

Statement of Environmental Effects

Installation of a Battery Energy Storage System (BESS)

Providence Climate Capital

704/99 Bathurst Street Sydney NSW 2000

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Making Sustainability Happen

Revision Record

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Basis of Report

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

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Acronyms and Abbreviations

BESS	Battery Energy Storage System
BC Act	Biodiversity Conservation Act 2016
CC	Construction Certificate
CPTED	Crime Prevention Through Environmental Design
DA	Development Application
DCP	Development Control Plan
EP&A	Environmental Planning and Assessment Act
EPBC	Environmental Protection and Biodiversity Conservation
EPI	Environmental Planning Instrument
GSRS	Gunnedah Shire Rural Strategy
LEP	Local Environmental Plan
LGA	Local Government Area
MNES	Matters of National Environmental Significance
MW	Megawatt
MWh	Mega Watts per Hour
OC	Occupation Certificate
O&M	Operation and Maintenance
OMP	Operational Management Plan
PAG	Providence Asset Group
PCC	Providence Climate Capital
POEO	Protection of the Environment Operations Act
PV	Photovoltaic
SEE	Statement of Environmental Effects
SEPP	State Environmental Planning Policy

1.0 Introduction

This Statement of Environmental Effects (SEE) is submitted to Gunnedah Shire Council (Council) to accompany a Development Application (DA) for the Proposed Battery Energy Storage System (BESS) at 262 Hunts Road, Gunnedah NSW 2380 (the site) where approval has been granted for a solar photovoltaic (PV) power generation plant located at the site.

The proposal involves installation of a 11MWh Battery Energy Storage System (BESS). This will support the approved solar farm located on site. The amendments will provide for a well-designed, modern facility compliant with relevant environmental standards and guidelines. There is no change to the approved land use proposed under the proposed development, which is permissible under the State Environmental Planning Policy (Transport and Infrastructure) 2021 and Gunnedah Shire Local Environmental Plan 2012.

This Statement of Environmental Effects (SEE) describes the site, its environments, the proposed development and an assessment of the proposal in terms of the matters for consideration under Section 4.15 of the Environmental Planning and Assessment Act 1979 (EP&A Act 1979). The report should be read in conjunction with the supporting information appended to this SEE.

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

1.1 **Providence Climate Capital**

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

PCC have now secured over 30 solar farm sites in regional NSW and Victoria, including a partnership with Manilla Community Renewable Energy Inc. to develop Australia's first community owned solar farm. Once constructed, the Manilla project will be able to power the community of Manilla during daylight hours. The project is also a recipient of a NSW Government grant to develop PCC's world first energy storage technology which will enable the Manilla project, and subsequently PCC's solar projects, to provide stable energy well into the early morning and evening peak electricity consumption periods. This development application pertains to this world first energy storage technology, referred to as Battery Energy Storage Systems (BESS).

1.2 Background

Development consent was previously granted on 28 October 2022 for the Construction and use of electricity generating works comprising a 5MW solar farm and associated infrastructure under DA2020/035.

1.3 Consultation with Council

Pre-development application advice was provided by Gunnedah Shire Council via an online meeting on 10:00AM Wednesday 10 May 2023. Overall, the feedback was positive and confirmed the addition of the BESS units could be facilitated via a development application. It was also discussed that this application is ancillary to the existing development consent for the recently approved Solar Farm under DA 2020/035.

The necessary items to take into consideration for the proposed development application were confirmed as part of the meeting, and include:

Items to be addressed:	Comment:
Gunnedah Local Environmental Plan 2012 ("The LEP")	This has been addressed at Section 4.9.
State Environmental Planning Policy (Resilience and Hazards) 2021	This has been addressed at Section 4.7.
Gunnedah Development Control Plan 2012 ("The DCP")	This has been addressed at Section 4.10
1.6 – Development Contributions	It is noted that the development will incur Development Contributions, subject to 7.12 contribution.
6.2 – Parking	Parking has been addressed at Section 5.4.
6.3 – Landscaping	Landscaping has been addressed at Section 5.7.
6.6.1 – Environmental Effects	Traffic has been addressed at Section 5.4.
 It is anticipated that the proposed development will be facilitated by a suitably qualified consultant in order to compile relevant and supporting documentation, including a detailed Statement of Environmental Effects, to address relevant planning instruments and local controls. Generally, any changes to the original Development Consent would, in the first instance, require a Modification to Development 	This Statement of Environmental Effects (SEE) has been prepared by a qualified planning consultant at SLR Consulting Pty Ltd. It is noted that the Development Consent
Consent pursuant to Clause 4.55 of the Environmental Planning and Assessment Act 1979. In order to circumvent any contravention of the approved development consent, it is advised that a modification application be prepared and lodged for assessment and determination to capture all elements that will be required to be altered to incorporate the proposed Battery unit are appropriately assessed and determined prior to the Lodgement of a Development Application for the proposed Battery Unit.	would require a Modification Application in the event that there are any changes proposed.
3. An Operational Management Plan would be required for the proposed Battery units with reference to potential fire risks from the Battery units demonstrating relevant control mechanisms in place and safety standards to prevent potential hazards. The application should consider Planning for Bushfire Protection as part of its development design.	An OMP can be provided to Council prior to the issuance of an Occupation Certificate (OC).

Items to be addressed:	Comment:
4. The development should be prepared with consideration for	
Crime Prevention Through Environmental Design (CPTED)	designed to consider the
principles. The application should not rely on the placement of	
CCTV or other mechanical surveillance techniques.	Through Environmental Design (CPTED)
	principles at section 5.10.
5. As part of the assessment process, the development application will be required to be notified to adjoining neighbours in accordance with the Gunnedah Community Participation Plan. Council suggest based on the community interest and opposition to the development for the Solar Farm, that the developer undertake its own consultation with the surrounding land owners and broader community where necessary.	

2.0 The Site and Surrounds

2.1 Site Description

The land is legally known as part **Lot 2 DP 814689** and is located on the western side of Hunts Road at 262 Hunts Road, Gunnedah NSW 2380 (refer to Figure 1). The land is currently used for agricultural purposes with a little grass coverage. In terms of topography, the site is relevantly flat with a gradual slope from southwest to northeast.

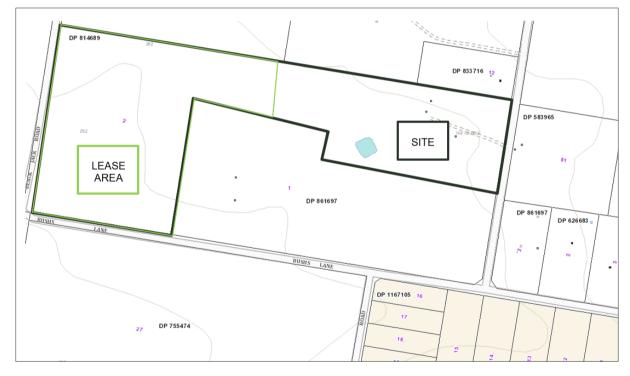
The site is a part of a large rural lot which contains a dwelling in the north eastern portion of the site with the rest of the land used for agricultural purposes. A low number of scattered trees are present on the site, along the southern and western border as well as the northern border. Access to the existing dwelling is via Hunts Road at the eastern boundary of the site. The dwelling is approximately 400m from the location of the solar PV farm.

The subject site is irregularly shaped comprising approximately 24.2 hectares. The site has frontage to Hunts Road to the east, Black Jack Road to the west and Bushs Lane to the south. The area of the proposed solar PV farm is approximately 16 hectares as identified in Figure 1 and Figure 2.





Figure 2 Cadastral Plan (Source: Six Maps)



2.2 Site Location and Context

The site is located approximately 5km south west of Gunnedah town centre, within the Gunnedah Shire Local Government Area (LGA). It is approximately 2km south of the state classified road Oxley Highway.

The surrounding area is made up of large rural lots undertaking agricultural activities with some ancillary development such as single dwellings and sheds.

Bushs Lane is an unsealed single lane in each direction road, unmarked with no kerb or guttering on either side. Black Jack Road is a sealed road, unmarked with no kerb or guttering



on either side The Gunnedah electrical substation of which the development proposes to connect to is located approximately 2.4km north east of the site on Wandobah Road. Gunnedah Airport is located 7km to the north east of the site.

A State Significant Development for a large-scale solar farm was approved at the beginning of 2019 and is located approximately 15km northeast of the site, accessed via Orange Grove Road. This solar farm was approved for a 150MW capacity solar farm.

There are no immediately obvious watercourses within, or in proximity to the proposed project area. The nearest significant water source is the Namoi River approximately 5.5 km to the north east. The closest dwelling to the development is located approximately 120m away, on the east side of the site.

3.0 **Project Description**

The Gunnedah BESS project is one of PCC's most recent initiatives in regional Australia, promising various benefits for rural and regional communities. The proposal involves the installation of a 11MWh BESS and associated infrastructure. The approved solar farm will be connected to Essential Energy's network via a 22kV distribution line running adjacent to the southern boundary of the site.

The proposed development includes the installation of four (4) BESS units, with a collective capacity of 11MWh, and relocation of the Operation and Maintenance shed (O&M) and water tank. This proposal does not modify the construction and operation consents of the solar farm as approved. Refer to **Figure 3** for the proposed layout and **Figure 4** for the approved consent under DA2020/035.

The proposed BESS development will be located on the hardstand area approved within the solar farm DA. As the proposal will utilise the existing hardstand area, no additional civil works are proposed, and the existing approved access will be used. There are no changes to the configuration of the solar farm layout.

A temporary construction office area is indicatively shown on the General Arrangement Plan on the eastern boundary of the site, with expectations that temporary car parking and off load areas are located within the hardstand area, also identified within the general arrangement plan. Motion activated security lighting will be installed at the site.

The solar PV farm has been approved to operate 24 hours a day, 7 days a week, with no permanent staff on site. Maintenance inspections will be undertaken on an as-needs basis.



Figure 3 Proposed Site Layout





4.0 Relevant Legislation and Planning Controls

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

- Environment Protection and Biodiversity Conservation Act 1999;
- Environmental Planning and Assessment Act 1979;
- National Parks and Wildlife Act 1974;
- Biodiversity Conservation Act 2016;
- State Environmental Planning Policy (Planning Systems) 2021
- State Environmental Planning Policy (Transport and Infrastructure) 2021;
- State Environmental Planning Policy (Resilience and Hazards) 2021;
- State Environmental Planning Policy (Biodiversity and Conservation) 2021;
- Gunnedah Local Environmental Plan 2012;
- Gunnedah Development Control Plan 2012; and
- Gunnedah Shire Rural Strategy.

4.1 Environmental Protection and Biodiversity Conservation Act 1999

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

Ecology advice has been provided by Habitat Environmental Services at Appendix B.

4.2 Environmental Planning and Assessment Act 1979

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

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

4.3 National Park and Wildlife Act 1974

The National Parks and Wildlife Act 1974 includes provisions for the protection and recording of Aboriginal objects in NSW.

An Aboriginal Due Diligence investigation was undertaken in accordance with the provisions of the National Parks and Wildlife Regulations 2009 and the accompanying Due Diligence Code of Practice for the Protection of Aboriginal Objects in NSW (OEH 2010) for previous approved DA2020/035.

The proposed BESS units are within the approved development area of the solar farm and do not require excavation outside of this footprint. As such, no further assessment of Aboriginal Heritage is deemed necessary under this proposal.

4.4 Biodiversity Conservation Act 2016

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

Under DA 2020/035, an assessment was undertaken by Kleinfelder in accordance with Section 7.3 of the BC Act 2016 to determine the significance of potential impacts of the proposed development on any threatened species or communities which are listed within the Act. In addition, Ecological advice was sought from Habitat Environmental Services at **Appendix B**. It was demonstrated that the construction of the Battery Energy Storage system is likely to have negligible impact on the biodiversity values of the site.

No threatened ecological communities or any listed flora or fauna were identified on site with the proposed development unlikely to cause any significant impact to any threatened species, populations or communities listed within the BC Act.

4.5 State Environmental Planning Policy (Planning Systems) 2021

Regional development classification applies to both local and designated development applications exceeding certain criteria defined by Schedule 6 of the SEPP Regionally Significant Development.

4.5.1 Chapter 4 Concurrences and consents

Schedule 6 Regionally significant development

5 Private infrastructure and community facilities over \$5 million

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

(a) air transport facilities, **electricity generating works**, port facilities, rail infrastructure facilities, road infrastructure facilities, sewerage systems, telecommunications facilities, waste or resource management facilities, water supply systems, or wharf or boating facilities,

(b) affordable housing, child care centres, community facilities, correctional centres, educational establishments, group homes, health services facilities or places of public worship.

The proposed development is considered to be private infrastructure with a CIV greater than \$5 million and as a result the development is deemed to be regionally significant development and the application will be referred to the JRPP for determination.

4.6 State Environmental Planning Policy (Transport and Infrastructure) 2021

4.6.1 Chapter 2 Infrastructure

Division 4 Electricity generating works or solar energy systems

The aim of SEPP (Transport and Infrastructure) 2021 is to provide greater flexibility in the location of infrastructure and service facilities. This SEPP identifies certain electricity generating works that are permitted with consent, without consent, as exempt development, as complying development and works that are prohibited.

The proposed BESS units are considered electricity generating works as they constitute electricity storage and are not involved in the generation of solar energy for use onsite. The proposal does not require any change of use or additional use for the approved operation.

Clause 2.36 Development permitted with consent

Development for the purpose of electricity generating works may be carried out by any person with consent on the following land—

- a) in the case of electricity generating works comprising a building or place used for the purpose of making or generating electricity using waves, tides or aquatic thermal as the relevant fuel source—on any land,
- b) in any other case—any land in a prescribed non-residential zone.

prescribed non-residential zone means any of the following land use zones or a land use zone that is equivalent to any of those zones—

(a) RU1 Primary Production,

- (b) RU2 Rural Landscape,
- (c) RU3 Forestry,
- (d) RU4 Primary Production Small Lots,
- (e) E4 General Industrial,
- (f) E5 Heavy Industrial,
- (g) IN1 General Industrial,
- (h) IN2 Light Industrial,
- (i) IN3 Heavy Industrial,
- (j) IN4 Working Waterfront,
- (k) SP1 Special Activities,
- (I) SP2 Infrastructure,
- (m) W4 Working Waterfront.

The site is zoned RU4 Primary Production Small Lots, a prescribed non-residential zone, the proposed BESS units are permitted with consent under Clause 2.36 of SEPP (Transport and Infrastructure) 2021.

Clause 2.122 Traffic-generating development

The proposed development will not generate greater than 200 vehicle movements per hour and as such does not trigger traffic generating development under the SEPP. Referral under this clause to the RMS is therefore not required.

4.7 State Environmental Planning Policy (Resilience and Hazards) 2021

4.7.1 Chapter 3 – Hazardous and Offensive Development

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

The potential for fire hazard arising from the additional BESS units is considered negligible. However, regard has been given for Planning for Bushfire Protection 2019, and any building construction standards. It is noted that the approved development includes a 10m buffer zone around to reduce fire risk, which is retained by the proposed development. The buffer zone between the fence and solar array enables emergency vehicle access and fire risk management.

Herein, the site and design are deemed to not impose a significant level of risk to the community with the site being assessed as not potentially hazardous.

4.7.2 Chapter 4 – Remediation of Land

Chapter 4 of the Resilience and Hazards SEPP states that a consent authority must not consent to the carrying out of any development on land unless:

- a) it has considered whether the land is contaminated, and
- b) if the land is contaminated, it is satisfied that the land is suitable in its contaminated state (or will be suitable, after remediation) for the purpose for which the development is proposed to be carried out, and
- c) if the land requires remediation to be made suitable for the purpose for which the development is proposed to be carried out, it is satisfied that the land will be remediated before the land is used for that purpose.

The status of the land was assessed under DA2020/35 and therefore is not required for this proposal. All proposed works will be carried out within the applicable guidelines and on land which is approved under the previous development application.

4.8 State Environmental Planning Policy (Biodiversity and Conservation) 2021

4.8.1 Chapter 3 – Koala Habitat Protection 2020

This Policy aims to encourage the proper conservation and management of areas of natural vegetation that provide habitat for koalas through the identification of core koala habitat and by requiring the preparation of plans of management before development consent can be granted in relation to areas of core koala habitat.

The site is devoid of trees and woody vegetation, it is considered unlikely that the site contains potential koala habitat or core koala habitat. This proposal poses no further impacts for koala

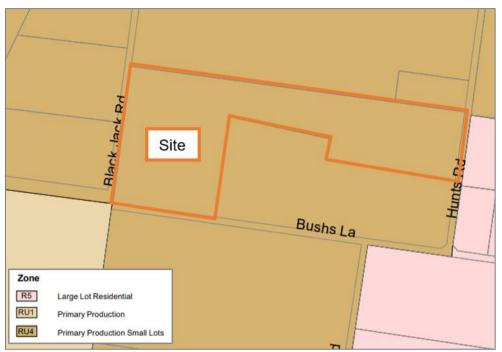


habitation as the additional BESS units and relocated O&M shed are situated entirely within the approved footprint of the development.

4.9 Gunnedah Local Environmental Plan 2012

The site is zoned RU4 Primary Production Small Lots under the Gunnedah Local Environmental Plan 2012 (LEP 2012), see Figure 5.

Figure 5 Land Zone Extract Gunnedah LEP 2012 (LZN_005A)



Zone RU4 Primary Production Small Lots

1 Objectives of zone

- To enable sustainable primary industry and other compatible land uses.
- To encourage and promote diversity and employment opportunities in relation to primary industry enterprises, particularly those that require smaller lots or that are more intensive in nature.
- To minimise conflict between land uses within this zone and land uses within adjoining zones.
- To maintain the rural and scenic character of the land.
- To ensure that development does not unreasonably increase the demand for public services or public facilities.
- To conserve and enhance the quality of valuable environmental assets, including waterways, riparian land, wetlands and other surface and groundwater resources, remnant native vegetation and fauna movement corridors as part of all new development and land use.
- To provide opportunities for a restricted range of employment-generating development that is compatible with, and adds value to, local agricultural production.
- To minimise conflict between land uses in the zone and with adjoining zones.



• To maintain native vegetation and wildlife corridors.

2 Permitted without consent

Environmental protection works; Extensive agriculture; Home-based child care; Home occupations; Moorings; Roads

3 Permitted with consent

Aquaculture; Bed and breakfast accommodation; Building identification signs; Business identification signs; Cellar door premises; Dual occupancies (attached); Dwelling houses; Farm buildings; Farm stay accommodation; Heliports; Home industries; Intensive plant agriculture; Plant nurseries; Roadside stalls; <u>Any other development not specified in item 2 or 4</u>

4 Prohibited

Air transport facilities; Airstrips; Amusement centres; Animal boarding or training establishments; Camping grounds; Car parks; Caravan parks; Centre-based child care facilities; Commercial premises; Community facilities; Crematoria; Depots; Eco-tourist facilities; Entertainment facilities; Exhibition homes; Exhibition villages; Forestry; Freight transport facilities; Function centres; Heavy industrial storage establishments; Helipads; Highway service centres; Home occupations (sex services); Industrial retail outlets; Industrial training facilities; Industries; Intensive livestock agriculture; Mortuaries; Passenger transport facilities; Places of public worship; Public administration buildings; Recreation facilities (major); Registered clubs; Residential accommodation; Respite day care centres; Restricted premises; Tourist and visitor accommodation; Transport depots; Truck depots; Vehicle body repair workshops; Vehicle repair stations; Warehouse or distribution centres; Wharf or boating facilities; Wholesale supplies

Definition:

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

The proposed land use, defined as electricity generating works, is permitted on the site with consent as *Any other development not specified in item 2 or 4*.

The proposed development is consistent with the objectives of the RU4 Primary Production Small Lots zone as it will provide a compatible land use which minimises land use conflict in the area whilst contributing to the land use diversity of the area. The proposal will not increase demand for public services or facilities and will have minimal impact on native vegetation and wildlife corridors or on waterways, wetlands or riparian zones.

Clause 5.10 Heritage Conservation

The site is not a listed heritage item nor are any listed heritage items located in proximity to the site. The site is not mapped as a heritage conservation area.

Clause 6.1 Flood Planning

The site is not mapped as being situated within flood prone land under the Gunnedah LEP 2012.

4.10 Gunnedah Development Control Plan 2012

The Gunnedah Development Control Plan (DCP) 2012 applies to all land within the Gunnedah Local Government Area (LGA), including the subject site. The relevant sections of the DCP include:



- Section 4 Industrial Development
- Chapter 6 General Development Specifications

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

4.11 Gunnedah Shire Rural Strategy

The Gunnedah Shire Rural Strategy (GSRS) aims to guide future development and land use within the Gunnedah Shire. The preparation of the strategy provides the basis for future planning decisions and provide certainty to the community whilst encouraging favourable development and the protection of the environment.

The proposal is consistent with strategy, which seeks to create a strong sustainable economic base. This development will continue the diversification of the Gunnedah LGA's economy, providing another significant contributor to the economy allowing Gunnedah to transition from its traditional agricultural base. The proposal is aligned with the strategy as it seeks to use the existing resources in the area to provide further economic growth and development, which has a sustainable long-term future.

The development also acknowledges the desire of the strategy to protect the regions native vegetation. The proposal has been uniquely designed to protect the native vegetation with the PV arrays having a clearance above the existing ground surface.

5.0 Assessment of Planning Issues

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

5.1 Compliance with Planning Instruments and Controls

Unless otherwise stated, the proposed development either complies with or is consistent with all relevant planning instruments and controls set out in Section 5 of this SEE, in that:

- The proposed development is permissible under SEPP (Transport and Infrastructure) 2021 and the RU4 zone;
- The proposal is consistent with the relevant objectives of the RU4 zone, as it will provide a sustainable rural land use whilst maintaining and enhancing the existing natural resource base;
- The proposed modification items will have no further impacts on flora or fauna under the BC Act 2016;
- The development is classified as Regional Development under SEPP (Planning Systems) 2021 and will therefore be determined by the RPP;
- The proposal complies with the requirements of SEPP (Transport and Infrastructure) and referral to the road authority will not be required as the proposal is not classified as traffic generating development; and,
- The proposal is generally consistent with the objectives and relevant controls within Gunnedah DCP 2012.

5.2 Noise

A Noise Assessment (NA) undertaken by Muller Acoustic Consultants Pty Ltd (MAC) measured and modelled the potential noise generation for the approved operation (both during construction and once operational) including sleep disturbance noise emissions. The report concluded that based on the Noise Assessment results, both the operation of the solar farm and the BESS are anticipated to comply with the limiting night-time PNYL pf 35dB LAeq (15min).

There are no noise related issues which would prevent approval of the project. This assessment is retained for the proposed development as the additional BESS units do not further the potential for noise generation.

5.3 Bushfire

The proposal includes a 10m buffer zone around to reduce fire risk. The buffer zone between the fence and solar array enables emergency vehicle access and fire risk management. The proposed development does not alter the approved buffer zone. These mitigative measures are considered to alleviate the consideration of the development as potentially hazardous under the SEPP (Resilience and Hazards) 2021.

5.4 Traffic, Access And Parking

A Traffic Impact Assessment (TIA) was undertaken by Intersect Traffic for the previously approved DA2020/035. The anticipated rates of traffic likely to be generated from the proposed development (both during construction and once operational) are unlikely to be altered as this application involves minor addition of (4) BESS units. The proposal is considered to have a negligible impact on traffic, access and parking components at the site.

5.5 Stormwater, Soil And Erosion Control

As stated within the addendum letter, prepared by DRB Consulting Engineers, the proposed batteries are located on the hardstand area. The area has previously been assessed as 100% impervious under DA2020/035. Therefore, the inclusion of the BESS will not have further impact on the stormwater design at the site. Refer to **Appendix D** for further details.

5.6 Flora And Fauna

Habitat Environmental Services have prepared Ecology Advice for the proposed development (refer **Appendix B**) based on the findings of Kleinfelder Australia Pty Ltd. Dr. Gilbert Whyte conducted ecological investigations within the project site on 04 March 2020 and prepared a Flora and Fauna Assessment Report (FFAR) to support the solar farm project.

As noted within the advice, The Battery Energy Storage System is proposed to be constructed in the western portion of the Project Site. This area was found to be cleared when the project site was inspected on 04 March 2020. A review of aerial photography from 03 December 2021 also shows the lack of vegetation in this area.

Due to the lack of native vegetation and habitat features within the project site, construction of the Battery Energy Storage System is likely to have a negligible impact on biodiversity values.

5.7 Landscape And Visual Impact

5.7.1 Visual Impact

It is relevant to consider the visual impact of the proposal given the existing rural landscape character of the area and location of a number of neighbouring properties within 1km radius of the site. The proposed additional BESS is unlikely to add high visual impact on the site. The development is limited to the existing hardstand areas of the site. The proposal involves relocation of O&M Container, water tank and central inverter. In addition, four (4) BESS are proposed on the hardstand area. Moreover, the site is screened by appropriate landscaping.

To manage visual impacts a range of mitigation measures are proposed. Landscaping is to be established to provide a visual buffer and is to consist of a number of mature trees and shrubs planted along the northern, eastern, western and southern boundaries of the development site. If possible, structures are to be coloured a neutral pallet consistent with the surrounding area with bright and contrasting colours avoided.

5.7.2 Landscaping

A Landscape Plan prepared by SLR Consulting was previously approved under DA2020/035. The landscaping for this application is to remain unchanged as part of this application. The Landscape Plan aims to provide screening of the development from Black Jack Road and Bushs lane and nearby residences through the provision of screening trees along the northern, eastern, western and southern boundaries along with car park/laydown area trees.

The planting palette is based mainly on durable native species which enhance the local ecology and complement the rural character of the surrounding landscape. Large shrubs and small trees will be used along the western and northern boundaries to screen any potential visual impact the proposal may have when viewed from Black Jack Road or nearby dwellings. Larger shrubs will be used on the eastern boundary to screen the nearby residential dwelling, however, no trees will be planted due to the close proximity of overhead powerlines.

5.8 Glare Analysis

The Reflective Glare Assessment (RGA) of the previous application was assessed under DA2020/035, and therein considered unnecessary for this proposed development. These assessments are retained for the proposed development as the additional BESS units and relocated O&M shed and water tank are considered to negligibly alter the reflective glare qualities of the development.

5.9 Social And Economic Impacts

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

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

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

The most common perceived advantages of renewables included environmental benefits and lower cost of electricity. The most common perceived disadvantages included higher cost and



concerns about efficiency and reliability. In the North West, 74 per cent were prepared to use renewables 'provided I don't have to pay more for my electricity' and 22 per cent were prepared to pay more to support them.

In summary, the proposed establishment of BESS (associated with approved Solar Farm) on the site is anticipated to have an ongoing positive social and economic impact on the local area and the broader Gunnedah community. Overall, it is considered that the development:

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

5.10 Safety and Security

The development has been designed to and shall be managed to minimise and discourage criminal activity and ensure the safety of staff and the local community. The proposal has been designed to be consistent with Crime Prevention through Environmental Design (CPTED) principles. CPTED employs 4 key strategies. These include surveillance, access control, territorial reinforcement and space/activity management.

5.10.1 Natural Surveillance

Natural surveillance limits the opportunity for crime by increasing awareness that people can be seen. Potential offenders therefore feel increased scrutiny and limitations on their escape routes.

Good surveillance is achieved by:

- a) Clear sightlines between private and public spaces;
- b) Effective lighting of public places; and
- c) Landscaping that makes places attractive, but not a place to hide.

The design of the development includes natural surveillance by the strategic placement of physical features to maximise visibility. The specific design elements include:

- Clear sight lines between the site and adjoining streets and businesses, allowing maximum visibility and surveillance at the vehicular entry into the site;
- Clear sight lines are provided allowing maximum surveillance of the vehicular entry and exit point(s) for the site;
- The maintenance levels for paths of travel will comply with AS1680;
- Appropriate day and night lighting installed to eliminate any potential problem areas and to ensure security cameras operate effectively (i.e. easy facial recognition at 15m);
- No 'hidden spots' created within the site by siting of buildings and canopies allowing optimal surveillance over the internal (central) areas of the site; and



• The design of the car park areas encourages passive surveillance and incorporates active measures such as lighting and signage.

5.10.2 Natural Access Control

Natural access control limits the opportunity for crime by taking steps to clearly differentiate between public space and private space.

Good access control for the movement of people is achieved by:

- a) Landscapes and physical features that channel and group pedestrians into target areas;
- b) Public external spaces that attract rather than discourage people from gathering; and
- c) Restricted access to internal or high risk areas (e.g. car parks).

The site has been designed to limit access and control flow by:

- The creation of attractive spaces within the development;
- Clear delineation of the property boundary with landscape treatment;
- Use of landscaping that supports pedestrian access within the site;
- Clear movement for pedestrians throughout the car park and between the elements of the development to minimise conflict with vehicles; and
- Appropriate lighting through the parking areas and signage for customers.

5.10.3 Territorial Reinforcement (Community Ownership)

Territorial reinforcement promotes social control through increased definition of space and improved proprietary concern, i.e. it makes the normal user feel safe and makes the potential offender aware of a substantial risk of apprehension or scrutiny. By using buildings, fences, pavement, signs, lighting and landscape to express ownership and define public, semi-public and private space, natural territorial reinforcement occurs.

Community ownership (territorial reinforcement) makes people feel comfortable in a place and is achieved by:

- a. A design that encourages people to gather in public spaces;
- b. Having a clear transition between boundaries of public and private spaces; and
- c. Having clear design cues as to who is to use the space and what it is to be used for.

The proposed development has been designed to clearly delineate spaces that are to be used for congregation and areas that are not. This will ensure that any potential intruders or people who are not customers will stand out and be easily identified. Elements of territorial reinforcement included in the original design and ongoing management of the site include:

- The premises and landscaping will be maintained such that it communicates an alert and active presence occupying the entire space;
- Clearly defined boundaries of the site;
- Pedestrian line markings provided within the development;
- Display of security system signage at access points;
- Clearly defined boundaries of the development and areas within; and

• Provision of directional signage that assists in controlling activities and movements throughout the premises (knowing how and where to enter/exit and find assistance can impact on safety).

5.10.4 Space Management

Space management strategies such as site maintenance, target hardening, and target removal are included in the development.

Maintenance

Management and maintenance are closely linked to a sense of ownership. Good management and maintenance of a place, or property, is often the difference between it seeming safe or unsafe and it being cared for or uncared for. Deterioration indicates less control by the users of a site and indicates a greater tolerance of disorder.

It is in the interest of the future operators at the site to maintain the site to a high standard so that the business can operate at their optimal level and attract as much usage as possible. Routine maintenance checks and reporting will be carried out by personnel employed at the development to ensure the property is maintained and to reduce the likelihood of crime or vandalism.

Furthermore, robust materials are proposed to be used where possible including graffiti resistant materials and fixed rubbish bins, however not exclusively, to mitigate against potential malicious damage. Any vandalism or graffiti will be repaired and removed promptly by staff or contractors.

As stated above, the proposed landscaping is designed not to create pockets or enclosures whereby victims could be entrapped but to help integrate the built form into the site and surrounds. The proposed landscaping scheme avoids vegetation that impedes the effectiveness of outdoor lighting and allows for good sightlines without areas for concealment.

Target Hardening and Removal

Target hardening and removal is the use of 'design out crime' strategies to make it harder for a crime to be committed and reduces the gains of crime. While this is the most longestablished and traditional approach to crime prevention, it can create a 'fortress mentality' and imagery whereby users of the development withdraw behind physical barriers and the self-policing capacity of the built environment is damaged. This is effectively working against CPTED strategies that rely on surveillance, territoriality and positive image management.

The proposal includes the use of some physical barriers associated with target hardening such as security cameras and landscaping in key locations. However, the site allows opportunities for natural surveillance from within the site, with clearly defined boundaries, and allows opportunities for natural access control. The site design has ensured that there is a safe environment for customers and workers within the site.

6.0 Conclusion

The proposed application for the four (4) BESS units, the relocation of O&M shed and the water tank is located at 262 Hunts Road, Gunnedah NSW 2380 (the site) where previous approval has been granted for solar photovoltaic (PV) power generation plant located at the site. The proposal will provide for a well-designed, modern facility compliant with relevant environmental standards and guidelines. There is no change to the approved land use.

With the growth of the Gunnedah area, the enhancement of the electrical storage capacity of the approved solar farm will greatly assist in meeting the growing electrical demands required to support that growth, regardless of solar conditions.



The proposed BESS units are consistent with the objectives of the RU4 Primary Production Small Lots Zone as it will provide a compatible land use which minimises land use conflict in the area whilst contributing to the land use diversity of the area. The amendments will not increase demand for public services or facilities and do not further impact native vegetation, wildlife corridors, waterways, wetlands, or riparian zones. The development remains compliant with the relevant LEP clauses, presenting no variations to any development standard. The approved and modified development is generally compliant with the requirements of Gunnedah DCP 2012.

This SEE retains the assessment of potential impacts arising from the approved development on surrounding properties including traffic, access and parking, and water management. However, this SEE addressed the minor potential for fire hazard arising from the additional BESS units rather than append a Preliminary Hazard Analysis. Furthermore, this proposal has provided renewed assessments and considerations of the visual impact of the development, noise impact, ecology and a revised waste management plan.

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

Sincerely,

SLR Consulting Australia

Melanie Dow Project Consultant - Planning

7.0 Feedback

At SLR, we are committed to delivering professional quality service to our clients. We are constantly looking for ways to improve the quality of our deliverables and our service to our clients. Client feedback is a valuable tool in helping us prioritise services and resources according to our client needs.

To achieve this, your feedback on the team's performance, deliverables and service are valuable and SLR welcome all feedback via <u>https://www.slrconsulting.com/en/feedback</u>. We recognise the value of your time and we will make a \$10 donation to our 2023 Charity Partner - Lifeline, for every completed form.



Appendix A Architectural Plans

Statement of Environmental Effects

Installation of a Battery Energy Storage System (BESS)

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Appendix B Ecology Addendum Letter

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Appendix C Acoustic Report

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Appendix D Stormwater Addendum Letter

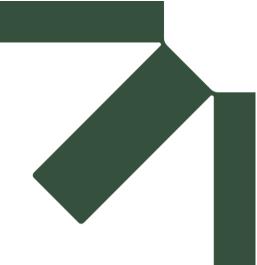
Statement of Environmental Effects

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Appendix E Visual Impact Assessment

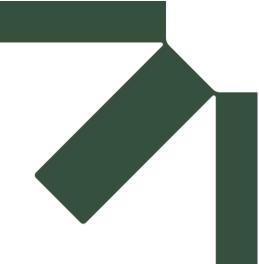
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Appendix F DCP Compliance Table

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Figure 6	DCP	Compliance	Table
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Control	Requirement		Comment	Compliance	
Chapter 4 Industrial					
4.1 Building Setbacks	Street	(Primary and		There are no changes to the	Y
	Mullaley Road (Oxley Highway)	10m	BCA	existing setbacks	
	Farrar Road Quia Road	10m 10m	BCA BCA	approved under DA2020/035.	
	Blackjack Road 10m BCA				
4 4 Traffia and	Other	7.5m	BCA		N N
4.4 Traffic and	The Traffic Assessment is required to			There are no changes from the	Y
Access	o Road network;	demonstrate the ddequdey of.			
	o Geometric desi	an for intersect	ione	Impact Assessment	
	including paveme		10115,	for the approved DA2020/035. As	
	o Site access;	• •		such, further Traffic	
	o Loading/Unload	ding facilities;		Assessment is not	
	o Safe on-site ma design vehicle; a	-	argest	required as part of this DA.	
	o Wearing surfact parking areas, lo		•		
	and associated v relative to the de		ring areas		
	Access drivewa	ys across the fo	ootpath		
	should be hard sealed, consisting of either concrete, asphaltic concrete, paving blocks or other approved material.				
		Unsealed vehicle movement areas			
	are not acceptable due to				
		environmental management impacts.			
	•	 Kerb, gutter and road shoulder between the lip of the gutter and the 			
	edge of the existi	-			
	footway formation	•			
	associated road				
	constructed for th	•			
	the site.				
	All vehicles mus	st be able to en	ter and		
	exit the site in a f				
	• Site access is n	ot permitted:			
	o Close to traffic roundabouts with				
	distances;	_			
	o Opposite other without a median		nents		
	o Where there is pedestrian move	•			
	or				

Control	Requ	uirement	Comment	Compliance	
Control	o Where right turnin site may obstruct th • Separate signpost exit driveways are re developments requi parking spaces or w generates a high turnover of traffic. • The number of acc to any one street fro ingress and 1 egres • Driveways must be accordance with AS Facilities. • Access and parkin must comply with th Driveway type Upt 1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	ag traffic entering the rough traffic. eed entrance and equired for iring more than 50 where development cess points from a site ontage is limited to 1 is. e provided in 3 2890.1 Parking ag arrangements he following: <u>Refine Marman (Sold Harden Vielden Refine) (Sold Harden Vielden 1995)</u> <u>Refine Marman (Sold Harden Vielden Refine) (Sold Harden Vielden 1995)</u> <u>Refine Marman (Sold Harden Vielden Vielden 1995)</u> <u>Refine Marman (Sold Harden 1995)</u> <u>Refine Ma</u>	Comment	Compliance	
4.5 Parking	Land Use Industrial Retail Industrial Sex services premises Transport/Truck Depot Vehicle Body Repair Workshop or Repair Station Warehouses Other	Parking Requirements Gross Floor Area (GFA) 1 space per 45m ² GFA 1 space per 75m ² GFA OR 1 space per 75m ² GFA OR 1 space per 2 employees WHICHEVER IS GREATER 1 space per staff working at any one time PLUS 1 space per room where sexual services are provided Space of each vehicle present at peak time onsite and driver parking 1 space per 40m ² GFA OR 3 spaces per workshop bay WHICHEVER IS GREATER 1 space per 40m ² GFA OR 1 space per employee WHICHEVER IS GREATER Based on predicted peak vehicle use	The proposal will require only 1 parking space, as there will only be 1 staff member on site. As such, the proposal complies with this control, as 10 car parking spaces are provided.	Y	
4.6 Landscaping	public place or adjoin and o areas adjacent to bu customer access po	treet setback; backs where visible from ining residential area; uilding entrances and	Landscaping is provided along all four boundaries of the site. Refer to the Architectural Plans. No changes are proposed to the approved Landscape Plan under DA2020/035.		

Control	Requirement	Comment	Compliance
	and rear boundaries where visible		
	from a public place or adjoining		
	residential area;		
	• For properties located in Farrar Road,		
	landscaping is to be provided all lot		
	boundaries;		•
	 Landscaping for shading shall be 		
	provided in outdoor car parking areas where >10 spaces are required, to provide shading and soften the visual impact of large hard surfaces.		
	• Shade structures shall be provided for 30% of parking spaces in outdoor car parking areas where ≥30 spaces are required, to provide shading and soften the visual impact of large hard surfaces.		
	Landscaping shall comprise only low		
	maintenance, drought and frost tolerant species.		
4.9 Outdoor Lighting	Outdoor lighting must comply with AS 4282 Control of Obtrusive Effects of Outdoor Lighting	Noted.	Y
4.11 Noise	 Windows, doors and other wall openings shall be arranged to minimise noise impacts on 	N/A	N/A
	residences where proposed within 400m of a residential zone.		
	• External plant (generators, air conditioning plant, etc.) shall be enclosed to minimise noise nuisance where adjoining a residential area.		
Chapter 6 Gener	al Development Specifications	1	
6.2 Parking	• Parking must be provided as per the Schedule in Appendix 1.	The parking requirements under the schedule for the proposal are for 1 car space. The proposal has capacity for 10 car spaces and therefore complies with this control.	Y
6.3 Landscaping	 Location and grouping of plant types shall be multi-functional providing privacy, security, shading and recreation functions. Landscaping for shading shall be provided in outdoor car parking areas where >10 spaces are required, to provide shading and soften the visual 	As discussed, the approved Landscape Plans for this site are remain unchanged as part of this DA.	Y

Control	Requirement	Comment	Compliance
	 impact of large hard surfaces. Shade structures shall be provided for 30% of parking spaces in outdoor car parking areas where ≥30 spaces are required, to provide shading and soften the visual impact of large hard surfaces. Landscaping shall comprise low maintenance, drought and frost tolerant species. 		
	6.6.4 Waste Management General waste storage and collection arrangements shall be specified	A Waste Management Plan has been prepared and located at Appendix G.	Y





Appendix G Waste Management Plan

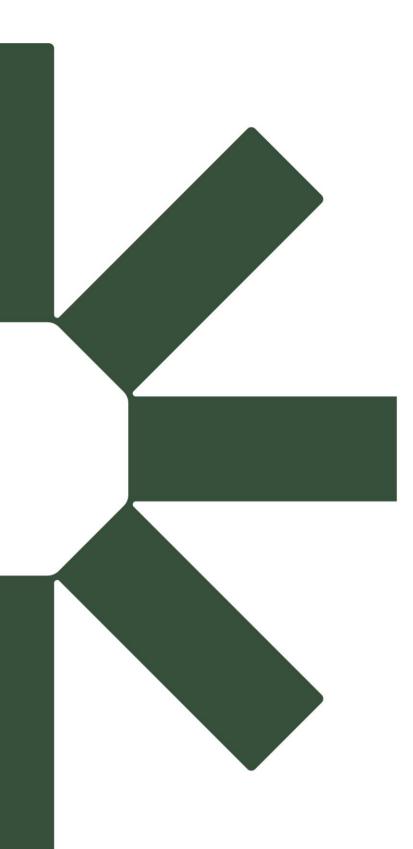
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