prepare a Statement of Environmental Effects to describe the proposed solar photovoltaic (PV) power generation plant at 33 Blain Road, Mudgee. This Statement of Environmental Effects (SEE) includes supporting reports and details to describe the development and assess the potential impacts of the proposal. The proposed development includes the following:

- Establishment of a grid-connected solar photovoltaic (PV) plant including associated electrical generation, supplying no greater than 5 megawatts (MW) (using single axis trackers);
- New section of access road to progress to the development site through the Mudgee Sewage Treatment Plant and improvements for access through the Mudgee Waste Depot and – 5-6m wide access road to the site;
- High chain link security fencing min 2m high; and
- Other associated site improvements as shown on the Plans.

The land does not have frontage to a public road and will be accessed from Hill End Road via Blaine Road and the Mudgee Waste Depot and Mudgee Sewage Treatment Plant. Subdivision of land and creation of carriageways is not proposed to facilitate the development, with the land accessed by other Council asset related land. The plans supporting this application demonstrate how the proposed layout relates to the existing lot boundaries, existing and proposed infrastructure, and interaction with the existing environment. The existing Lot 289 DP756894 supports much of the proposed solar infrastructure, this land is currently vacant and not set aside for other Council infrastructure.

Appendices:

- Appendix A – AHIMS Search Results.

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2 BACKGROUND

2.1 SITE IDENTIFICATION

Owner: Mid-Western Regional Council

Site address: 33 Blain Road, MUDGEE.

Land description: Lot 90 and 91 DP756897 and Lot 289 DP756894.

Property Description: The subject land includes approximately 17ha. Mid-Western Regional Council operations - Sewage Treatment Plant (STP) and Mudgee's Waste Depot are also associated with this address.

The site is located approximately 5.3km from the Mudgee Post Office in Market Street (accessed via Market Street, Castlereagh Highway, Hill End Road and Blaine Road). The location of the subject land is shown below in **Figure 1**.

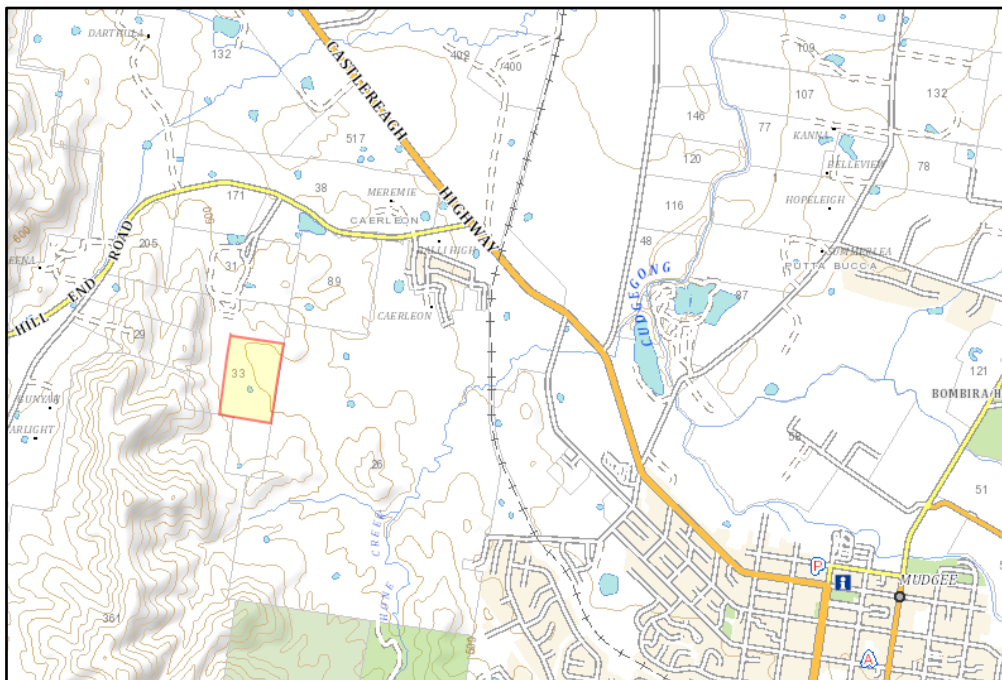


Figure 1: Site Location – part of 33 Blain Road, MUDGEE

Source: (NSW Government Land and Property Information- six maps viewer).



3 EXISTING SITE CONDITIONS

Prior to preparing the detailed design and this SEE, a Land Use Conflict Risk Assessment (LUCRA) was performed. The LUCRA was also provided for pre-lodgement comment to MWRC staff and describes the existing site conditions and potential land use conflicts. The subject site location is mostly screened due to the topography; however, the locality has varied land uses in vicinity to the site:

- To the immediate north of the site lies: Mid-Western Regional Council operations - Sewage Treatment Plant (STP) and Mudgee's Waste Depot.
- To the east of the site: R5 Large Lot Residential land and R1 General Residential land currently undeveloped forming part of the development known as Caerleon site and referenced in the DCP.
- To the west of the site is: private land in multiple holdings, including treed slopes zoned E3 Environmental Management. These parcels have access off Old Grattai Road and dwellings located over a treed ridge screened from the development site.
- To the south of the site: similarly cleared RU1 Primary Production zoned land and treed slopes that extend to the Avisford Nature Reserve (located > 1km).

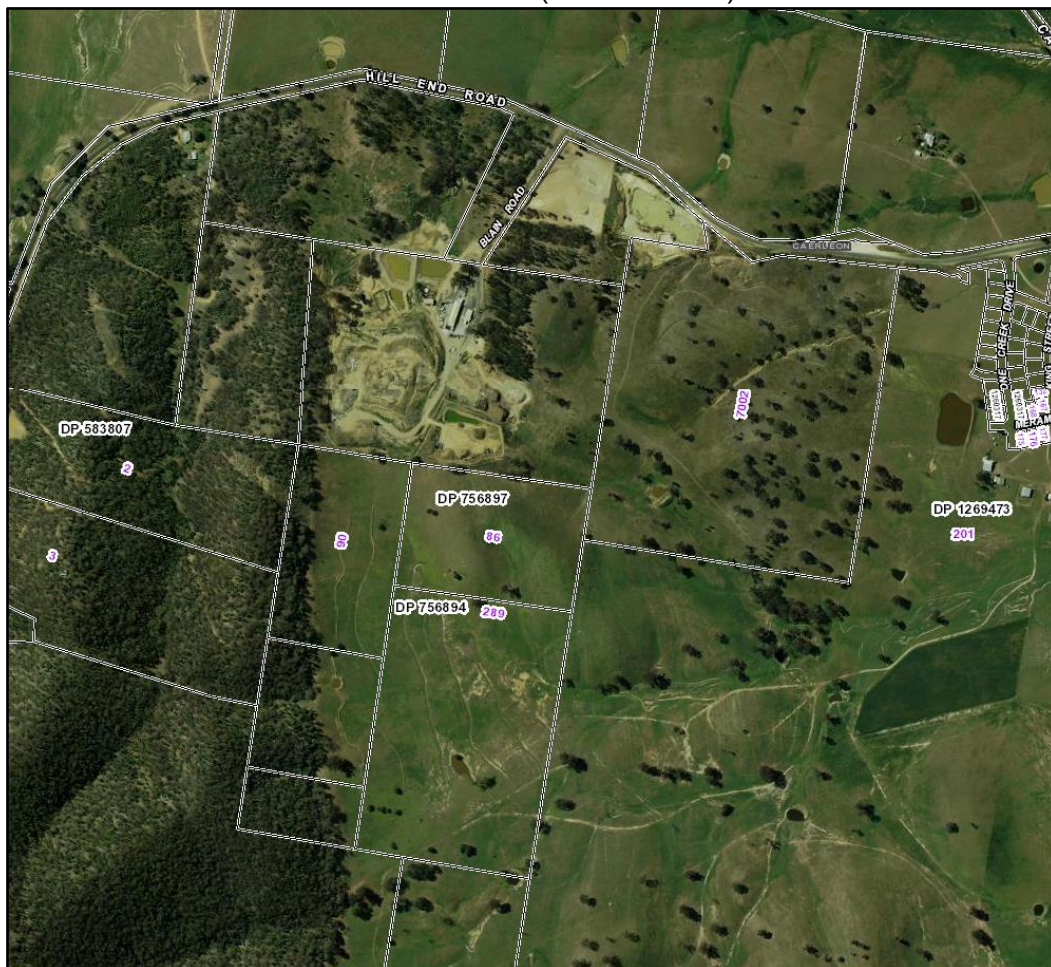


Figure 2: Aerial – vicinity of subject land

Source: (Six Maps).

Photos of current site conditions are provided below.



Plate 1: View from STP boundary towards sth west (existing security fencing)



Plate 2: Typical site conditions (existing contours established with previous farm practices)



Plate 3: View to north-west from closest sewage pond to the proposed site (access road to be extended).

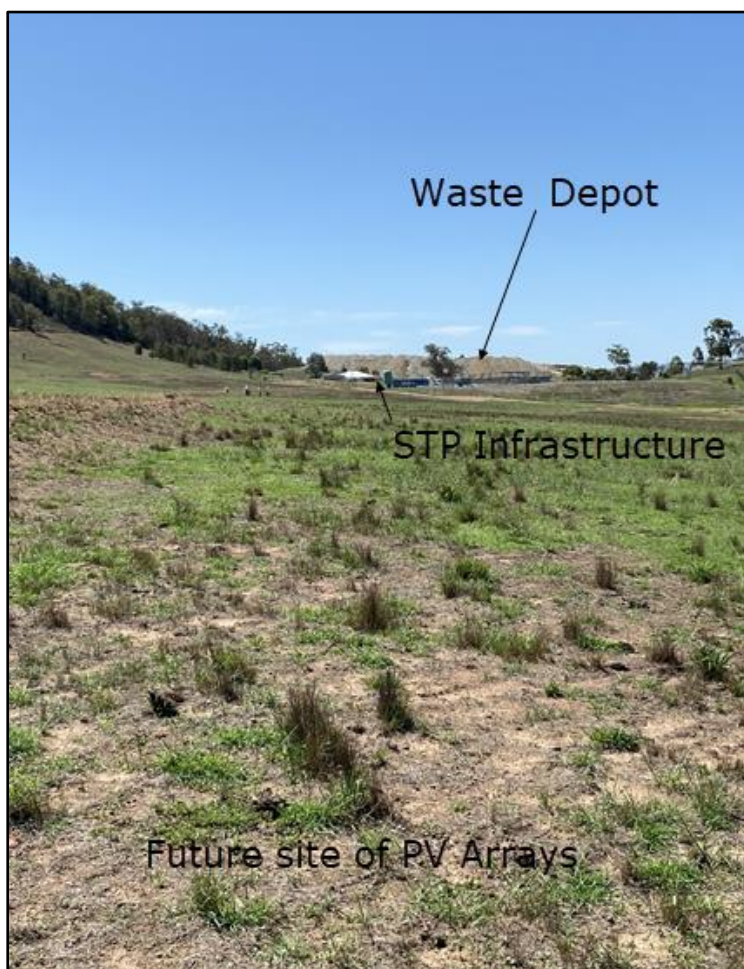


Plate 4: View to north from future site of the PV arrays



Plate 5: Fruiting trees within Lot 289 that may have been planted in association with site of a previous farm building (unconfirmed)

Prior to progression of the proposed development concept, the site analysis identified potential site issues. In summary the following is noted:

- The land is mapped as Bushfire Prone land (category 1 and 2). Provisions of Planning for Bushfire Protection 2019 considered in this SEE.
- The lots included within the assessed development area are partially mapped with High Biodiversity Sensitivity land (Sensitivity Biodiversity Map - Sheet BIO_006, Mid-Western Regional Local Environmental Plan 2012). MWR LEP 2012 Clause 6.5 to be considered in this SEE.
- The land is within the mapped Sewage Treatment Plant Buffer (Sewage Treatment Plant Buffer Map - Sheet STB_006, Mid-Western Regional Local Environmental Plan 2012). MWR LEP 2012 Clause 6.12 to be considered in this SEE.
- The lots included within the assessed development area, are partially mapped within "Visually Sensitive Land" (Flood Planning Map Active Street Frontages Map Visually Sensitive Land Map Sheet CL1_006, Mid-Western Regional Local Environmental Plan 2012). MWR LEP 2012 Clause 6.10 considered in this SEE.
- The lots included within the development area are partially mapped within "Groundwater Vulnerable" land (Groundwater Vulnerability Map - Sheet GRV_006, Mid-Western Regional Local Environmental Plan 2012). MWR LEP 2012 Clause 6.4 to be considered in this SEE.



- AHIMS Basic Searches had been carried out as part of the LUCRA in September 2020 and updated with this report. These will identify whether there are any Aboriginal sites recorded in the search area. An Aboriginal site that is recorded on AHIMS could be:
 - an Aboriginal object (as defined under the NPW Act),
 - a group (i.e. a collection, scattering, deposit etc) of Aboriginal objects,
 - an area of land containing Aboriginal objects,
 - a 'potential' archaeological deposit which is an area where, based on previous investigation, Aboriginal objects are likely to be present,
 - a declared Aboriginal place (as defined under the NPW Act), which may or may not contain Aboriginal objects,
 - an Aboriginal site that has been partially or completely destroyed under the conditions of a past consent.

The searches showed zero (0) recorded sites within 200m of all searched lots. Due diligence assessment required.

- An existing farm dam and first order watercourse are located within the development site. The application is lodged as 'Integrated Development' and a controlled activity approval to be sought for works within vicinity to the mapped drainage line. Contouring practices however have altered the drainage pattern occurring on site. In this instance it is unlikely that the controlled activity approval is required and NRAR may consider the site from exempt from this approval process.



4 THE PROPOSAL

4.1 DESCRIPTION OF THE DEVELOPMENT

The Mid-Western Regional Council as a developer of a solar farm project is part of an initiative to benefit the wider community. The project is a collaboration with Engie Electrical and Communications. Electricity generated will connect back to distribution lines through a separate approval process with Essential Energy. The proposal includes a no larger than 5MW grid-connected solar PV installation (solar photovoltaic (PV) power generation plant). The solar farm will be connected to Essential Energy's network via a 22 kV distribution line at a point within Council's STP facility (switchboard location to be confirmed).

Most of the infrastructure will be prefabricated off-site, delivered, and assembled on-site. The proposed development aims to erect and estimated 9408 solar PV panels (refer to system arrangement summary below). The transformer substation inverter station will be the determining infrastructure that limits the production to less than 5MW. The single-axis trackers will have a height of 2.6m (with PV modules) at maximum tilt. The PV mounting structure will comprise steel posts driven to below ground using a small pile driver (as per geotechnical report and engineers design).

The proposed development will not require the entire removal of vegetation within the development area, it is noted that the site has already been cleared for agricultural purposes in the past, and earthworks carried out for contour installation. Small areas of the property have high biodiversity value and threshold criteria are exceeded the Biodiversity Offset Scheme is triggered and preparation of a Biodiversity Assessment Development Report (BDAR) was necessary.

A new access road is proposed to traverse past the Mudgee STP. It is proposed that a Traffic Management Plan be prepared (likely as a condition of approval prior to release of a Construction Certificate) to ensure measures are adopted to maintain safety and access through the Waste Depot and STP to Hill End Road and minimise disturbance to regular functions.

The solar farm will be fully fenced with min 2m high security fencing including barbed wire at the top (as per existing STP fencing). The main gate access will be provided on the northern border of the site. Emergency access gates will be provided on eastern and southern sides of the site. A construction period car park area, off load area and temporary construction office are indicatively to be in the site area avoided for possible future sewage pond. Additionally, there will be a clearance of panels and vegetation around the perimeter of the solar farm, to allow for vehicle access, including fire trucks. Motion activated security lighting may be installed at the site, in addition to the proposed CCTV solution with alarm system at gates.

Earthworks for the project would include: any site levelling (removal of contour banks), access road, drainage diversions to sediment basin, basin and any laydown area. During the construction period there is estimated to be up to 25 workers. The solar PV farm is proposed to operate 24 hours a day, 7 days a week, with no permanent staff on site. Maintenance inspections will be undertaken by up to 10 workers on an occasional basis (4-12 times yearly) or on an as needs basis with no permanent site facilities proposed.



4.1.1 SUMMARY OF KEY DEVELOPMENT DETAILS

The information in this SEE should be in reference to the plans of the development.

Technical information

The technical information is a reasonable representation of the typical technologies and technical specifications of a solar system of this capacity at the proposed location. All equipment information is provided on a typical basis, as manufacturers and models have not yet been awarded for this project. Datasheets of main components (PV Modules, Single-Axis Trackers, Inverters) had been attached to the LUCRA and include:

- Cell data – TR 72M 515-535 Wall Mono-facial (Jinkosolar);
- Tracker details – NX Horizon;
- Power station – MV;
- Sheet for Diffuse Reflectivity of Jinko PV module.

Component specifications	Dimensions (Typical)	Weight (Typical)
PV modules	L 2230 x W 1134 x H 35mm	28.79 kg
Single-Axis Trackers	L 100 x W 0.5 x H 1.5 m (without PV modules) L 100 x W 2.3 x H 2.6 m (with PV modules)	
Inverters	L 6058 x W 2438 x H 2896 mm	18 tonnes

System arrangement		
Trackers (rows)	112	
PV modules per tracker (row)	84	
Total PV modules	9408	
Tracker pitch (row spacing, centre-to-centre)	6 m	

Technical noise emission sources typically considered:

- Inverter (e.g. 67.0 dB(A) with distance 10 m)
- Tracker motors
- Transformer substation

Glare assessment

Information from panel manufacturers is available as guidance on reflectance of solar PV modules. The proposed development is expected to use of the type "Mono (Anti-Reflection Coating (ARC) glass)", for which the Diffuse Reflectivity (Albedo) Value is stated at 5.35% in the attached technical sheets.



The manufacturers also advise that the effect of ARC is that the panels have similar or better glare/glint properties when compared to roofing materials.

Underground and aboveground components and infrastructure

Most components and infrastructure of the solar farm will be installed or constructed aboveground.

Underground infrastructure will include:

- DC cables within the PV array and to the inverter location
- High Voltage AC cables from the Transformer to the HV switchboard
- Low Voltage AC cables from the Transformer to the HV switchboard and inverter location
- Communications cables following similar routes to the cables stated above
- Foundations: Concrete slabs; Piers.

Services required for the solar farm (permanent office, maintenance schedule, access arrangements...)

Expected services required for the plant:

- Electricity (generation export and auxiliary consumption)
- Water (cleaning)
- Communications (remote monitoring and security)
- Access roads
- Stormwater drainage Operation:
 - Site access expected to be occasional (4-12 times yearly)
 - Up to 10 workers on site during maintenance and cleaning works
 - Limited park and set-down area
 - No site facilities.

Landscaping proposed

- Grubbing and clearing where necessary throughout the plant area.
- Roads and electrical infrastructure will additionally require levelling as well as soil compaction and/or surface gravel or similar.
- Contour banks are also expected to be levelled or modified to allow the positioning of solar tracker with compliant clearances.
- Planting of screening vegetation or as required for appropriate natural resource management.

Construction phase

- Up to 25 workers on site at the peak including superintendence
- Temporary site facilities
 - Site office;
 - Site crib room
 - Male & Female amenities
 - Stand-alone generator to compound
- Park and set-down area
- Deliveries: 35 to 45 40ft containers over a 10-week period expected at the peak of construction
- Heavy machinery (landscaping and pier piling).



Security measures proposed in design

A permanent fencing solution with gates at access points will be deployed in the early stages of construction.

During operation, a CCTV solution with remote viewing and alarm system will be installed and maintained at gates and key points of the solar farm.

Life expectancy of project and decommissioning phase

PV System operational lifetime is 25 years

Rehabilitation of the site

The infrastructure can be removed, and ground surface levelled (holes filled) to enable reverting the land suitable for passive primary production purposes/& buffer to the STP and Waste Depot.

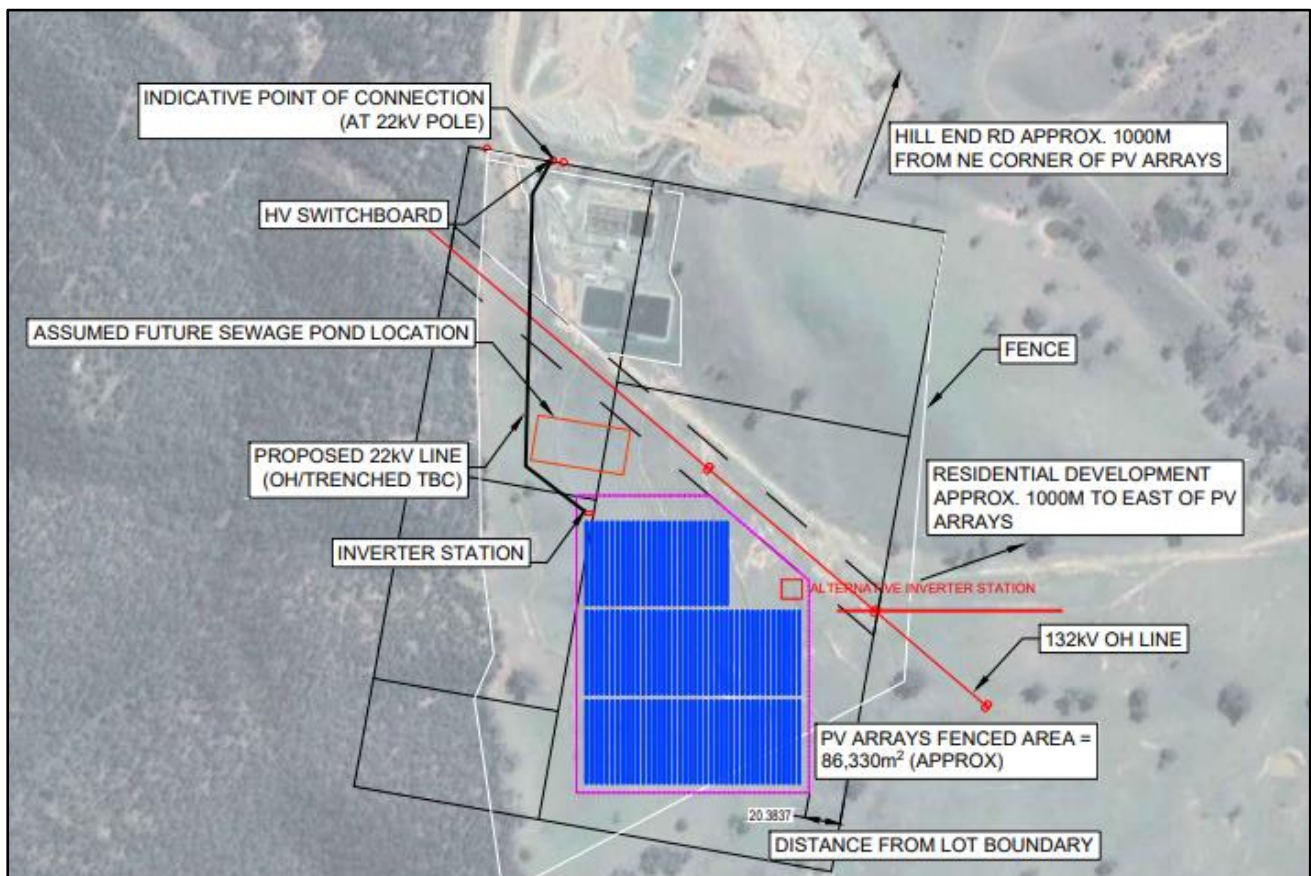


Plate 6: Aerial view with proposed site layout



5 LEGISLATIVE CONTEXT

5.1 BIODIVERSITY CONSERVATION ACT 2016

The *Biodiversity Conservation Act 2016*, together with the *Biodiversity Conservation Regulation 2017*, outlines the framework for addressing impacts on biodiversity from development and clearing. The Biodiversity Offsets Scheme applies to local development (assessed under Part 4 of the Environmental Planning and Assessment Act 1979) that triggers the Biodiversity Offsets Scheme threshold or is likely to significantly affect threatened species based on the test of significance in section 7.3 of the *Biodiversity Conservation Act 2016*.

The Biodiversity Assessment Method (BAM) is the assessment manual that outlines how an accredited person assesses impacts on biodiversity at development sites. The assessor documents the results of the biodiversity assessment in a Biodiversity Development Assessment Report (BDAR). A proponent must provide the BDAR to the approval authority as part of their development, major project proposal, or clearing application.

The Biodiversity Offsets Scheme Threshold is a test used to determine when is necessary to engage an accredited assessor to apply the Biodiversity Assessment Method (the BAM) to assess the impacts of a proposal.

The threshold has two elements:

1. Whether the amount of native vegetation being cleared exceeds a threshold area set out below.
2. Whether the impacts occur on an area mapped on the Biodiversity Values map published by the Minister for the Environment.

If clearing and other impacts exceeds either trigger, the Biodiversity Offset Scheme applies to the proposed development.

Part of the development site is mapped as having Biodiversity Values map triggered. Hence a Biodiversity Assessment Report was required to be submitted with the development application. Refer to the Biodiversity Development Assessment Report (BDAR) prepared by Access Environmental Planning. In summary, the assessed condition means no ecosystem or species credits are required to offset the biodiversity impacts of the proposal. Effects from prescribed impacts will be reduced by the implementation of safeguards. No species are likely to be exposed to serious and irreversible impacts.

5.2 ENVIRONMENTAL PLANNING AND ASSESSMENT ACT

In determining a development application, a consent authority is to take into consideration such of the following matters as are of relevance to the development pursuant to Section 4.15 of the Environmental Planning and Assessment Act 1976.

This Statement of Environmental Effects aims to assist in this consideration. Further assessment of relevant LEP provisions and SEPPs are addressed below.



5.2.1 Integrated Development

Part 4 Division 4.8 Section 4.46 of the *Environmental Planning and Assessment Act 1979* (EP&A Act) outlines what is 'Integrated Development'. This development is 'integrated' as referred in the Act - This proposal has been assessed as potentially requiring the following:

- **Water Management Act 2000**– Section 91 Controlled Activity Approval – s91(2) A controlled activity approval confers a right on its holder to carry out a specified controlled activity at a specified location in, on or under waterfront land.

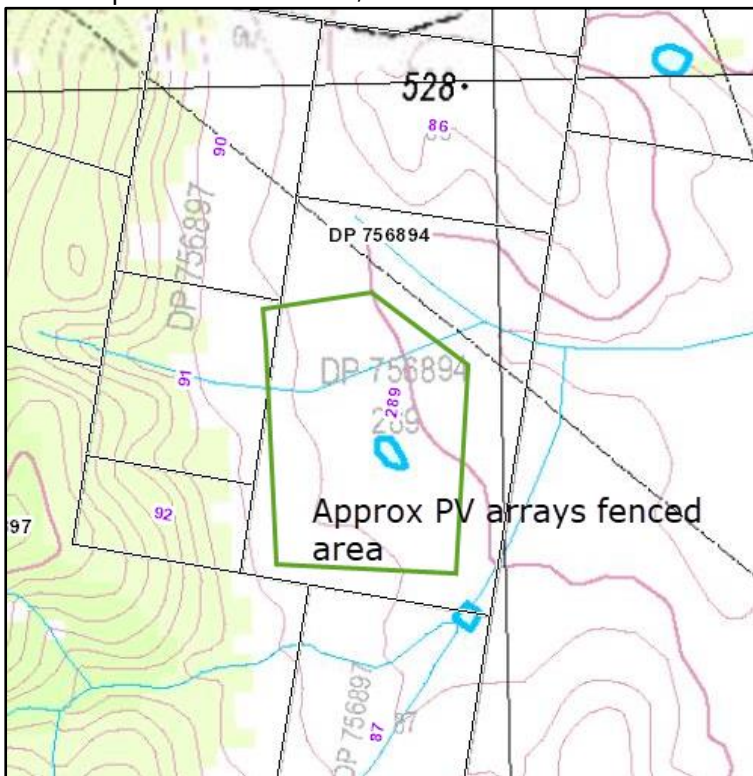


Figure 3: Location of mapped watercourse in vicinity to proposed solar farm site

5.2.2 Evaluation- Part 4 Division 4.3 Section 4.15

The following sections refer to relevant matters:

Section 6 refers to Part 4 Division 4.3 Section 4.15:

Part 4 Division 4.3 Section 4.15 (1) (a) the provisions of:

- (i) any environmental planning instrument, and*
- (ii) any proposed instrument that is or has been the subject of public consultation under this Act and that has been notified to the consent authority (unless the Secretary has notified the consent authority that the making of the proposed instrument has been deferred indefinitely or has not been approved), and*
- (iii) any development control plan, and*
- (iii) any planning agreement that has been entered into under section 93F, or any draft planning agreement that a developer has offered to enter into under section 93F, and*
- (iv) the regulations (to the extent that they prescribe matters for the purposes of this paragraph), and*
- (v) any coastal zone management plan (within the meaning of the Coastal Protection Act 1979), that apply to the land to which the development application relates,*



Section 7 refers to Section 4.15 (1)(b) to (e)

- (b) the likely impacts of that development, including environmental impacts on both the natural and built environments, and social and economic impacts in the locality,*
- (c) the suitability of the site for the development,*
- (d) any submissions made in accordance with this Act or the regulations,*
- (e) the public interest.*



6 EVALUATION - LEGISLATION

6.1 STATE ENVIRONMENTAL PLANNING POLICIES

6.1.1 *State Environmental Planning Policy (State and Regional Development) 2011*

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

Schedule 7 Regionally significant development

3 Council related development over \$5 million

Development that has a capital investment value of more than \$5 million if—

- (a) a council for the area in which the development is to be carried out is the applicant for development consent, or*
- (b) the council is the owner of any land on which the development is to be carried out, or*
- (c) the development is to be carried out by the council, or*
- (d) the council is a party to any agreement or arrangement relating to the development (other than any agreement or arrangement entered into under the Act or for the purposes of the payment of contributions by a person other than the council).*

The proposed development is considered to be Council related development with a CIV greater than \$5 million and with reference to Schedule 7 is deemed to be regionally significant development and the application will be referred to the Regional Planning Panel (RPP) for determination.

6.1.2 *State Environmental Planning Policy (Infrastructure) 2007*

Reference is made to Division 4 Electricity generating works or solar energy systems. A photovoltaic electricity generating system is included in the definition of 'solar energy system'. Further, in this Division— electricity generating works has the same meaning as it has in the Standard Instrument. Electricity generating works means a building or place used for the purpose of—

- (a) making or generating electricity, or
- (b) electricity storage.

The subject land is zoned RU1 Primary Production and in accordance with clause 34 the development is permitted with consent. Clause 34 (7) Solar energy systems states: *"Development for the purpose of a solar energy system may be carried out by any person with consent on any land"*.

In accordance with clause 36 Development permitted without consent

"cl. 36 (1) Development for any of the following purposes may be carried out by or on behalf of a public authority without consent on any land—

- (b) routine maintenance of, or emergency works relating to, electricity generating works..."*

Future approvals are hence not required for future maintenance works.

The development nor separate components do not meet the requirements to be considered as 'exempt' development with reference to clause 39(3).



6.1.3 State Environmental Planning Policy No 55—Remediation of Land

State Environmental Planning Policy 55 (SEPP 55) requires planning authorities to consider potential for contamination at a site prior to planning decisions being made. Clause 7 requires Council to consider prior to determination of a development application whether the site is contaminated and suitable for the proposal. No detail of history has been identified that would suggest previous incompatible land use. The land has been used for previous grazing and has been subject to earthworks for land contour banks being formed. The land has most recently been held as part of buffer lands to the Mudgee Waste Depot and Mudgee STP, with no contaminating land uses associated with the proposed solar farm site. Based on this, the development should not be hindered for reasons of potential for site contamination.

6.2 MID-WESTERN REGIONAL LOCAL ENVIRONMENTAL PLAN

The Mid-Western Regional LEP 2012 applies to the subject site. The subject land is zoned RU1 Primary Production.

Zone RU1 Primary Production

1 Objectives of zone

- *To encourage sustainable primary industry production by maintaining and enhancing the natural resource base.*
- *To encourage diversity in primary industry enterprises and systems appropriate for the area.*
- *To minimise the fragmentation and alienation of resource lands.*
- *To minimise conflict between land uses within this zone and land uses within adjoining zones.*
- *To maintain the visual amenity and landscape quality of Mid-Western Regional by preserving the area's open rural landscapes and environmental and cultural heritage values.*
- *To promote the unique rural character of Mid-Western Regional and facilitate a variety of tourist land uses.*

2 Permitted without consent

Environmental protection works; Extensive agriculture; Home businesses; Home occupations; Intensive plant agriculture; Roads; Water reticulation systems

3 Permitted with consent

Aquaculture; Building identification signs; Business identification signs; Cellar door premises; Dwelling houses; Extractive industries; Farm buildings; Home industries; Intensive livestock agriculture; Landscaping material supplies; Markets; Open cut mining; Plant nurseries; Restaurants or cafes; Roadside stalls; Any other development not specified in item 2 or 4

4 Prohibited

Amusement centres; Attached dwellings; Backpackers' accommodation; Boarding houses; Boat building and repair facilities; Car parks; Centre-based child care facilities; Commercial premises; Correctional centres; Crematoria; Educational establishments; Exhibition homes; Exhibition villages; Freight transport facilities; Group homes; Health services facilities; Heavy industrial storage establishments; Hostels; Industrial retail outlets; Industries; Marinas; Mortuaries; Multi dwelling housing; Passenger transport facilities; Places of public worship; Public administration buildings; Pubs; Recreation facilities (indoor); Registered clubs; Residential flat buildings;



Respite day care centres; Restricted premises; Semi-detached dwellings; Seniors housing; Service stations; Sex services premises; Shops; Shop top housing; Signage; Storage premises; Transport depots; Truck depots; Vehicle body repair workshops; Vehicle repair stations; Warehouse or distribution centres; Wholesale supplies

The zone permits 'electricity generating works' with consent as 'any other development not specified in item 2 or 4'. Further it is noted the development is permissible as discussed under Clause 34 of SEPP (Infrastructure) 2007.

The relevant provisions of the MWR LEP 2012 are discussed below:

Clause 4.1 Minimum subdivision lot size - The subject land falls with the Area labelled 'AD – 100ha' of the Lot Size Map Sheet LSZ_006. Subdivision does not form part of the scope of works for the solar PV farm. This clause is relevant however for BDAR thresholds.

Clause 6.1 Salinity – The Mid-Western Regional LGA is noted has having inherent salinity issues. The Solar PV power generation plan and associated infrastructure will have negligible impact on the risk of salinity with implementation of adequate drainage provisions. Macquarie Geotech were engaged to carry out field work and testing for the development site. The geotechnical assessment has not raised any concern regarding soil features, occurrence of a high water-table, or evidence of aggressive soils that may indicate salinity issues.

Clause 6.3 Earthworks – Earthworks are ancillary to the development and to be assessed as part of the proposal. No fill is proposed to be placed on the land.

Clause 6.4 Groundwater vulnerability - This clause applies to land identified as "Groundwater vulnerable" on the Groundwater Vulnerability Map (Sheet GRV_006). The mapping partly applies to this development site.

The objective of this clause is to maintain the hydrological functions of key groundwater systems and to protect vulnerable groundwater resources from depletion and contamination as a result of inappropriate development. With no additional onsite effluent disposal, this development will have negligible impact to groundwater. Chemical uses are not a likely concern, with no need to treat the panels for maintenance. It is unlikely that groundwater dependent ecosystems occur in the vicinity to the site or will be affected as no interference to groundwater is proposed through any new bores for water supply.

Clause 6.5 Terrestrial biodiversity - This clause applies to land identified as "Moderate Biodiversity Sensitivity" or "High Biodiversity Sensitivity" on the Sensitivity Biodiversity Map. This clause applies to the development site. The site is marginally affected as the map depicts below (Lot 289 edged with green) and parts of Lots 90 and 91 affected by mapping are similarly avoided.

Further assessment of existing vegetation and impacts on biodiversity are noted in the BDAR prepared by Access Environmental Planning. The site has already been cleared in past years with no large-scale new clearing proposed for this development. No large stands of trees will be affected by any new road or the compound for the solar arrays. The bushfire assessment also addresses need for future vegetation management.

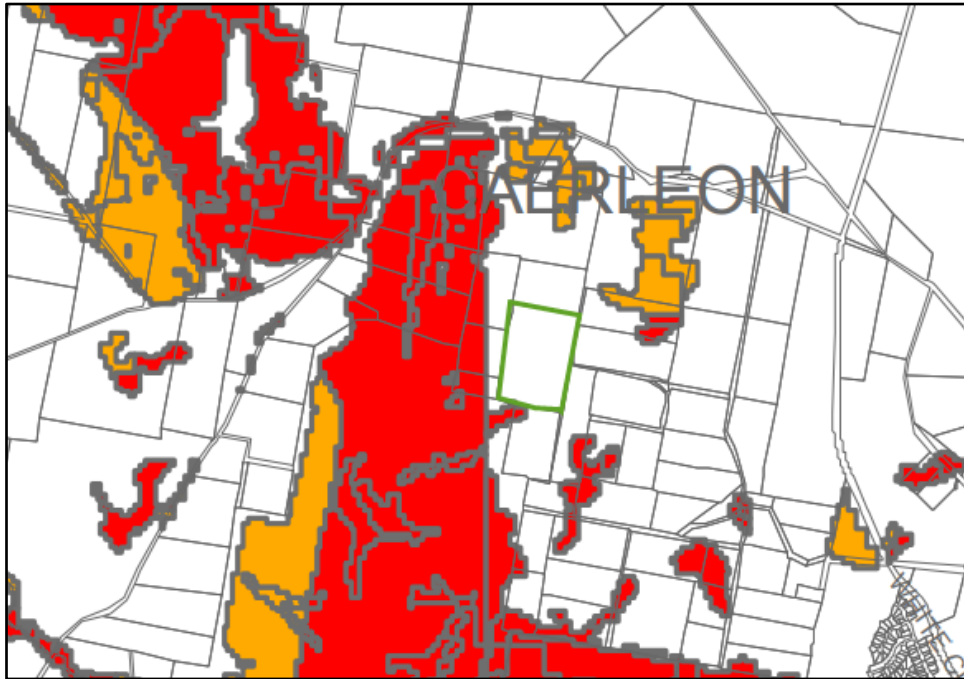


Figure 4: Excerpt MWR LEP 2012 Sensitivity Biodiversity Map - Sheet BIO_006

Clause 6.9 Essential services – Pursuant to this clause the consent authority is required to be satisfied that any of the following services that are essential for the proposed development are available or that adequate arrangements have been made to make them available when required:

- (a) *the supply of water,*
- (b) *the supply of electricity,*
- (c) *the disposal and management of sewage,*
- (d) *stormwater drainage or on-site conservation,*
- (e) *suitable road access.*

The land can be serviced to Council standards (and will be expected to be subject to conditions of approval).

Clause 6.10 Visually sensitive land near Mudgee - The objective of this clause is to protect the visually and environmentally significant land on the urban fringe of the town of Mudgee. The proposed development site is not mapped land however part of the subject titles are mapped (refer to Flood Planning Map Active Street Frontages Map Visually Sensitive Land Map Sheet CL1_006).

The Land Use Conflict Risk Assessment identified the eastern vista as key views to be protected. This has been further assessed in this SEE. Also modelling to determine potential viewpoints that are available for the solar farm based on topography have been prepared by Triaxial Consulting (refer to the Visual Plan prepared by Triaxial Consulting). It is demonstrated the solar farm will not be a significant feature for any residential development in Caerleon Estate.

Landscaping will be provided on the outside of the security fence on the eastern side of the development to mitigate the potential for visual intrusion.



Clause 6.11 Temporary workers' accommodation – This infrastructure project is not of a scale to warrant provision of temporary workers' accommodation.

Clause 6.12 Development in a designated buffer area - The objective of this clause is to protect the operational environment of the sewage treatment plant in Mudgee. Before granting development consent for development on land to which this clause applies, the consent authority must consider the following matters—

- (a) if the development is for the purposes of residential accommodation—the impact that any odour, noise and other emissions associated with the operation of the Mudgee sewage treatment plant would have on the development,
- (b) any proposed measures incorporated into the development that limit the impact of such noise and other emissions associated with the existing plant,
- (c) whether the development would adversely affect the operational environment of the plant.

The separation from areas of operation associated with the existing plant and planning for future STP expansion has been accounted for by the proposed development footprint. Mid-Western Regional Council as the relevant authority and as the proponent of the proposed solar PV power generation plant has ensured that both activities can function without hindering the operational environment of the plant. The solar farm use is not sensitive to any STP impacts of odour or noise. The construction traffic will need to be managed to ensure both the STP and Mudgee Waste Depot interactions are appropriately managed with separation of traffic where possible.

6.2.1 COMPLIANCE WITH MWRC DEVELOPMENT CONTROL PLAN

Compliance with Part 6.5 Solar Energy Farms of the Mid-Western Regional Development Control Plan (2013) was discussed with Council planning and engineering staff at pre-lodgement phase. The development as proposed has aimed to comply with the controls and pre-lodgement advice

DCP Provisions

Objectives

- *To minimise potential land use conflicts;*
- *To ensure that there is no unreasonable interference with the comfort or response of adjoining land users;*
- *To ensure that impacts on agricultural land, businesses and tourism are appropriately considered;*
- *To ensure road access, visual impacts, noise, health, waste, construction management and environmental constraints are identified and sufficient information is included with each development application to enable proper assessment; and*
- *To ensure that adequate provisions are made to restore developed land at the end of the life of the development.*

The proposed site has been chosen to reflect the objectives; the impacts on agricultural land are minor, the site is already hindered for development due to the STP buffer and vicinity of the Mudgee Waste depot. Detail of the proposal as presented in the plans and this SEE and supporting documents aim to demonstrate consistency with these development objectives as justification for the proposal.



Statement of Environmental Effects - requirements

The location of the property, land contours, boundary dimensions and site area. This should include a topographic map of 1:25,000 scale showing the location of the proposed solar development, the route of transmission lines to the electricity grid (and include access road/s and erosion control assessments), the service roads on and to the site, and the proximity to significant features such as main townships or villages, main roads, other solar farm developments, dwellings, environmentally and visually sensitive land, watercourses or drainage lines, crop and pasture land, forests, national parks, heritage items or conservation areas and aircraft facilities.

Plans depicting the development are included in the SEE with supporting plans of the development including:

Sheets 1 to 3; Set of Plans showing contour survey over lots 86, 90, 91 & 92 in DP756897 & Lot 289 in DP756894 prepared by O’Ryan Geospatial Pty Ltd.

Site plan prepared by ENGIE Electrical and Communications for MWRC Mudgee Solar Farm Blaine Rd Caerleon NSW.

The site plan or plans showing the position of the proposed solar panel arrays, inverters, battery storages and all construction facilities from site boundaries, the land contours, native vegetation to be removed or retained, the proposed vehicular access points, the location and uses of all existing and proposed buildings, power lines, sub-station and fences on the land.

Refer to:

PV LAYOUT Option 1 prepared by ENGIE Electrical and Communications for MWRC Mudgee Solar Farm Blaine Rd Caerleon NSW.

A description of the proposed solar arrays including all relevant design details such as number, dimensions, generation capacity, overall height once mounted, rotational information and materials / colour including if mirror or lenses are proposed. This may also be supported by an elevation plan.

Details of the proposed connection to the electricity reticulation network shall be included as part of the Development Application.

Section 4.1 in this SEE provides description of the development in support of the details on the plans.

A land use description of the adjoining land and/or affected lands and landscape including assessment of the likely future impact.

A Land Use Conflict Risk Assessment (LUCRA) shall be prepared in accordance with the Land Use Conflict Risk Assessment Guide produced by the Department of Primary Industries.



The description and LUCRA was completed and provided to MWRC at the pre-lodgement discussion. Refer to LUCRA prepared by Atlas Environment and Planning.

A preliminary risk screening in accordance with SEPP No. 33 – Hazardous and Offensive Development shall be included, particularly if battery storage is proposed onsite. If the proposal is deemed “potentially hazardous”, a Preliminary Hazard Analysis (PHA) shall be prepared and submitted with mitigation measures to manage the risks including but not limited to spontaneous ignition, bushfire and electro-magnetic fields in accordance with relevant Australian Guidelines.

N/A.

A noise impact assessment demonstrating compliance with the NSW Noise Policy for Industry 2017, Noise Construction Guidelines and any other NSW Acts, Rules or Regulations applicable to solar farm noise including during construction and decommissioning.

A Noise and Vibration Impact Assessment prepared by Spectrum Acoustics was carried out. No modelled noise exceedances were identified.

A description and assessment of the visual effects on all scenic, neighbouring and public view locations including photomontages, plate or panoramic photomontages, computer assisted photo simulations or other graphic representations of the appearance of the solar arrays and ancillary infrastructure such as inverters, transmission lines and battery storages. Viewshed modelling via the use of a suitable GIS (e.g. “MapInfo”) is recommended.

Visual assessment has been carried out with the support of computer assisted modelling of topography and viewpoints possible of the development site. Visual Plan prepared by Triaxial Consulting Pty Ltd depicts through shading the land able to view the development site through use of the point and surface information generated from LIDAR survey. The mapping does not factor other barriers such as structures and vegetation that may obstruct views. The map supports that the eastern vista is to be the focus of screening landscaping to minimise any views of the solar farm for existing and future residential areas in the Caerleon locality.

A glint and glare assessment, including full details on night lighting shall be submitted with the DA.

The system will not be visually sensitive to any receivers such as an airport. The site will not require night-time lighting other than minimal security features. (A specific glint and glare assessment is not warranted for this location).



A construction program and environmental management plan incorporating the proposed staging of the project, erosion and sedimentation controls, heavy vehicle movements, site access including all service roads, substation, underground wiring, construction phase impacts including facilities, waste disposal, staff/contractor numbers etc., weed control, farm impacts and all other works.

Details of the development are included in the SEE and will be updated with any conditions of approval. The erosion and sediment controls are to be in accordance with the 'Blue book'. Mudgee Waste Depot will be used for waste disposal /recycling of packaging. A Traffic Management Plan is proposed to be further developed for the construction phase to address interactions with the Mudgee Waste Depot and Mudgee STP. This should be individualised for timing of works and activities occurring at the other Council facilities during the construction phase when known.

The developer shall ensure that a workforce management plan including workforce accommodation considerations are detailed in the DA for the construction and operation phases of the project

The scale of the development does not warrant a specific workforce management plan. The site will attract a maximum of 25 workers on site (including superintendence) during the construction phase.

Council will require a full traffic assessment as part of the development application which shall detail the impact of construction vehicles on the proposed route having regard to public safety especially school bus hours and citizens' peak hour travel to work. Detailed road condition reports will be required as part of any consent.

A Traffic Assessment Report was prepared by Triaxial Consulting Pty Ltd on behalf of MWRC in support of this development application with reference to the DCP. The requirement for detailed road condition reports likely to be required as part of any consent is noted.

An evaluation of flora and fauna impacts with specific mention of migratory species potentially impacted by the development. Where the development is in close proximity to known habitats of threatened species (Flora or Fauna), early consultation with the Office of Environment and Heritage is highly recommended.

Biodiversity assessment has been carried out. The land has remnant stand of trees that is mapped and identified in the Biodiversity Values Map and Threshold Report. Due to this mapping the development is required to be supported by a Biodiversity Development Assessment Report. No Biodiversity Offset is required.



A decommissioning and site restoration plan should be included that provides measures to remediate the land in accordance with SEPP No 55 – Remediation of Land along with details of appropriate disposal methods for all infrastructure.

Decommissioning and rehabilitation details should be refined closer to end of life. The infrastructure can be removed, and ground surface levelled (holes filled) to enable reverting the land suitable for passive primary production purposes/& buffer to the STP and Waste Depot.

Demonstration that all issues raised by relevant State Agencies consulted have been addressed (e.g. CASA for aviation safety, DPI Water for water impacts, OEH for flora and fauna impacts).

The development application will be lodged as Integrated development pursuant to s91 of the Water Management Act. The access road/intersection is not a main road. Any new issues raised by State Agencies in the processing of the DA will be addressed by the proponent.

The cultural heritage significance of the site and surrounds.

A due diligence assessment has been included in this SEE (refer to Section 7.3).

An assessment of any risks involved in soil disturbance or arising from vibration or microclimate impact including contamination impacts on hydrology and archaeological issues.

Potential for soil impacts have been addressed in this SEE. The potential for vibration impacts was included in the assessment Noise and Vibration Impact Assessment prepared by Spectrum Acoustics.

Assessment of the development regarding all relevant legislation and applicable policies.

Applicants are required to keep the local community fully informed throughout the design process.

The SEE considers relevant legislation and applicable policies. It is expected that the development will be advertised and notified as part of the application process.

Development Control Plan - Controls

The following must be included as part of the design criteria and assessment of any related development application:

Control: The developer should assess the visual impact of the project including an assessment of the development on the scenic value and character of the locality. This assessment should consider how the proposal will maintain the unique local character of the area, all significant vistas and also



examine local community values towards key elements which form the identity of the area being impacted by the proposal.

The site is a unique setting that minimises potential for visual impacts. In terms of the scenic value and character of the locality the elevated treed land to the west of the site is considered significant to forming a part of the backdrop to the urban area of Mudgee. The solar farm will not intrude into this visual element. Visually the setting is influenced by the Mudgee Waste Depot and the associated waste cells/mounds. The setting is conducive to a solar farm as the scenic value on a closer scale is already compromised by infrastructure projects. The topography shields view to any road.

Control: The development should be sited and carried out to minimise impacts on, or restrictions to grazing, farming, residential, tourism, business and forestry practices.

The development site is within the buffer land of the Mudgee STP. Siting the solar arrays within the buffer also minimises impact on other potentially non-compatible land uses.

Control: The development should be carried out in a way that minimises any physical adverse effects on adjoining land and the development site, including, but not limited to:

- (i) land degradation*
- (ii) native vegetation loss*
- (iii) alteration to drainage patterns*
- (iv) pollution of surface and ground water*
- (v) spread of noxious plants and animals, and*
- (vi) bushfire hazard.*

Land degradation is minimised by proper design and implementation of an erosion and sediment control plan. Native vegetation and biodiversity impacts are addressed in the specialist assessment and minimised by site controls and fencing. The land has been affected by land contouring practices for past farmland use. The first order watercourse is impacted by this, and alteration of the natural drainage pattern has already occurred. The proposed site levelling and new stormwater management plan has included stabilisation and detention of runoff. Pollution potential of the groundwater is minimal due to the development. Ongoing maintenance and management of the site will include control of any weeds and practices will be co-ordinated with other management carried out by MWRC at the neighbouring infrastructure facilities. Bushfire hazard management will be addressed in the first instance by the design measures: access track on the perimeter suitable for emergency vehicle access; and provision of an asset protection zone.



Control: The developer should assess the cumulative impact of the development having regard to solar energy farms already built and those approved but not yet constructed. Council does not favour large expanses of land being covered with solar energy farms where there is significant cumulative impact.

No known solar projects are approved or proposed in vicinity to the site.

Control: Proposed solar farms should consider the NSW Department of Planning and Environment Solar Energy Guidelines, NSW Noise Policy for Industry and any other NSW Acts, Rules or Regulations applicable to solar energy farms.

Noted. The relevant rules have been considered and implemented where possible in the design of this development.

Control: Where the proposal is located within a 5km radius from main townships and villages, the proposal must demonstrate that it will not impact on the scenic value and character of the locality.

The development site is within 5km of Mudgee urban zoned land. This SEE has included due consideration of scenic issues. Mitigation of views possible to the east are proposed to be managed with landscaping.

Control: Solar Energy Farms should not be located within 500m of any dwelling not associated with the development or from any lot upon which a dwelling may be constructed.

The land is not within vicinity of existing dwellings. As previously noted, the land is affected by the association with the Mudgee Waste Depot and the buffer to the Mudgee STP. The nearest dwellings are noted in the LUCRA. No issue is raised due to conflict with dwellings. The visual assessment mapping shows these dwelling sites are not within line of sight of the solar arrays.

Control: Solar Energy Farms should not be located within 200m from a formed Local Public Road or 500m from a Regional or State Road. A greater distance may be required by the road authority where visual impact mitigation is necessary.

The development complies.

Control: Solar Energy Farms should not be located within 100m from a non-related property boundary; existing and proposed screenings may be used to minimise visual impacts to non-related properties. However, screening is not the only preferred method of minimising visual impact. Solar



arrays shall be located in positions so as to have minimal visual impact on nearby properties, especially existing dwellings and lots on which dwellings may be constructed.

The distance to the adjoining eastern lot boundary is approx. 20m at the nearest point. The solar farm however avoids a more elevated position by reducing this side setback.

Control: Solar Energy Farm locations are to be sensitive to existing related dwellings on the subject site. Noise and glare should be minimised in all respects.

Noise and glare are minimised through technology and site design. Noise is not likely to impact any residents in the wider setting.

Control: Solar Energy Farms should not surround a non-related property. Solar arrays shall be located with the specified setbacks from property boundaries to minimise the visual impact of the development on adjacent and nearby non-related property.

Due to the topography the visual impact of the development on non-related property is minimal.

Control: Construction vehicles, including concrete trucks, carriers of solar/ inverter/battery storage components, and related workforce vehicles (including relevant contractors) shall only travel on an approved route. This route should be identified in a traffic report having regard to public safety especially school bus hours and citizens peak hour travel to work and approved in accordance with this Plan.

The Traffic Assessment Report prepared by Triaxial Consulting has considered construction vehicle traffic separate to operational phase of the project. The construction period will require deliveries including the maximum design vehicle B-Double. The report concludes the peak vehicle trips will have only a very minor impact on the surrounding road network. It is not envisaged that the development will cause a decrease in the level of service to the Castlereagh Highway. The intersection with Hill End Road and Blain Road has also been assessed. Site distance and potential impact of delivery truck causing a queue of vehicles and disruption is minimal. The report suggests that the workers may use a bus to the access the site during a construction phase. This is not confirmed but will be further addressed in a Traffic Management Plan for the project.

Control: Council may require road works to cope with the traffic movements related to the construction of a Solar Energy Farm. Bonds will also be required for any potential damage to roads during the construction phase. The road works and bond amounts will be determined by Council professional staff, but will be determined generally by the length of road and condition of road surface/base bridge, drainage etc. relevant to the selected route. Where road works are determined



necessary for the development, costs associated with the road works shall be the developer's responsibility.

Noted. No road works on public roads are proposed for the development, hence a s138 Approval pursuant to the Roads Act has not been sought with the development application.

Control: The construction and maintenance of internal roads (roads within the property subject to the development) shall be the responsibility of the developer. Council will require proof that they have been adequately designed and constructed for their purpose. Council and relevant State Government Agencies shall be provided with adequate information about the environmental aspects of the internal road construction.

The internal road construction and construction traffic management is proposed to be dealt with further in a Traffic Management Plan. Depending upon the timing of the development proceeding and activities at the Mudgee Waste Depot and Mudgee STP works will be modified to minimise interactions.

Control: All infrastructure related to the Solar Energy Farm should be included in the development application. Management of temporary facilities, waste, numbers of contractors/employees, etc., should be part of the Development Application information. All infrastructure should be located in low visual impact locations and interconnection cables/wiring and the like should be underground.

Details of the development are described in this SEE and depicted on the plans. The description of the development highlights the underground and aboveground infrastructure (refer to section 4.1).

Control: Within six months of the Solar Energy Farm ceasing to operate, any rights of carriageways that were created to enable maintenance to be conducted are to be extinguished by the developer and the land made good, unless otherwise agreed with the landowner.

Noted.

Control: Within twelve months of the Solar Energy Farm ceasing to operate, all infrastructure is to be fully dismantled and removed from the site.

The development has an expected life of 25yrs based on technology operational lifespan. The development will have a decommissioning phase and it is assumed a decommissioning plan will be prepared and submitted to MWRC with an appropriate lead time. A future decommissioning plan with a waste management plan will need to be prepared to address on site activities and relevant aspects as they are known at the time of decommissioning.



7 EVALUATION - ENVIRONMENTAL IMPACTS

7.1 ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES

This section considers the likely impacts of the proposed development, including environmental impacts on both the natural and built environments.

7.2 SOIL AND SURFACE WATER

7.2.1 Potential Impacts – Soil and Surface Water

The existing site drains to the east towards the Caerleon Estate. The site has been constructed with a series of diversion banks running perpendicular the general fall of the land to direct the stormwater towards existing farm dams that have historically serviced the site. These earthworks features have impacted drainage to the natural watercourse that are the potential focus of 'controlled activity'. The proposed development may trigger integrated development provisions due to works within 40m of a waterway. Under the Water Management Act 2000 (WM Act) an approval is required to undertake controlled activities on waterfront land. However, in this instance with the absence of banks and watercourse vegetation the provisions of the Act may not be applicable. The application will be lodged as integrated to provide NRAR the opportunity to provide assessment of the status of the watercourse.

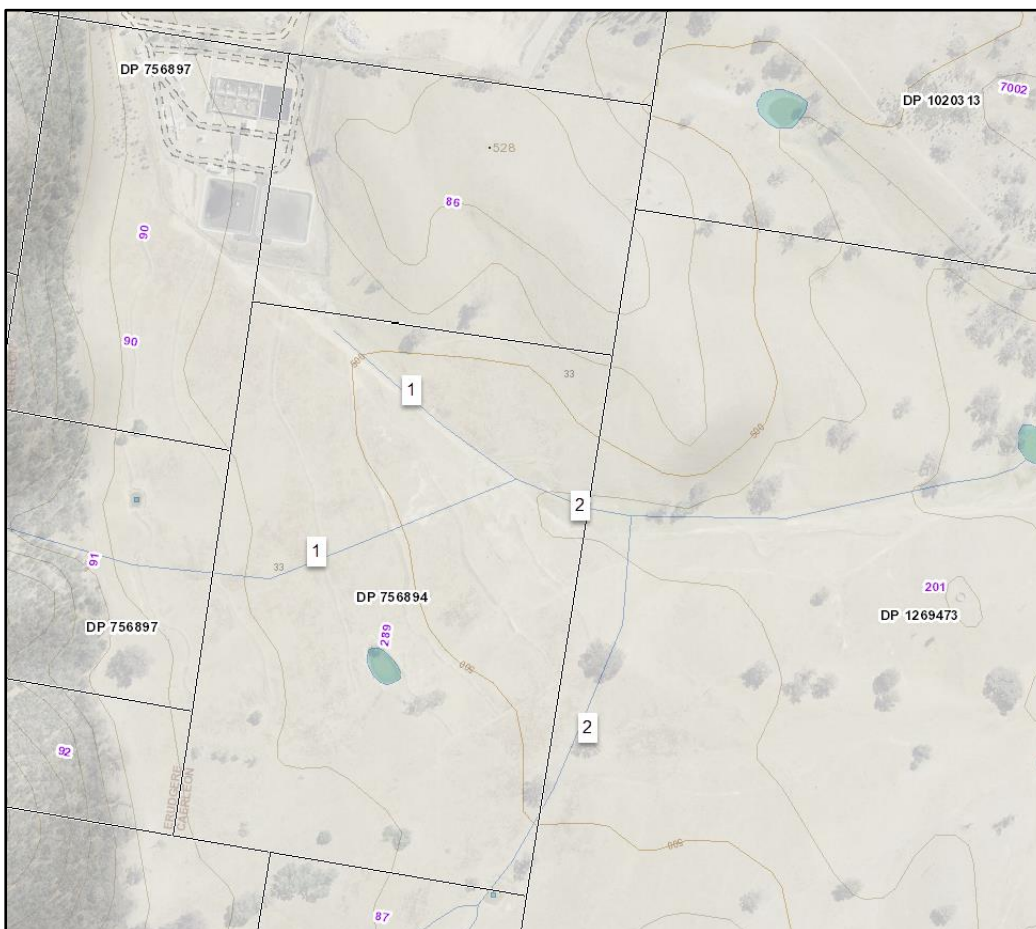


Figure 5: First and second order mapped streams in vicinity to the site



Potential soil impacts due to the development of the solar array include, exposure of soils to increased erosion and offsite sediment transport through vegetation stripping and general site disturbance for future installation of structures. This limited disturbance is not expected to have any long-term impact. No major reshaping of the landform is proposed to facilitate the solar array installation.

Drainage from natural overland flow will be managed in accordance with existing arrangements. With one new sediment basin proposed as located on the proposed plans of the development.

The stormwater assessment prepared by Triaxial Consulting demonstrates that the development of the proposed Mudgee Solar Farm will not be impeded by the expected sheet flows occurring over the site in storm events due to the existing diversion swales, as the observed depths and velocities of flow are of a very minor nature and pose no inundation threat to the infrastructure to be constructed on site.



Plate 7: View to east along location of most northern first order mapped drainage line originating from STP infrastructure (partly constructed diversion bank) within Lot 289



Plate 8: Typical farm contour occurring (view to east) looking downstream



Plate 9: View of existing farm dam located centrally within Lot 289



7.2.2 Mitigation Measures – Soil and Surface Water

Overall, review of the proposed site for future infrastructure and the location of new basin in relation to existing infrastructure, indicates that the site should not be hindered for solar farm development based on soil and water management issues.

Mitigation measures should be adopted to minimise potential for impacts to soil and water.

- Erosion and sediment controls are to be established prior to any site disturbance.
- Road construction plans to address table drain design.
- Methods within the '*Managing Urban Stormwater: Soils and Construction Volume 1*' (Landcom 2004) are to be employed where relevant.
- Removal of groundcover must be minimised where possible to provide natural soil protection. In most instances this practice is to be the appropriate level of mitigation to be employed for this development.
- The provisions of the DCP 5.4 Environmental Controls – Building in a saline environment can be implemented for any building proposals. No further investigation or action are considered necessary for extensive assessment at the DA stage.

7.3 HERITAGE

7.3.1 Potential Impacts – Heritage

The proposed solar farm development will not have any detrimental impact on heritage items or the setting of listed items – i.e. no listed items are within close vicinity to the development site.

Due Diligence Code of Practice for the Protection of Aboriginal Objects in New South Wales published by Department of Environment, Climate Change and Water has been referred to for the preparation of this report. The site is within a rural environment that has been disturbed for past farming. The likelihood of undisturbed indigenous heritage to occur is minimal. The land has had farm contouring and dam construction that has caused previous disturbance to natural ground surfaces.

In accordance with Section 1 *Do you need to use this Due Diligence Code*, the development is required to follow the Generic Due Diligence Code of Practice outlined in Section 8. This has been provided:

- **Step 1**, *Will the activity disturb the ground surface,*

Yes. The development has potential to require land disturbance.

- **Step 2a**, *Search the AHIMS database and use any other sources of information of which you are already aware,*

An AHIMS search was conducted on 13 June 2021 of Lot 86, DP:756897; Lot 90, DP:756897; Lot 91, DP:756897; Lot 289, DP:756894, with a buffer of 200m and returned no recorded aboriginal sites and no declaration of aboriginal place within the site or buffer area. (Refer to **Appendix A**).

- **Step 2b**. *Activities in areas where landscape features indicate the presence of Aboriginal objects*

Aboriginal objects are often associated with particular landscape features as a result of Aboriginal people's use of those features in their everyday lives and for traditional cultural activities. Examples



of such landscape features are rock shelters, sand dunes, waterways, waterholes and wetlands. Therefore it is essential to determine whether the site contains landscape features that indicate the likely existence of Aboriginal objects. It has been considered whether the land and proposed activity is:

- within 200m of waters, or
- located within a sand dune system, or
- located on a ridge top, ridge line or headland, or
- located within 200m below or above a cliff face, or
- within 20m of or in a cave, rock shelter, or a cave mouth
- and is on land that is not disturbed land (defined in guidelines, see below) then you must go to step 3.

If after completing steps 2a and 2b it is reasonable to conclude that there are no known Aboriginal objects or a low probability of objects occurring in the area of the proposed activity, you can proceed with caution without applying for an AHIP.

- **Step 3.** *Can you avoid harm to the object or disturbance of the landscape feature?*

All features are either not occurring or avoided in this development site. No permanent water supply or ridge lines are present.

- **Step 4:** *Desktop assessment and visual inspection*

This step only applies if your activity is on land that is not disturbed land or contains known Aboriginal objects. The land is a disturbed landscape as described above, hence a desktop review is considered adequate in this location.

7.3.2 Mitigation Measures – Heritage

No known items of Aboriginal heritage are identified within the site. Direct impacts are considered to be nil in the absence of heritage items. No further Aboriginal heritage site survey is warranted at this site. No further mitigation measures are proposed for DA stage.

7.4 BUSH FIRE RISK

The development application should be referred to NSW RFS for review pursuant to s4.14 of the EP&A Act.

s4.14 Consultation and development consent—certain bush fire prone land

(cf previous s 79BA)

- (1) *Development consent cannot be granted for the carrying out of development for any purpose (other than a subdivision of land that could lawfully be used for residential or rural residential purposes or development for a special fire protection purpose) on bush fire prone land (being land for the time being recorded as bush fire prone land on a relevant map certified under section 10.3(2)) unless the consent authority—*
- (a) *is satisfied that the development conforms to the specifications and requirements of the version (as prescribed by the regulations) of the document entitled Planning for Bush Fire Protection prepared by the NSW Rural Fire Service in co-operation with the Department (or, if another document is prescribed by the regulations for the purposes of this paragraph, that document) that are relevant to the development (**the relevant specifications and requirements**), or*



- (b) has been provided with a certificate by a person who is recognised by the NSW Rural Fire Service as a qualified consultant in bush fire risk assessment stating that the development conforms to the relevant specifications and requirements.
- (1A) If the consent authority is satisfied that the development does not conform to the relevant specifications and requirements, the consent authority may, despite subsection (1), grant consent to the carrying out of the development but only if it has consulted with the Commissioner of the NSW Rural Fire Service concerning measures to be taken with respect to the development to protect persons, property and the environment from danger that may arise from a bush fire.
- (1B) This section does not apply to State significant development.
- (1C) The regulations may exclude development from the application of this section subject to compliance with any requirements of the regulations. The regulations may (without limiting the requirements that may be made)—
- (a) require the issue of a certificate by the Commissioner of the NSW Rural Fire Service or other qualified person in relation to the bush fire risk of the land concerned, and
- (b) authorise the payment of a fee for the issue of any such certificate.
- (2) In this section—

special fire protection purpose has the same meaning as it has in section 100B of the [Rural Fires Act 1997](#).

It is intended that the proposed development will conform to the requirements of Planning for Bush Fire Protection prepared by the NSW Rural Fire Service in co-operation with the Department (2019).

7.4.1 Potential Impacts – Bushfire

The PV array site location being at lower elevation characterised by undulating landform dominated by grass vegetation is associated with the higher elevated area to the west with denser treed vegetation types. Grassland is taken as the predominant vegetation type. Woodland vegetation is greater than 100m from the solar array.

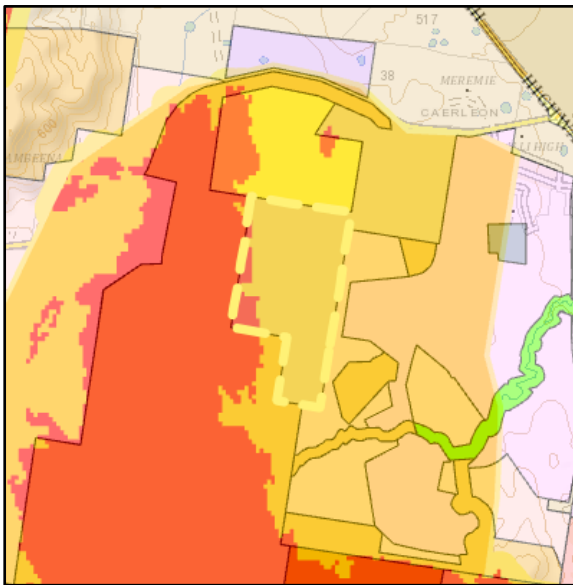


Figure 6: Subject land bushfire mapping



7.4.2 Mitigation Measures – Bushfire

This development is proposed to include or address the following aspects:

PBP 2019 - Intent of measures: to minimise the risk of bush fire attack and provide protection for emergency services personnel, residents and others assisting firefighting activities.

The development is proposed to be undertaken in accordance with a future Bush Fire Emergency Management and Operations Plan

The Plan should identify all relevant risks and mitigation measures associated with the construction and operation of the solar farm. Items such as the following will be addressed:

- Integration with existing Plans in place for the Mudgee Waste Facility and STP measures currently engaged to manage fire risk.
- For the construction and general operations periods - detailed measures to prevent or mitigate fires igniting.
- Describe permitted work and types of work that should not be carried out during total fire bans.
- Availability of fire-suppression equipment, access and water. Diagram to depict location of water access for emergencies to be included on a site sign.
- Details specific to the site for safe storage and maintenance of fuels and other flammable materials;
- Procedure for the notification of the local NSW RFS Fire Control Centre for any works that have the potential to ignite surrounding vegetation, proposed to be carried out during a bush-fire fire danger period to ensure weather conditions are appropriate; and
- Include appropriate bush fire emergency management planning.

Asset Protection Zones

From the start of building works, the property around the building is intended to be managed as an inner protection area (IPA) for a distance of at least 20 metres in accordance with the requirements of Appendix 4 of Planning for Bush Fire Protection 2019.

Construction Standards

All new construction shall be undertaken using non-combustible materials.

Access – Property Access

The access to the solar farm will aim to have design features to meet the following standards:

- Property access roads are two-wheel drive, all-weather roads;
- the capacity of road surfaces be sufficient to carry fully loaded firefighting vehicles (up to 23 tonnes);



- hydrants are provided in accordance with the relevant clauses of AS 2419.1:2005; and there is suitable access for a Category 1 fire appliance to within 4m of the static water supply where no access to the reticulated supply is not available;
- minimum 4m carriageway width and a minimum vertical clearance of 4m to any overhanging obstructions, including tree branches;
- property access must provide a suitable turning area in accordance with Appendix 3 of PBP 2019;
- curves have a minimum inner radius of 6m and are minimal in number to allow for rapid access and egress; the crossfall is not more than 10 degrees; maximum grades for sealed roads do not exceed 15 degrees and not more than 10 degrees for unsealed roads.

Water and Utility Services

The provision of water, electricity and gas must comply the with following in accordance with Table 7.4a of Planning for Bush Fire Protection 2019.

	PERFORMANCE CRITERIA	ACCEPTABLE SOLUTIONS
	The intent may be achieved where:	
WATER SUPPLIES	<ul style="list-style-type: none"> ➤ an adequate water supply is provided for firefighting purposes. 	<ul style="list-style-type: none"> ➤ reticulated water is to be provided to the development, where available; and ➤ a static water supply is provided where no reticulated water is available.
	<ul style="list-style-type: none"> ➤ water supplies are located at regular intervals; and ➤ the water supply is accessible and reliable for firefighting operations. 	<ul style="list-style-type: none"> ➤ fire hydrant spacing, design and sizing comply with the relevant clauses of AS 2419.1:2005; ➤ hydrants are not located within any road carriageway; and ➤ reticulated water supply to urban subdivisions uses a ring main system for areas with perimeter roads.
	<ul style="list-style-type: none"> ➤ flows and pressure are appropriate. 	<ul style="list-style-type: none"> ➤ fire hydrant flows and pressures comply with the relevant clauses of AS 2419.1:2005.
	<ul style="list-style-type: none"> ➤ the integrity of the water supply is maintained. 	<ul style="list-style-type: none"> ➤ all above-ground water service pipes external to the building are metal, including and up to any taps.
	<ul style="list-style-type: none"> ➤ a static water supply is provided for firefighting purposes in areas where reticulated water is not available. 	<ul style="list-style-type: none"> ➤ where no reticulated water supply is available, water for firefighting purposes is provided in accordance with Table 5.3d; ➤ a connection for firefighting purposes is located within the IPA or non-hazard side and away from the structure; 65mm Storz outlet with a ball valve is fitted to the outlet; ➤ ball valve and pipes are adequate for water flow and are metal; ➤ supply pipes from tank to ball valve have the same bore size to ensure flow volume; ➤ underground tanks have an access hole of 200mm to allow tankers to refill direct from the tank;



- a hardened ground surface for truck access is supplied within 4m;
- above-ground tanks are manufactured from concrete or metal;
- raised tanks have their stands constructed from non-combustible material or bush fire-resisting timber (see Appendix F of AS 3959);
- unobstructed access can be provided at all times;
- underground tanks are clearly marked;
- tanks on the hazard side of a building are provided with adequate shielding for the protection of firefighters;
- all exposed water pipes external to the building are metal, including any fittings;
- where pumps are provided, they are a minimum 5hp or 3kW petrol or diesel-powered pump, and are shielded against bush fire attack; any hose and reel for firefighting connected to the pump shall be 19mm internal diameter; and
- fire hose reels are constructed in accordance with AS/NZS 1221:1997, and installed in accordance with the relevant clauses of AS 2441:2005.

Proposed Landscaping

Landscaping is proposed on the outside of the security fence and will be located to avoid any reduction in the APZ that is proposed to be maintained. Landscaping within the required asset protection zone will be designed to comply with Appendix 4 of Planning for Bush Fire Protection 2019.

In this regard, the following principles are to be incorporated:

- A minimum 1 metre wide area, suitable for pedestrian traffic, must be provided around the immediate curtilage of any infrastructure related storage buildings;
- Planting is generally to be avoided in the immediate vicinity of any the building;
- Landscape species are chosen to ensure tree canopy cover is less than 15% (IPA), and less than 30% (OPA) at maturity and trees do no touch or overhang buildings;
- Avoid species with rough fibrous bark, or which retain/shed bark in long strips or retain dead material in their canopies;
- Use smooth bark species of trees species which generally do not carry a fire up the bark into the crown;
- Avoid planting of deciduous species that may increase fuel at surface/ ground level (i.e. leaf litter) and locate any combustible materials such as woodchips/mulch, flammable fuel stores away from the building; and low flammability vegetation species are used.



7.5 CUMULATIVE ISSUES

No significant potential cumulative issues have been identified because of the proposed solar PV Power Generation Plant. The development of a future traffic management plan is encouraged to ensure the interaction between the solar installation and the existing Mudgee Waste Facility and STP are not impacted by the construction period or ongoing development access.

7.6 SOCIAL AND ECONOMIC IMPACTS

This section considers the likely social and economic impacts of the development in the locality. Socially the proposal will have minimal impact with limited construction employment generated. The development facilitates alternative electricity generation development within Mid-Western Regional LGA that may have positive economic flow on effects.

7.7 SITE SUITABILITY

A Land Use Conflict Risk Assessment process and pre-lodgement discussion with MWRC Planning and Engineering staff was carried out prior to proceeding with development design. Overall, no issue has been identified that would indicate that the land is not suitable for the development. The potential impacts identified are able to be mitigated by appropriate design or measures in the construction period (such as erosion and sedimentation control measures).

7.8 PUBLIC SUBMISSIONS

Any submissions made in accordance with this Act or the regulations received during the notification period for the development application would be required to be considered by Council in the assessment of the application.

7.9 PUBLIC INTEREST

Section 4.15(1)(e) requires consideration of the public interest in assessing the proposed development.

The proposed establishment of a solar farm on the site is anticipated to have an ongoing positive social and economic impact on the local Mid-Western Regional local government area and the broader community.

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

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

The proposed establishment of a solar PV farm on the site is anticipated to have an ongoing positive social and economic impact on the local Mid-Western Regional Council area and broader community. Overall, it is considered that the development:



- Is consistent with the regulatory and business development framework, including state government legislation and the Mid-Western Regional Council strategic land use plans;
- Will have positive impacts intergenerational equity, with the provision of cleaner energy in the future;
- Supports Commonwealth and NSW climate change commitments;
- Will generate enough clean, renewable energy for about 2,000 homes;
- Is an appropriate development in relation to the projected changes to population and demographics in the region;
- Is unlikely to have significant negative social impacts to the locality in a site close to other infrastructure projects with limited interaction with private land; and,
- Would be a benefit contributing to the overall community sustainability of Mudgee and broader communities.



8 CONCLUSION

This Statement of Environmental Effects assessed the impact of the proposed development and where relevant provides the supporting information and outlines proposed actions that demonstrate measures to be undertaken to ensure consistency with the objectives of the zone, and outline what plans are in place to ensure mitigation of any potential environmental impacts.

With the growth of the Mid-Western Regional area, the new solar farm proposed under this DA will greatly assist in meeting the growing electrical demands in a location that provides minimal impact to residential areas of Mudgee. The proposed solar PV electrical generation operation located at 33 Blain Road will provide electrical power generation that will support future growth.

The site has been chosen for its suitability in terms of land use zoning, suitable topography, limited trees and vegetation and access to high-capacity transmission lines. The proposed development is consistent with the objectives of the RU1 Primary Production Zone as it will provide a compatible land use which minimises land use conflict in the area, whilst contributing to the land use diversity of the infrastructure focus in the local site (STP and Waste Depot).

The design of the development incorporates appropriate stormwater management, respects the natural environment, and minimises potential amenity impacts on neighbouring properties. The proposal will not increase demand for public services or facilities and will have minimal impact on native vegetation and wildlife corridors or on waterways, wetlands, or riparian zones. The development is compliant with the relevant LEP and ISEPP clauses, presenting no variations to any development standard. The proposal is generally compliant with the requirements of Mid-Western Regional Council DCP 2013. Due to the use of high-quality solar tracking systems and site buffer distances to surrounding receivers and transport networks, potential for glare impacts on the surrounding area is negligible.

A BDAR has been prepared to support this development proposal. The mapping for sensitive vegetation has triggered the need for this report (refer to that report for conclusions on impact and need for biodiversity offsets). The development is located within a mapped bush fire prone area. It is proposed that the development conform to the provisions of the Planning for Bushfire Protection 2019 document (as such, a separate risk assessment was not warranted). The land also has mapped first order watercourses, which will be within 40m of the proposed solar farm building works. Hence controlled activity approval pursuant to the Water Management Act may be required, however unlikely given there is no clear bank or riparian vegetation, and due to the level of contouring of the land that has occurred for past farm surface water management.

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

Overall, the development proposal has been demonstrated to have merit in the design aspects, the site free of significant adverse environmental impacts or planning issues. Where environmental impacts had been identified, suitable mitigation measures are noted. In conclusion, the DA is considered to be in the public's interest and able to be supported by Council.



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Appendix A

AHIMS search results

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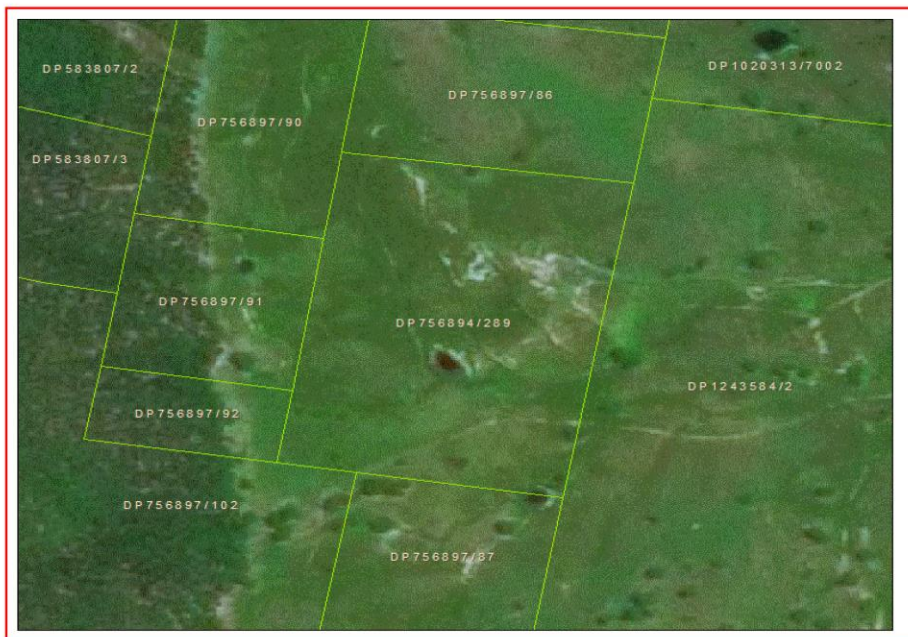
Atlas Environment & Planning
46 Market Street
Mudgee New South Wales 2850
Attention: Emma Yule
Email: yule.atlas@gmail.com

Date: 13 June 2021

Dear Sir or Madam:

AHIMS Web Service search for the following area at Lot : 289, DP:756894 with a Buffer of 200 meters, conducted by Emma Yule on 13 June 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.*

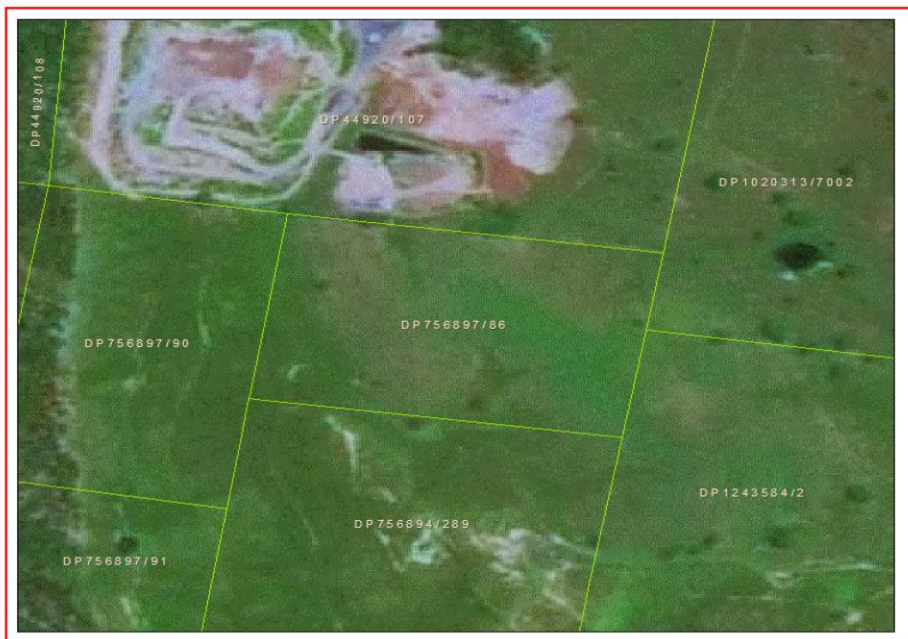
Atlas Environment & Planning
46 Market Street
Mudgee New South Wales 2850
Attention: Emma Yule
Email: yule.atlas@gmail.com

Date: 13 June 2021

Dear Sir or Madam:

AHIMS Web Service search for the following area at Lot : 86, DP:756897 with a Buffer of 200 meters, conducted by Emma Yule on 13 June 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. *

Atlas Environment & Planning
46 Market Street
Mudgee New South Wales 2850
Attention: Emma Yule
Email: yule.atlas@gmail.com

Date: 13 June 2021

Dear Sir or Madam:

AHIMS Web Service search for the following area at Lot: 90, DP:756897 with a Buffer of 200 meters, conducted by Emma Yule on 13 June 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:

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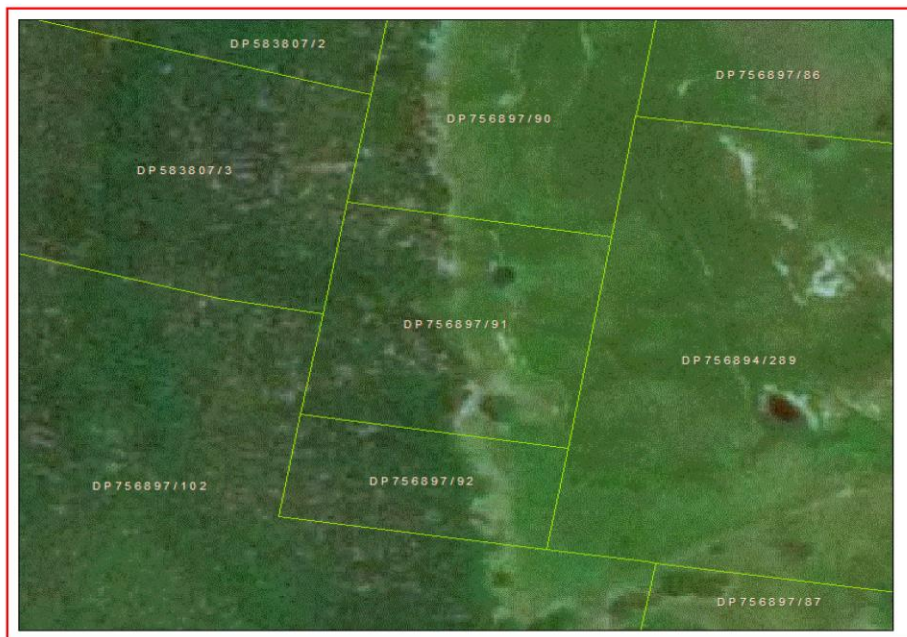
Atlas Environment & Planning
46 Market Street
Mudgee New South Wales 2850
Attention: Emma Yule
Email: yule.atlas@gmail.com

Date: 13 June 2021

Dear Sir or Madam:

AHIMS Web Service search for the following area at Lot: 91, DP:756897 with a Buffer of 200 meters, conducted by Emma Yule on 13 June 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) (<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 to 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.

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