

Statement of Environmental Effects

Junee Battery Energy Storage
System

346 Old Sydney Road and 38
Millbank Lane, Marinna

Prepared for
Metlen

December 2024




Mecone acknowledges the Traditional Custodians of the Wiradjuri Nation and across the Mecone offices that this report is prepared, paying respect to the Elders past and present. We recognise the ongoing connection of Aboriginal and Torres Strait Islander peoples to land, waters, and culture.

Project director

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Revision	Revision date	Status	Authorised: Name & Signature	
V1	1 October 2024	DRAFT	A Smith	
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* This document is for discussion purposes only unless signed and dated by the persons identified. This document has been reviewed by the Project Director.

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Glossary and abbreviations

Item	Description
APZ	Asset Protection Zones
BAL	Bushfire Attack Level
BAR	Bushfire Assessment Report
BCSEPP	<i>State Environmental Planning Policy (Biodiversity and Conservation) 2021</i>
BESS	Battery Energy Storage System
DA	Development Application
EDC	Estimated Cost of Development
NSW EPA	NSW Environmental Protection Agency
EPA Regulation	<i>Environmental Planning and Assessment Regulation 2021</i>
EP&A Act	<i>Environmental Planning and Assessment Act 1979</i>
IPA	Inner protection area
JDCP 2021	Junee Development Control Plan 2021
JLEP 2012	Junee Local Environmental Plan 2012
LGA	Local Government Area
MW	Megawatts
NPI	<i>Noise Policy for Industry (NPI) 2017</i>
PBP 2019	Planning for Bush Fire Protection (PBP) 2019
PHA	Preliminary Hazard Assessment
Planning Systems SEPP	<i>State Environmental Planning Policy (Planning Systems) 2021</i>
PSI	Preliminary Site Investigation
RHSEPP	<i>State Environmental Planning Policy (Resilience and Hazards) 2021</i>
RSD	Regionally Significant Development
SEE	Statement of Environmental Effect
SEPP	State Environmental Planning Policy
SRPP	Southern Regional Planning Panel
SSD	State Significant Development
TISEPP	<i>State Environmental Planning Policy (Transport and Infrastructure) 2021</i>
VPA	Voluntary Planning Agreement



1 Introduction

This Statement of Environmental Effects (**SEE**) has been prepared by Mecone Group Pty Limited on behalf of Metlen (**Applicant**) to support a Development Application (**DA**) to Junee Shire Council (**Council**) at 346 Old Sydney Road and 38 Millbank Road, Marinna (the **site**).

This DA seeks consent for:

- The construction and operation of a Battery Energy Storage System (**BESS**) with a capacity of 17.6MW/35.2MWh to support the operation of the existing solar farm at 346 Old Sydney Road and 38 Millbank Road, Marinna.

The DA is lodged with Council under section 4.12 of the *Environmental Planning and Assessment Act 1979* (**EP&A Act**) and this SEE has been prepared in accordance with the requirements of Part 3, Clause 24 of the Environmental Planning and Assessment Regulation 2021 (**EP&A Regulation**). This SEE includes an assessment of the proposed development in relation to the matters for consideration set out under section 4.15 of the EP&A Act and should be read in conjunction with accompanying documentation.

The SEE is structured as follows:

- **Section 1 – Introduction:** provides an introduction to the proposal;
- **Section 2 – The Site:** provides an analysis of the site and its context;
- **Section 3 – Background:** provides an outline of the existing solar farm approvals and the pre-lodgement meeting held on 30 September 2023;
- **Section 4 – The Proposal:** provides a detailed description of the proposal;
- **Section 5 – Statutory Planning Framework:** assessment of the proposal against relevant State and local environmental planning instruments and development control plan;
- **Section 6 – Planning Evaluation:** assessment of the proposal's environmental impacts and identification of mitigation measures where required. This section also outlines why the site is suitable and the proposed development is in the public interest; and
- **Section 7 – Conclusion:** provides an overview and conclusion of the development assessment for the development application.

The proposed works have an estimated development cost (**EDC**) of \$19,031,838 (excluding GST), refer to the EDC Report prepared by Metlen (refer to **Appendix 5**). Based on the EDC, Council is the relevant consent authority in this instance.

Schedule 6, Clause 5 of the *State Environmental Planning Policy (Planning Systems) 2021* (**Planning Systems SEPP**) identifies that electricity generating works comprising an EDC of more than \$5 million comprises regionally significant development (**RSD**). Therefore, the proposed development with an EDC of \$19,031,838, will comprise RSD and be deferred to the Southern Regional Planning Panel for a determination.

This DA, and works proposed within, have been designed in accordance with the *Junee Local Environmental Plan 2012* (**JLEP 2012**) and the *Junee Shire Development Control Plan 2021* (**JSDCP 2021**). The DA is compliant with the statutory controls and the use is permitted with consent under Chapter 2, Part 2.3 (Division 4) of the State Environmental Planning Policy (Transport and Infrastructure) (**TISEPP**).

Furthermore, the BESS would be an integral support to the existing solar farm and would lead to positive economic and environmental outcomes. The proposed BESS is intended to store electricity created by the solar farm, pumping remaining electricity into the grid. This system would supply energy to many users and enhance the productivity of the precinct. It would not depart from any relevant guidelines or development controls and



would not result in any unacceptable impacts. The proposed development has planning merit, is appropriate for the site and approval is therefore recommended, subject to appropriate conditions of consent.

Project Team and Documents

This DA is supported by and should be read in conjunction with the following plans and specialist reports in Table 1.

Table 1: Supporting Documentation

Appendix		Consultant
1	Architectural Plans	Mytilneos
2	Preliminary Hazard Analysis	Riskcon
3	Acoustic Report	Acoustic Logic
4	Bushfire Assessment Report	Waratah Bushfire
5	EDC Report	Hollis Partners Quantity Surveyors
6	Owners Consent	-



2 The Site

The immediate context of the site is shown in **Figure 1**. The broader local context is shown in **Figure 2**.

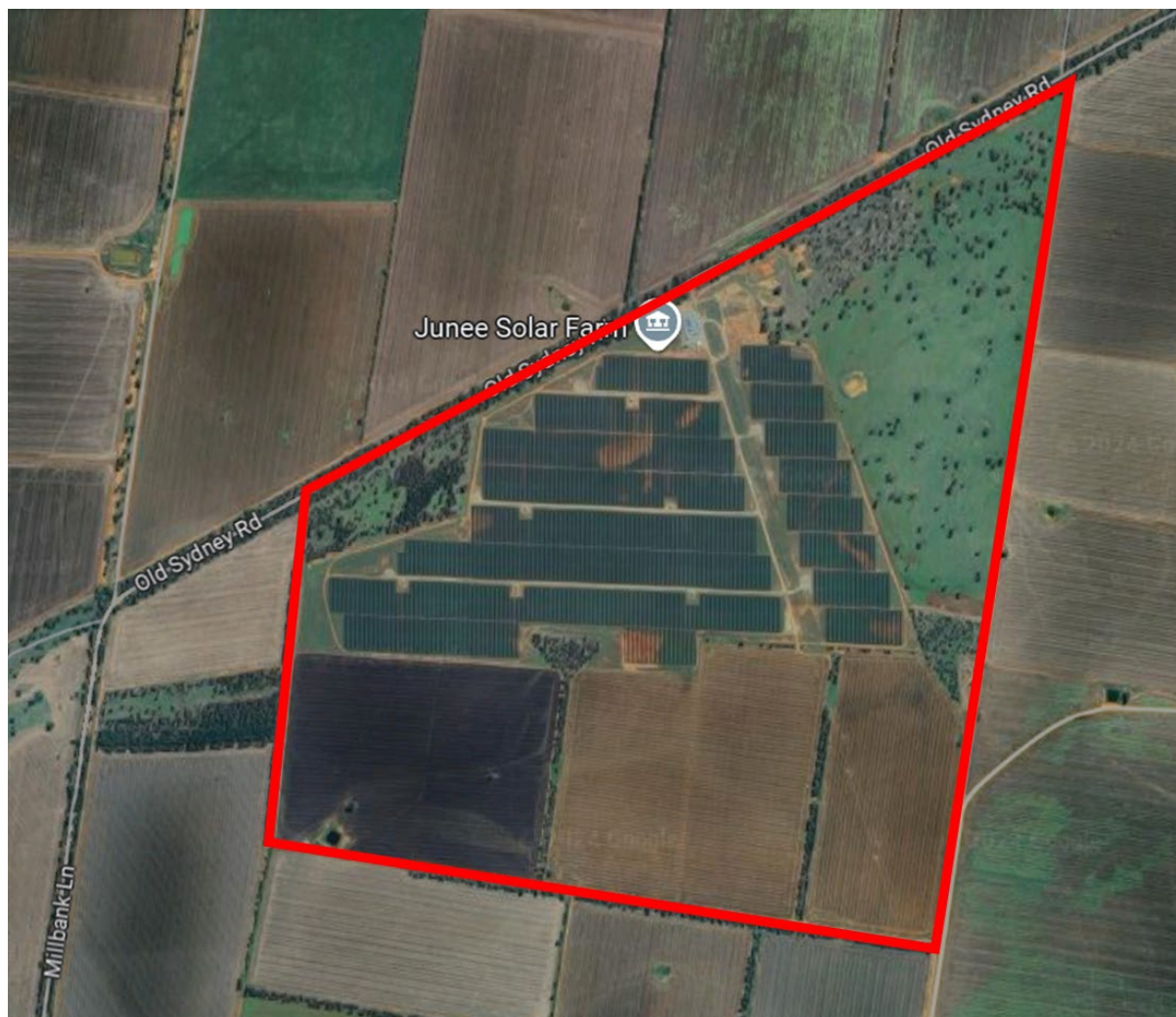


Figure 1: Subject Site (site shown in red outline)

Source: Google Maps



Figure 2: Site Context Plan (site shown in red outline)

Source: Google Maps

A summary of the key site features and characteristics are summarised in **Table 2** below.

Table 2: Summary of Key Features

Item	Description
Address	<ul style="list-style-type: none"> 346 Old Sydney Road, Marinna 38 Millbank Lane, Marinna
Legal Description	<ul style="list-style-type: none"> Lot 32 in DP 1271693 Lot 24 in DP 1263462
Local Government Area (LGA)	Junee Shire LGA
Total Site Area	463 hectares (ha)
Description of the site	<p>The approved solar farm (DA2018/11) is spread across the site, with a substation contained within the northern portion of the site.</p> <p>The remaining area of the site comprises cleared land, including small trees, shrubs and pasture. There are no dwellings on the site. An identified hydro line traverses underground through the centre of the site, to the south-east running through to the adjoining allotments. There are no existing easements located on the site.</p>



Previous Uses	The site has historically been utilised for agricultural purposes, until the recent construction of the solar farm, which was approved under DA2018/11.
Local Context and Surrounding Development	The surrounding land to the north, east, south and west comprises predominantly undeveloped RU1 zoned land utilised for rural/agricultural purposes. Single dwelling houses and sheds are interspersed around the surrounding sites, which are predominantly characterised as paddocks. The closest dwellings are located approximately 1.1km from the subject site.



3 Background

3.1 Original DA: DA2018/11

A development application, DA2018/11 was lodged on 14 February 2018 for the following works:

‘Construction and operation of a 26MW solar farm’.

Works proposed included the installation of solar photovoltaic modules, steel racking and piled supports, electrical transformers and inverters, electrical cabling, telecommunications equipment, an operations and maintenance building, site substation and perimeter fencing. The solar panels are installed on trackers which automatically track the position of the sun. In addition to the solar panels, approved development includes electrical transformers and inverters with associated electrical cabling and internal access routes between the solar.

Subsequent to a public meeting held on 6 June 2018, the Southern Regional Planning Panel (SRPP) agreed on the 31 August 2018 to defer the determination of the matter pending the submission of the following further information from the Applicant:

- *Details in metres of the actual spacing between panels at the Mt. Majura solar farm (which is used as evidence of appropriate ground cover), and similar details for a comparable (to Marinna) solar farm site.*
- *Details of the condition of ground cover over an extended period as the Mt. Majura site and any other comparable site (with single axis solar cells in similar soil and climate to the proposed arrangement at Marinna). Details to demonstrate how ground cover condition has been monitored and managed overtime to maintain cover and manage weeds and fire risks.*
- *Photomontage with the solar cells to be included in the visual impact assessment. The visual assessment should include locations when viewed from the immediately adjoining site, within proximity to the common boundaries.*
- *Landscape plan to include provision of canopy trees.*

The required additional information was provided to respond to the deferral decision of the SRPP and a briefing was held with SRPP members who approved the DA pursuant to Section 4.16 of the EP&A Act 1979 on 2 November 2018.

3.2 Subsequent Modifications

DA2018/11.2

Development consent DA2018/11 was modified on 6 December 2018 (reference DA2018/11.2) to allow up to a 30MW solar farm to be constructed with a future battery storage bay added. This modification made no ‘onsite’ changes to the original development and was achieved by modifying/adding the following conditions:

- **Addition of Condition 41 for the future approval of the BESS:**

41. Future Battery Storage Bay: Although the general location of a ‘future battery storage bay’ is approved under this consent, the actual installation of a battery storage system associated with the solar farm development will be subject to its own separate planning approval.

Reason: *To ensure that the actual works involved in the installation of a battery storage system onsite is considered suitable for the site and obtains planning approval that may be applicable at the time of proposed installation.*

- **Minor change to existing Condition 42:**



42. Maximum Energy Generation: The Solar Farm development once completed shall not have the capacity to generate more than 30 megawatts of electrical power, without the planning approval.

***Reason:** Electricity generating stations that generate more than 30 megawatts of electrical power (including solar powered generators) are described as being 'Designated Development' under Schedule 3 of the Environmental Planning and Assessment Regulation 2000. Planning approval would be required to generate additional electric energy over 30 megawatts.*

Condition 41 requires a separate planning approval for the BESS, although the bay is already incorporated into the solar farm's design. Therefore, this DA is seeking approval for the BESS to be installed in the approved location.

DA2018/11.3

The consent was again modified by Council on 5 May 2020 (reference DA2018/11.3), whereby Condition 10 limiting construction hours was amended to allow construction to commence an hour earlier than originally specified.

DA2018/11.4

A third application (DA2018/11.4) to modify landscape screening requirements for the Junee Solar Farm was approved on 8 December 2022. This modification updated Condition 1(f) of the consent to reflect a new visual impact assessment, conducted with input from neighbouring landowners, which focused on targeted landscaping to reduce visual impacts, rather than landscaping the entire boundary of the site. Three screening options were considered by the Applicant, with Option 1 chosen: a 5-meter wide, 685m long vegetation screen along the eastern boundary.

Additionally, the revised visual assessment examined visual impacts along Old Sydney Road.

While existing roadside vegetation provides some visual screening, it was deemed by Council and subsequently supported by the SRPP that the existing vegetation was insufficient to meet the original consent conditions. SRPP were not satisfied that the proposal to modify the screening requirements to delete the need for screening along the northern and north-east boundaries has been fully justified by the Applicant. Justification for the removal of the screening requirement on this boundary relied heavily on existing vegetation on public land, which SRPP were not supportive of in any instance.

The resolution was that the Applicant was to provide the landscaping buffer to the north and north-east boundaries as approved originally, however the requirement to provide the buffer along the southern boundary was supported and subsequently deleted.

Construction of the approved solar farm has been completed (see **Figures 1 and 2** above).

The proposed BESS will be located within the boundaries of the existing solar farm and will not impact the approved vegetation buffers.

3.3 Pre-Lodgement Meeting

A Pre-DA meeting was held with Council on 31 September 2023.

The meeting included the attendance of Rohan Johnston from Council. Formal meeting minutes were not prepared by Council. It was noted by Council, however, that there are no major concerns with the BESS, and they are enthused to see renewable infrastructure and investment within the LGA.



4 The Proposal

This DA seeks development consent for:

- The construction and operation of a Battery Energy Storage System (**BESS**) with a capacity of 17.6MW/35.2MWh to support the operation of the existing solar farm at 346 Old Sydney Road and 38 Millbank Road, Marinna.

The BESS will have a capacity of 17.6MW and will be utilised to store excess power which will be pumped back into the grid for use primarily during peak period. The batteries have been sited in proximity to the existing substation and will be accessible by a semi-sealed road, adjoining Old Sydney Road to the north.

The key parameters of the proposed development are provided at **Table 3** below.

Table 3: Summary of Proposed Development

Item	Description
Battery Type	Intensium Max 20 High Energy Soft Battery Container
Storage Capacity	17.6 MW
Racks	20 (x 24 mod)
Banks	12
Battery Containers	12
Racks	3 x 20 = 60
Landscaping	Sufficient landscaping is provided on the site, as approved under DA2018/11.
Car parking	Sufficient car parking is provided on the site, as approved under DA2018/11.
Access	The batteries will be accessible by a semi-sealed road, adjoining the main roadway to the north.
Estimated Cost of Development	19,031,838

Plans of the proposed development are included at **Figure 3** and **Figure 4** below.



Figure 3: Site Layout Plan

Source: Metlen

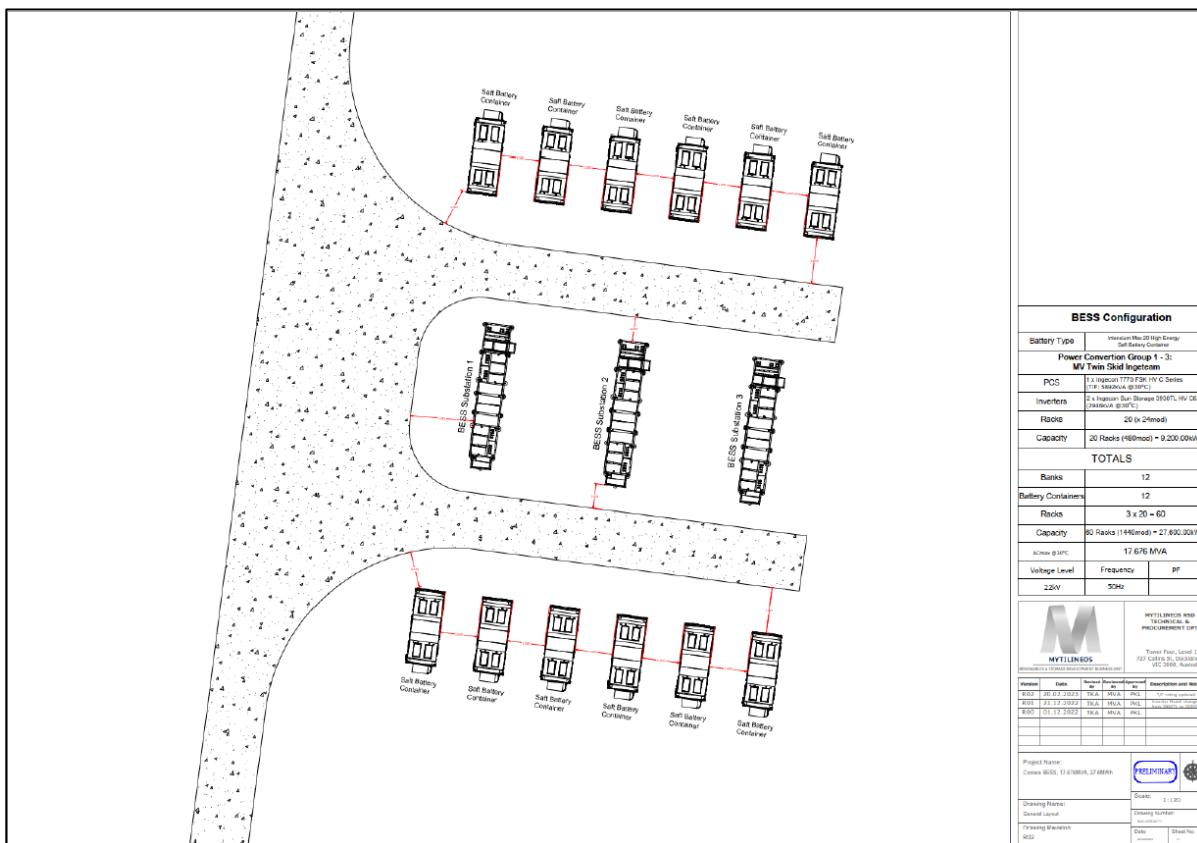


Figure 4: BESS Layout Plan

Source: Metlen



Figure 5: Typical BESS Arrangement

Source: Metlen

4.1 Decommissioning

Decommissioning of the facility would occur at the end of the useful life of the infrastructure, anticipated to be around 30 years from commencement of energy generation at the site. At the end of the facilities life a decision on whether to upgrade or decommission the facility would be taken in recognition of the changing face of power generation in NSW and Australia.

The operating solar farm is unlikely to cause serious or irreversible damage to the environment as it will be subject to a decommissioning process that will restore the land back to full agricultural capability. The same applies to the BESS, which is a package plant that can be removed and largely recycled off site after its useful life, leaving only concrete pad mounts, which similarly can be broken up, removed and recycled.

To ensure that the land is left in a suitable state for a return to primary production purposes (based on the current zoning) it would be proposed that, not later than 12 months prior to the proposed cessation of operation, that a decommissioning plan would be prepared and supplied for review and approval.



5 Statutory Planning Framework

This section provides a preliminary assessment of the proposal in relation to key relevant provisions contained in section 4.15(1)(a)(i)-(iiia) of the EP&A Act, environmental planning instruments, including state environmental planning policies (SEPPs), draft environmental planning instruments, applicable development control plans and planning agreements. Where necessary, a more detailed assessment is undertaken in the following section.

5.1 Environmental Planning & Assessment Act 1979

The EP&A Act is the principal planning and development legislation in NSW. Pursuant to Part 4, the proposal is considered local development. Section 4.15(1) of the EP&A Act specifies the matters which a consent authority must consider when determining a development application.

The relevant matters for consideration under Section 4.15(1) of the EP&A Act are provided in **Table 4** below.

Table 4: Section 4.15(1)(A) Considerations

Section	Response
Section 4.15(1)(a)(i) any environmental planning instrument, and	The relevant EPIs are addressed in Section 5 of this SEE.
Section 4.15(1)(a)(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 Planning Secretary has notified the consent authority that the making of the proposed instrument has been deferred indefinitely or has not been approved), and	There are no currently proposed EPIs that have been subject to public consultation which are relevant to the site or Proposal.
Section 4.15(1)(a)(iii) any development control plan, and	The JSDCP 2021 is the applicable development control plan for the Site. This is addressed in Section 5.5 below.
Section 4.15(1)(a)(iiia) any planning agreement that has been entered into under section 7.4, or any draft planning agreement that a developer has offered to enter into under section 7.4, and	There are no voluntary planning agreements (VPA) applicable to the Site.
Section 4.15(1)(a)(iv) the regulations (to the extent that they prescribe matters for the purposes of this paragraph),	The EP&A Regulation is addressed in Section 5.2 of this SEE.
Section 4.15(1)(b)-(e)	Refer to Section 6 of this SEE.

5.2 Environmental Planning Assessment Regulation 2021

The EP&A Regulation describes development which is designated development. Development described in Schedule 3; Part 2 is declared to be designated development for the purpose of the EP&A Regulation. Battery storage facilities are a development type to which designated development applies, as identified under Clause 7 below:

7 Battery storage facilities

Development for the purposes of a battery storage facility is designated development if the facility supplies or is capable or supplying more than 30 megawatts of electrical power.



The proposed BESS has a storage capacity of 17.6 MW of electrical power and will therefore not constitute a 'designated' battery storage facility.

5.3 Environmental Planning Instruments

The relevant State and local environmental planning instruments that apply to the site and the proposal include:

- *State Environmental Planning Policy (Transport and Infrastructure) 2021*
- *State Environmental Planning Policy (Resilience and Hazards) 2021;*
- *State Environmental Planning Policy (Planning Systems) 2021;*
- *State Environmental Planning Policy (Biodiversity and Conservation) 2021; and*
- *Junee Local Environmental Plan 2012.*

5.3.1 State Environmental Planning Policy (Transport and Infrastructure) 2021

Chapter 2 Infrastructure

Chapter 2, Part 2.3 (Division 4), addresses work related to *Electricity generating works or solar energy systems*. Under Section 2.35:

electricity generating works means a building or place used for the following purposes, but does not include a solar energy system—

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

Under Clause 2.36(1) development for the following purpose is permitted with development consent:

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

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

The proposed development comprises an electricity storage development and is located on land zoned RU1 Primary Production. RU1 land zoning is identified by clause 2.35 of the TISEPP as a 'prescribed non-residential zone'. Accordingly, the proposed BESS is prescribed for the purposes of clause 2.36 of the TISEPP and is permissible with consent.

5.3.2 State Environmental Planning Policy (Resilience and Hazards) 2021

Chapter 3 Hazardous and offensive development

Clause 3.7 of the RHSEPP requires the consideration of current circulars or guidelines prepared by DPHI in determining whether a development is:

- a hazardous storage establishment, hazardous industry or other potentially hazardous industry; or
- an offensive storage establishment, offensive industry or other potentially offensive industry.

A Preliminary Hazard Assessment (PHA) has been prepared by Riskcon at **Appendix 2** to assess the potential hazards posed by the proposed BESS. In this regard, Riskcon have considered the classes and quantities of dangerous goods in **Section 6.1** below, which are indicative and based on a preliminary risk screening. Riskcon have confirmed these do not meet the RHSEPP thresholds for dangerous goods.



A review of the incidents carried forward from this appendix indicates that there were no observed offsite impacts. Based on this analysis it is concluded that the risks at the site boundary will not exceed the acceptable risk criteria. Hence the project would only be classified as potentially hazardous and would be permitted within the current land zoning for the site.

Recommendations made by Riskcon in response to the potentially hazardous nature of the batteries are detailed in **Section 6.1**.

Chapter 4 Remediation of land

Clause 4.6(1) of the RHSEPP states that a consent authority must not consent to the carrying out of development unless it has considered whether the land is contaminated. If the land is contaminated, the consent authority must not consent to the carrying out of development unless it is suitable for the proposed use in its contaminated state or will be suitably remediated before the land is used for that purpose.

The site is located within a rural area and has not been identified as potentially contaminated land on Council's mapping system. While agriculture is listed as a land use which has the potential to lead to contamination, the historical agricultural practices on site have been grazing and arable cultivation there is no evidence of contamination on the site. A Preliminary Site Investigation (PSI) was not requested as part of the original DA for the site.

Based on this, Council can be satisfied that the site is suitable for the proposed development in accordance with Chapter 4 of the SEPP.

5.3.3 State Environmental Planning Policy (Planning Systems) 2021

The Planning Systems SEPP defines certain development as State Significant Development (**SSD**) or Regionally Significant Development (**RSD**). Schedule 1, Clause 20 identifies the following as SSD:

20 Electricity generating works and heat or co-generation

*Development for the purpose of electricity generating works or heat or their co-generation (using any energy source, including gas, coal, biofuel, distillate, waste, hydro, wave, **solar** or wind power) that—*

- a) has an estimated development cost of more than **\$30 million**, or*
- b) has an estimated development cost of more than \$10 million and is located in an environmentally sensitive area of State significance.*

Schedule 6, Clause 5 identifies the following as RSD:

5 Private infrastructure and community facilities over \$5 million

*Development that has an estimated development **cost 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.*

As the proposed development has an EDC of more than \$5 million, it constitutes RSD and will therefore be referred to the SRPP for a determination. It is noted that the proposed development has an EDC less than \$30 million and therefore does not trigger the requirements under Schedule 1, Clause 20 for SSD.

5.3.4 State Environmental Planning Policy (Biodiversity and Conservation) 2021

Chapter 3 Koala habitat protection 2020

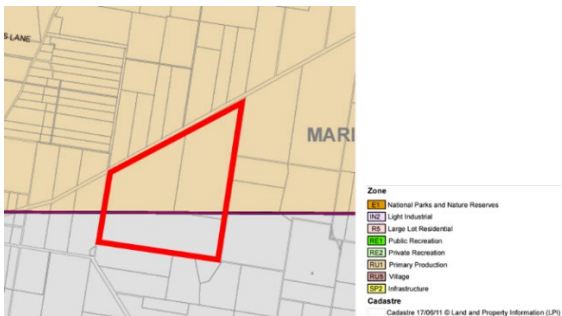
This chapter aims to encourage the conservation and management of areas of natural vegetation that provide habitat for koalas and to reverse the current trend of koala population decline. The site is located in the RU1 zone and therefore Chapter 3 applies to the site.

However, as the proposal will not result in the removal of any trees which may comprise koala habitat or significant biodiversity, no further consideration of the BCSEPP is required.

5.3.5 Junee Local Environmental Plan 2012

The *Junee Local Environmental Plan 2012 (JLEP2012)* is the comprehensive environmental planning instrument applicable to the Junee Shire LGA. An assessment with regard to the relevant clauses is provided at **Table 6** below.

Table 5: Summary of Compliance with JLEP 2012

Clause and requirement	Proposed
<p>Clause 2.3 Zone objective and Land Use Table</p> <p>RU1 Primary Production</p>  <p>Objectives of zone</p> <ul style="list-style-type: none"> To encourage sustainable primary industry production by maintaining and enhancing the natural resource base. To encourage diversity in primary industry enterprises and systems appropriate for the area. To minimise the fragmentation and alienation of resource lands. To minimise conflict between land uses within this zone and land uses within adjoining zones. To allow the development of processing, service and value adding industries related to primary production. To encourage tourist and visitor accommodation that does not have an adverse impact on agricultural activities. To allow for the development of non-agricultural land uses that are compatible with the character of the zone. <p>2 Permitted without consent</p>	<p>The proposed BESS falls within the definition electricity generating works (defined as a building or place used for the purpose of making or generating electricity, or electricity storage).</p> <p>Notwithstanding that Electricity generating works are prohibited in the RU1 zone under the JLEP 2012, the proposal is permitted with consent under Section 2.36 of the TISEPP (see Section 5.3.1).</p> <p>For completeness, the proposal is not inconsistent with the objectives of this zone, as:</p> <ul style="list-style-type: none"> It will not reduce the natural resource base. It will diversify the primary industrial base of the area. It will not fragment and alienate resource lands. It will not conflict with other surrounding land uses. It is compatible with the character of the zone.



<p><i>Environmental protection works; Extensive agriculture; Forestry; Home-based child care; Home businesses; Home occupations; Intensive plant agriculture</i></p> <p>3 Permitted with consent <i>Agritourism; Air transport facilities; Airstrips; Animal boarding or training establishments; Aquaculture; Bed and breakfast accommodation; Boat launching ramps; Boat sheds; Building identification signs; Business identification signs; Camping grounds; Caravan parks; Cellar door premises; Cemeteries; Community facilities; Correctional centres; Crematoria; Depots; Dual occupancies (attached); Dwelling houses; Eco-tourist facilities; Educational establishments; Environmental facilities; Extractive industries; Farm buildings; Farm stay accommodation; Flood mitigation works; Freight transport facilities; Helipads; Highway service centres; Home industries; Home occupations (sex services); Industrial training facilities; Information and education facilities; Intensive livestock agriculture; Jetties; Landscaping material supplies; Open cut mining; Plant nurseries; Recreation areas; Recreation facilities (major); Recreation facilities (outdoor); Research stations; Roads; Roadside stalls; Rural industries; Rural supplies; Rural workers' dwellings; Secondary dwellings; Timber yards; Veterinary hospitals; Water recreation structures; Water supply systems; Wharf or boating facilities</i></p> <p>4 Prohibited <i>Any development not specified in item 2 or 3</i></p>	
<p>Clause 4.1 Minimum subdivision lot size</p> <p>The site is subject to a minimum lot size of 100ha.</p>	<p>N/A</p>
<p>Clause 4.3 Height of buildings</p> <p>The site is not subject to a height of buildings control.</p>	<p>N/A</p>
<p>Clause 5.21 Flood planning</p> <p>The site is not identified as being flood prone.</p>	<p>N/A</p>
<p>Clause 6.1 Earthworks</p> <p>(2) <i>Before granting development consent for earthworks (or for development involving ancillary earthworks), the consent authority must consider the following matters—</i></p> <ul style="list-style-type: none"> (a) <i>the likely disruption of, or any detrimental effect on, existing drainage patterns and soil stability in the locality,</i> (b) <i>the effect of the development on the likely future use or redevelopment of the land,</i> (c) <i>the quality of the fill or the soil to be excavated, or both,</i> (d) <i>the effect of the proposed development on the existing and likely amenity of adjoining properties,</i> (e) <i>the source of any fill material and the destination of any excavated material,</i> (f) <i>the likelihood of disturbing relics,</i> 	<p>The proposed BESS does not require earthworks, nor will it result in the disruption of existing drainage patterns and soil sustainability.</p> <p>The BESS is located within the existing solar farm. Prior to the construction of the solar farm, the entire site was prepared for construction and therefore no further invasive site preparation works are required.</p>



<p>(g) the proximity to, and potential for adverse impacts on, any waterway, drinking water catchment or environmentally sensitive area,</p> <p>(h) any appropriate measures proposed to avoid, minimise or mitigate the impacts of the development.</p>	
<p>Clause 6.4 Terrestrial Biodiversity</p> <p>(3) Before determining a development application for development on land to which this clause applies, the consent authority must consider –</p> <p>(a) whether the development is likely to have—</p> <p>(i) any adverse impact on the condition, ecological value and significance of the fauna and flora on the land, and</p> <p>(ii) any adverse impact on the importance of the vegetation on the land to the habitat and survival of native fauna, and</p> <p>(iii) any potential to fragment, disturb or diminish the biodiversity structure, function and composition of the land, and</p> <p>(iv) any adverse impact on the habitat elements providing connectivity on the land, and</p> <p>(b) any appropriate measures proposed to avoid, minimise or mitigate the impacts of the development.</p>	<p>The site is identified as containing some land of terrestrial biodiversity value. A detailed Biodiversity Assessment was prepared as part of the DA for the solar farm (DA2018/11). The impact on the native vegetation was considered acceptable by Council for the purpose of constructing the solar farm.</p> <p>No further clearing of vegetation, or additional impact on the remaining vegetation is required to accommodate the proposed BESS.</p>

5.4 Applicable Draft Environmental Planning Instruments

There are no draft environmental planning instruments that are applicable to the DA.

5.5 Development Control Plans

JDCP 2021 applies to the site and the proposed development. A detailed review of the JDCP 2021 has been undertaken and for the most part the JDCP 2021 is not relevant to the proposal or site specifically. A compliance assessment against the relevant provisions under Part G of the DCP have been undertaken in the table below, for completeness.

Table 6: JDCP 2021 Compliance Table

DCP Section	Control	Compliance
Part G: Environment and Natural Hazard Management		
G2.3 Noise and Vibration	<p>1. Where any proposed development is likely to:</p> <p>a. Generate significant noise and/or vibration that may impact on existing sensitive land uses in reasonable proximity to the development site; or</p> <p>b. Be significantly impacted by potential noise and/or vibration from an existing (or future expanded) development or infrastructure (including a state/regional road or railway line),</p>	<p>An Acoustic Assessment has been prepared by Acoustic Logic at Appendix 3 to assess the potential acoustic impacts on sensitive receivers based on the operation of the BESS.</p>



	<p>then the applicant may be required to lodge a Noise and/or Vibration Assessment, prepared by a suitably qualified acoustic consultant, that demonstrates how the proposed development will be located, designed, and/or managed to avoid or mitigate those impacts to/from the proposed development in accordance with the relevant guidelines.</p> <p>2. The design or construction of building(s) or areas that may emit significant noise should consider:</p> <ol style="list-style-type: none"> Location, proximity, and buffers to protect sensitive land uses; Terrain and amplification/direction of noise; Background noise levels; Enclosure of noisy area(s) and suitable acoustic insulation; Avoidance of opening(s) of enclosed noisy area(s) towards sensitive land uses that may direct noise to a sensitive land use; Suitable hours of operation and transport movement, loading/unloading etc.; Any other factor that would exacerbate likely noise. <p>3. Any Noise Assessment involving a noise source set out in the Protection of the Environment Operations Act 1997 must address the requirements (where relevant) of the NSW EPA Noise Policy for Industry (2017 – as amended)</p>	<p>Acoustic Logic have utilised the following documents and regulations in the noise assessment of the development:</p> <ul style="list-style-type: none"> Assured Monitoring Group <i>June Solar Farm– Noise and Vibration Impact Assessment</i> (dated December 2017). NSW Environment Protection Authority (EPA) <i>Noise Policy for Industry</i> (NPI) 2017. <p>Based on their assessment, noise emissions to all nearby developments are predicted to be compliant with the requirements above.</p> <p>This is discussed in detail in Section 6.2 below.</p>
G2.4 Odour & Dust	<p>1. Where any proposed development is likely to:</p> <ol style="list-style-type: none"> Generate significant odour or dust that may impact on existing sensitive land uses in reasonable proximity to the development site; or Be significantly impacted by potential odour or dust from an existing (or future expanded) development or infrastructure (including a state / regional road or railway line); 	<p>N/A</p> <p>The BESS will not generate additional odour or dust.</p>
G2.7 Buffers & Landscaping	<p>Any buffers or setbacks should incorporate or be capable of incorporating sufficient landscaping/tree plantings (or other mechanism where appropriate) to minimise or mitigate any impacts from adjacent land uses without increasing the bushfire threat to any existing or proposed buildings.</p>	<p>Complies</p> <p>The proposed BESS is located within the approved solar farm and required landscape buffers.</p>
G2.8 Agriculture & Right to Farm	<p>Any sensitive land uses/development (or subdivision that intends to support those sensitive land uses) that has a boundary with rural zoned land, should seek to incorporate buffers or setbacks to that rural land to enable the rural land to be used for standard agricultural practices to the fullest agricultural potential of that land (taking into account the recommended buffers set out in the clause entitled 'Buffers to Sensitive Land Uses' above).</p>	<p>Complies</p> <p>The proposed BESS is located within the approved solar farm and required landscape buffers.</p>



6 Planning Evaluation

This section provides an assessment of the key planning matters arising in relation to the proposed development, under section 4.15 of the EP&A Act, including environmental impacts on both the natural and built environments, and social and economic impacts consistent with section 4.15(1)(b) of the EP&A Act.

This section also addresses matters contained in section 4.15(1)(c) and (e) in the EP&A Act including suitability of the site and if the proposal is in the public interest.

6.1 Hazards and Risk

A PHA has been prepared by Riskcon at **Appendix 2** to assess the potential hazards posed by the proposed BESS. The below classes and quantities of dangerous goods are indicative and based on a preliminary risk screening. As confirmed by Riskcon, these do not meet with RHSEPP thresholds for dangerous goods.

Table 7: Maximum Quantities of Dangerous Goods Stored and Preliminary Risk Screening

Area	Class	Description	Quantity	SEPP Threshold
BESS	9	Lithium Batteries	231,840	N/A
Substation Transformer	C2	Transformer oils	9,000 L	N/A

A hazard identification table was developed as Appendix A of the PHA to identify potential hazards that may be present at the site as a result of operations or storage of materials.

A review of the incidents carried forward for further analysis indicates that there were no observed offsite impacts. Based on the analysis conducted it was concluded that the risks at the site boundary do not exceed the acceptable risk criteria. Hence the project would only be classified as potentially hazardous and would be permitted within the current land zoning for the site.

On this basis, the following recommendations have been made by Riskcon:

- BESS must be tested in accordance with the UL9540A testing (Standard for Test Method for Evaluating Thermal Runaway Fire Propagation in BESS).
- Testing to demonstrate clearances required to prevent propagation of fires between separated units.
- BESS to be installed in accordance with manufacturer's specifications and UL9540A report recommended clearances based on testing.
- BESS to be installed with fire protection systems specified by the manufacturer and UL9540A report.
- Before construction, detailed design to validate the system can be installed in the project area whilst meeting the recommended clearances.
- UL9540A testing information shall be made available to the certifying authority. It is noted that a confidentiality agreement may be required.

6.2 Noise

An Acoustic Assessment has been prepared by Acoustic Logic at **Appendix 3** to assess the potential acoustic impacts on sensitive receivers based on the operation of the BESS.

The investigation carried out has identified the following sensitive receivers:

- **R1:** Residential receiver to the far east at 394 Danswans Road (Lot 2 in DP 546451)
- **R2:** Residential receiver to the far south of 38 Millbank Lane (Lot 24 in DP 1253462)
- **R3:** Residential receiver to the far south at 38 Millbank Lane (Lot 23 in DP 1263462)

- **R4:** Residential receiver to the far south-east at 273 Danswans Road (Lot 1 in DP 747293)
- **R5:** Residential receiver to the far north at 165 Millbank Road (Lot 1 in DP 226279).

An indication of the location of the abovementioned sensitive receivers is demonstrated in **Figure 6** below.



Figure 6: Sensitive Receivers Map

Source: Acoustic Logic

Acoustic Logic have utilised the following documents and regulations in the noise assessment of the development:

- Assured Monitoring Group *Junee Solar Farm– Noise and Vibration Impact Assessment* (dated December 2017).
- NSW Environment Protection Authority (EPA) *Noise Policy for Industry* (NPI) 2017.

An assessment has been conducted based on the minimum assumed rating background noise levels that apply per Table 2.1 of the NPI. This has been adopted as a conservative assessment basis. The summarised noise emissions criteria are therefore presented in the table below.

Table 8: Predicted External Noise Levels from Operation

Noise Source	Time of Day	Receiver Location	Predicted Noise Level $L_{eq}(15min)$ dB(A)	External Noise Criteria $L_{eq}(15min)$ dB(A)	Complies?
3x BESS Substations	Evening/night time (6pm – 7am)	R1	25	35	Yes
		R2	25	35	Yes



Noise Source	Time of Day	Receiver Location	Predicted Noise Level $L_{eq}(15min)$ dB(A)	External Noise Criteria $L_{eq}(15min)$ dB(A)	Complies?
		R3	24	35	Yes
		R4	23	35	Yes
		R5	23	35	Yes

Predicted Noise Levels

The predicted noise levels from BESS operation are presented in the following table. Predicted noise levels are based on the dimensions of the building/ noise sources, factor in losses due to distance attenuation and barrier effects (where applicable).

Table 9: EPA NPI Noise Emission Criteria (Residences Surrounding Project Site)

Receiver	Time Period	Assessment Background Noise Level dB(A) L_{90}	Intrusiveness Criteria $L_{eq}(15min)$	Project Amenity Criteria dB(A) L_{eq}	NPI Criteria for Sleep Disturbance
R1-R5	Day	35	40	48	N/A
	Evening	30	35	43	N/A
	Night	30	35	38	40 dB(A) $L_{eq, 15mins}$ 52dB(A) $L_{f,max}$

Based on the above, noise emissions to all nearby developments are predicted to be compliant with the requirements above.

6.3 Bushfire

This Bushfire Assessment Report (**BAR**) has been undertaken by Waratah Bushfire at **Appendix 4**. This assessment found that bush fire can potentially affect the project from the surrounding grassland and woodland vegetation.

The assessment determined the applicable Asset Protection Zones (**APZ**) and radiant heat levels (expressed in Bush Fire Attack (**BAL**) thresholds BAL 12.5) using Table A1.12.6 of Planning for Bush Fire Protection (**PBP**) 2019 (deemed to satisfy) detailed at **Table 8** below.

Table 10: Bushfire Attack Assessment

Aspect	Vegetation Formation within 140m	Effective Slope	APZ Provided	BAL Thresholds
Northwest	Woodland	Level	>22m	BAL 12.5 (22- <100m)
South, east and west	Managed land/solar farm	N/A	>22m	

The potential impact of bushfires within the project area will be mitigated with the adoption of the bush fire protection measures outlined in the PBP 2019. Table 6-1 of the Bushfire Assessment Report provides a detailed compliance of the proposal against the objectives of PBP 2019, finding that the proposed development is compliant.



The recommendations and mitigation measures provided at **Table 9** below will ensure that the proposed development has adequate clearances to combustible vegetation, firefighting access and water supplies in accordance with the requirements of PBP 2019.

Table 11: Recommendations and Mitigation Measures

Mitigation Measure	Timing
The BESS and associated substations are maintained to the standard of an inner protection area (IPA) in accordance with the requirements of Appendix 4 of <i>Planning for Bush Fire Protection 2019</i> . A minimum 22m APZ is to be provided around the development footprint.	<ul style="list-style-type: none">• Pre-construction• Construction• Operation
Access roads are to comply with the property access road requirements as outlined in Table 7.4a of <i>Planning for Bush Fire Protection 2019</i> , with additional considerations as outlined in Section 5.2.3 of this document.	<ul style="list-style-type: none">• Pre-construction• Construction
Water supply for firefighting purposes must be located at the primary vehicle access point to the facility and elsewhere in consultation with the NSW RFS District Office for the Riverina Zone, Fire and Rescue NSW and the fire Safety Study. This is further detailed in the Bushfire Report.	<ul style="list-style-type: none">• Construction• Operation
A Bush Fire Emergency Management and Operations Plan must be updated to include the BESS This is further detailed in the Bushfire Report.	<ul style="list-style-type: none">• Construction• Operation

6.4 Landscaping

The proposed BESS is located within the approved solar farm and will maintain the approved landscape buffers. The BESS has been designed to suitably integrate visually into the existing solar farm and surrounding landscape and will not result in the removal of trees or biodiversity.

6.5 Visual Impact

The BESS will be adequately screened by a landscaping buffer approved under the DA2018/11 for the solar farm. Council's assessment report for DA2018/11 confirmed the following with regard to visual impact:

'...with the inclusion of a five-metre-wide screen planting buffer, [the solar farm] can achieve a negligible impact within the visual landscape. The species proposed to be planted within the buffer are suitable to the site and for screening purposes.'

Given the proposed BESS is located within the existing solar farm, it is not anticipated to create any additional issues with regard to visual impacts, nor will additional landscaping be required as a result of the BESS.

6.6 Traffic, Parking and Access

No additional traffic will be associated with the proposed development as no additional staff, customers or vehicle movements are anticipated. The BESS will merely support the existing solar farm.

Vehicular access to the site will remain unchanged with ingress and egress to site via a driveway at Old Sydney Road. The BESS will be accessible by a semi-sealed road, adjoining the main roadway to the north.



6.7 Civil Engineering and Stormwater Management

The proposed BESS does not require earthworks, nor will it result in the disruption of existing drainage patterns and soil sustainability.

The BESS is located within the existing solar farm. Prior to the construction of the solar farm, the entire site was prepared for construction and therefore no further invasive site preparation works are required to accommodate the BESS.

6.8 Waste Management

The BESS will generate no waste as a result of its operations and have been designed to facilitate a life cycle of 30 years. Under existing technology up to 95% of a BESS can be recycled and repurposed following the decommissioning process.

Waste created during the installation of the BESS will be appropriately disposed of, with recyclable items recycled accordingly.

6.9 Suitability of the Site

The proposed development is suitable for the site for the following reasons:

- The proposal is consistent with the aims of the JLEP 2012 and the objectives of the RU1 zone;
- The proposal is generally consistent with the relevant environmental planning instruments and DCP controls, noting the proposed BESS is permitted with consent under the TISEPP;
- There are no environmental constraints on or in the vicinity of the site of such significance as to preclude the proposed development; and
- The BESS is located within the existing solar farm, having a negligible impact on the surrounding area, beyond that approved under DA2018/11.

Accordingly, the site is suitable for the proposed development.

6.10 Public Interest

The proposed development is within the public interest for the following reasons:

- The proposed BESS will support the existing solar farm by storing electricity generated to be pumped back into the grid at peak times;
- The proposal does not give rise to any material adverse amenity impacts including noise, intensity of use, and hazard and risk;
- The proposal provides a suitable use for the development of the site whilst managing the constraints; and
- The proposal will not reduce the safety, sustainability, or efficiency of surrounding land uses.



7 Conclusion

This SEE has been prepared by Mecone Group Pty Limited on behalf of Metlan to support a Development Application to Junee Shire Council (Council) for the construction and operation of a BESS, with a capacity of 17.6MW at 346 Old Sydney Road and 38 Millbank Lane, Marinna. It provides an assessment of relevant matters listed under section 4.15 of the EPA Act.

To summarise, the proposal:

- Is compliant with the requirements of JLEP 2012 and JDCP 2021 by proposing a BESS that will enable the approved solar farm to support the energy demand for the precinct and beyond;
- Promotes the efficient development of a BESS on the site, which will support the existing solar farm infrastructure;
- Will support the function of the solar farm by storing excess energy produced;
- Will not result in a loss of biodiversity or vegetation character within the LGA;
- Is predicted to be compliant with the noise emission requirements under the EPAs *Noise Policy for Industry 2017* (NPI);
- Will not create any additional issues with regard to visual impacts, nor will additional landscaping be required as a result of the BESS;
- Will maintain the approved landscape buffers;
- Is compliant with the aims and objective of PBP 2019 for bushfire protection;
- Results in negligible environmental impacts, particularly with regard to noise, bushfire and biodiversity;
- Generates no unreasonable adverse amenity impacts to the nearby receivers;
- Is in the public interest.

The proposed BESS is compliant with relevant statutory controls and will support the existing solar farm on the site. Furthermore, it will lead to positive social, economic and environmental outcomes and will not result in any unacceptable impacts. Therefore, the proposal has planning merit, and approval should be granted by Council to undertake the works as a DA.



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