



Planning Report – Deniliquin BESS



Figure 1: Location of Deniliquin Solar Farm

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1 Introduction

1.1 Background

This Planning Report has been prepared by CleanPeak Energy for the installation of a Battery Energy Storage System (BESS) at Deniliquin Solar Farm, located at 39 Hogans Lane, Deniliquin, NSW 2710, which is being constructed in 2026 and to be commissioned by 2027. This planning report should be considered in conjunction with the approved Solar Farm Development Approval 2023/0024 determined on 21st of May 2025 by the Land and Environment Court (LEC).

The proposed development involves the installation of a DC-coupled BESS system at the Solar Farm comprising of 8 x BESS units approximately 300mm above ground level (AGL). The BESS will be integrated with the existing photovoltaic (PV) infrastructure and 33kV switchgear kiosk, enabling the storage of surplus solar energy for dispatch during peak demand periods.

The system is to be located adjacent to the existing inverter and solar DC infrastructure in the centre of the farm. This location has been selected to minimise land disturbance and optimise integration with the existing PV system. The BESS units will be installed on piles within cleared, levelled areas, with access provided via existing internal roads and maintenance paths. No vegetation removal is required, and the installation is sited to avoid encroachment on environmentally sensitive areas or operational zones of the Solar Farm.

The battery system would augment the existing PV system by storing surplus energy generated during the day and enabling time-shifted dispatch during evening or peak demand periods. This will enhance the utilisation of renewable energy, improve energy resilience, and reduce reliance on the electricity grid during high-demand periods. The systems are designed using best-in-class lithium-ion battery technology, sourced from a Tier 1 battery manufacturer with in-built safety features including thermal management, fire suppression, and remote monitoring, in accordance with Australian and International Standards.

1.2 Purpose of the Planning Report

This Planning Report has been prepared pursuant to:

- State Environmental Planning Policy (Renewable Energy) 2023 (NSW Department of Planning, Housing and Infrastructure)
- State Environmental Planning Policy (Transport and Infrastructure) 2021 (NSW Department of Planning, Housing and Infrastructure)
- NSW Electricity Infrastructure Roadmap (NSW Department of Climate Change, Energy, the Environment and Water, 2020)
- Large-Scale Battery Storage Guidelines (NSW Department of Planning, Housing and Infrastructure, 2023)
- NSW Climate Change Policy Framework (NSW Department of Climate Change, Energy, the Environment and Water)
- Murray Regional Plan 2041 (NSW Department of Planning, Housing and Infrastructure, 2023)
- Edward-Wakool Local Strategic Planning Statement (Edward River Council)
- Edward River Local Environmental Plan 2021

The purpose of this Planning Report is to:

- Describe the proposed development and its context.
- Assess the proposal against the applicable planning controls and guidelines.
- Assess the potential environmental impacts of the development.
- Outline proposed mitigation measures.

Key features of the proposal include:

- Installation of 8 battery enclosures at the solar farm, to be installed adjacent to the inverters.
- Integration of DC-coupled BESS systems with existing PV infrastructure.
- Installation of DC conditioning units at each site.
- Upgrades to remote monitoring and SCADA integration for operational oversight and safety.

This Planning Report demonstrates that the proposal is consistent with the relevant statutory and policy frameworks. Under the Deniliquin Local Environmental Plan (LEP) 2013 land use tables, the site is zoned RU1 (Primary Production), energy generation and storage facilities are not listed, however still meet the objectives of the zone. As the BESS will be ancillary to the solar farm site and will not alter the land use that has been approved, it should be determined that this installation is consistent with the existing land use.

The proposal is not expected to result in any adverse impacts on amenity, safety, or the environment. The BESS units are located within existing cleared areas of the Solar Farm, away from sensitive receptors, and are designed to operate with minimal noise and no emissions. The site is identified as bushfire-prone land, and appropriate fire safety measures are incorporated into the system design. The development supports the principles of ecologically sustainable development and represents a logical and beneficial enhancement of existing renewable energy infrastructure. It is therefore considered suitable for the site and worthy of approval.

2 Site Analysis

2.1 Site Location

The Deniliquin Solar Farm is located on the following lot:

- Lot 2 of DP778062

The address is 39 Hogans Lane, Deniliquin, NSW, within the Edward River Council local government area. The site is situated northeast of the nearest township of Deniliquin in a semi-rural setting, surrounded by a mix of agricultural land and light industrial uses.

The surrounding area is characterised by low-density development, with limited residential dwellings and minimal visual sensitivity, owing to the flat topography and existing and installed vegetation buffers.

The proposed BESS installations will be located within the existing solar farm boundaries, in cleared areas adjacent to existing electrical infrastructure, ensuring minimal additional land disturbance, impact to visual amenity and maintaining compatibility with the current land use.

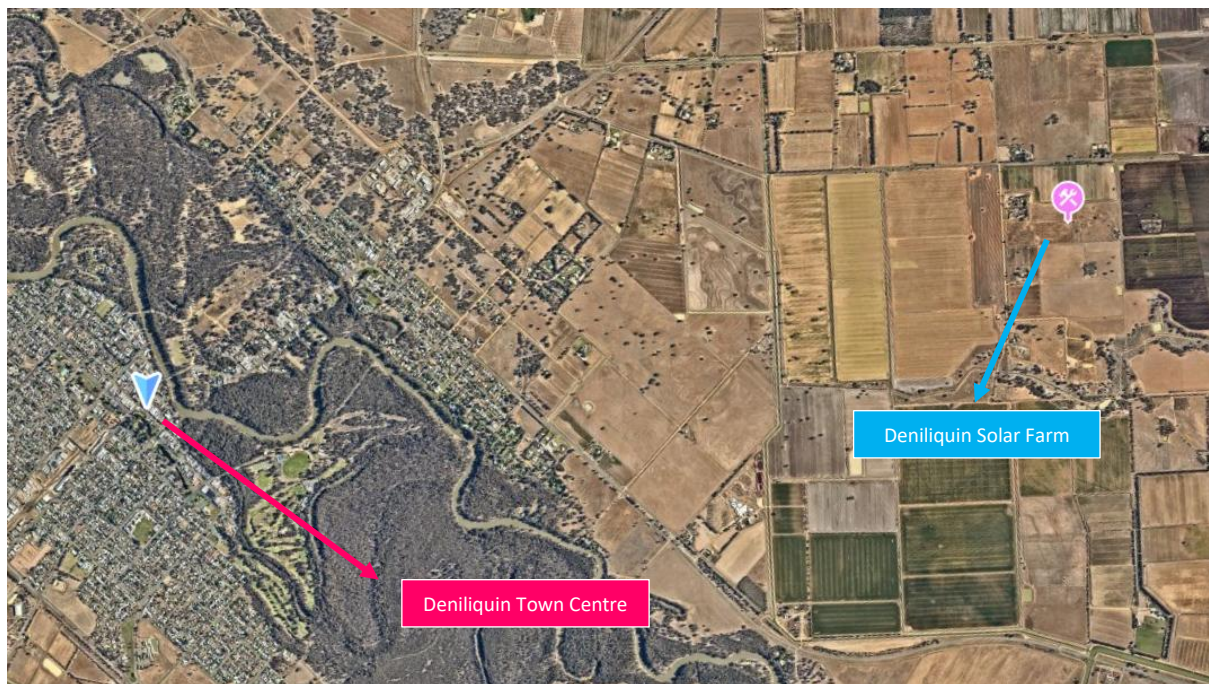


Figure 2: Deniliquin Solar Farm Locality

2.2 Existing Solar Farm Site Description

The proposed BESS installation is located within the existing Deniliquin Solar Farm, which is situated on generally flat, cleared land. The site is bounded by a mix of rural and industrial land uses summarised below:

Direction	Land Use Description
North	Multiple Farming Property Residences (1x Neighbour)
East	Multiple Farming Property Residences
South	Farming Property Residence (1x Neighbour) Transgrid Deniliquin Substation (3km)
West	Multiple Farming Property Residence Multiple Residential Properties (3km) Industrial Developments (4km) Deniliquin Town Centre (S-W 6km)

The Solar Farm is already developed with PV infrastructure, including single axis tracking arrays, inverter stations, and 33kV switchgear kiosks. The sites also include internal access roads, perimeter roads, and cleared laydown areas. The topography is flat, and the site contains existing drainage features, which are not impacted by the proposed development.

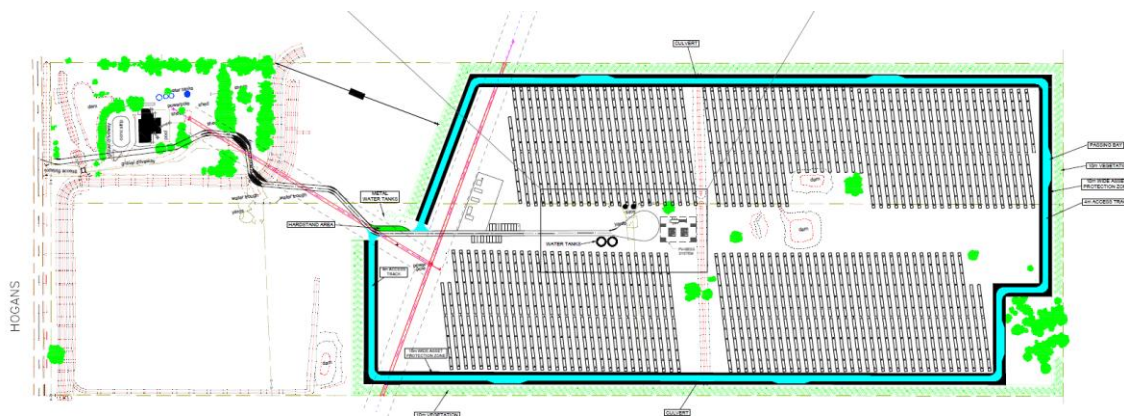


Figure 3: Deniliquin Solar Farm

2.3 Key Environmental Constraints

At the site, there are no environmental constraints, as the project has been cleared for the existing solar farm establishment. During the approval for the solar farm, it was deemed that the plot held no biodiversity significance and therefore does not have any environmental constraints.

2.4 Proposed BESS Location

The proposed BESS units will be installed within previously cleared and levelled land allowing for efficient integration with existing electrical infrastructure, including solar DC arrays. This location has been selected to minimise land disturbance, simplify access via internal roads, and optimise connectivity to the operational solar farm systems.

3 Proposed Development

3.1 Project Description

The proposed development involves the installation of 8 BESS units within the existing Deniliquin Solar Farm and adjacent the inverter.

Each BESS unit will consist of a modular Lithium Iron Phosphate battery housed in a purpose-built 20' containers. The systems will connect directly to the existing solar DC arrays and inverters, allowing surplus energy generated during the day to be stored and dispatched during peak demand periods.

Key components of the proposed installation include:

- 8 x SUNGROW ST2752UX BESS containers.
- Electrical integration with existing inverter stations.

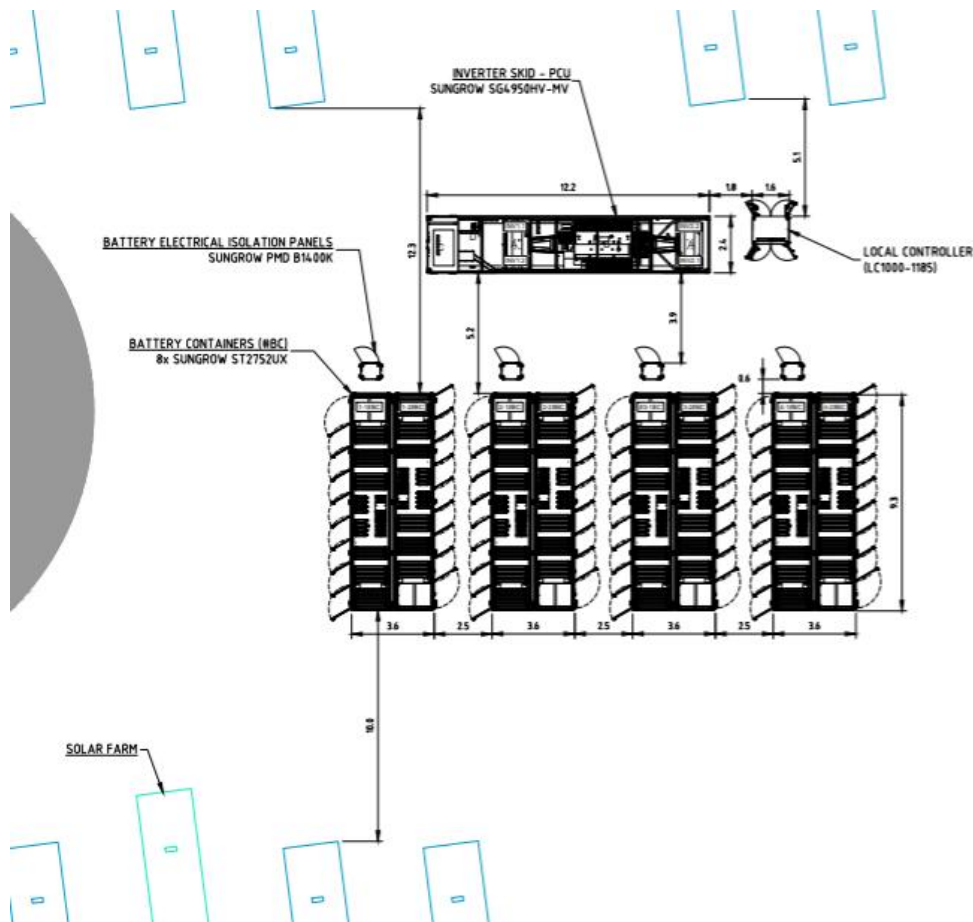


Figure 4: Deniliquin Battery Drawing of proposed BESS



Figure 7: Selected Battery Technology SUNGROW ST2752UX

3.2 Proposal Construction

3.2.1 Construction

The 3-month construction sequence for the BESS installation is expected to follow the below stages:

- Site establishment and preparation.
- Survey and marking of infrastructure locations.
- Earthworks – limited to trenching and minor grading to accommodate pile installation and cable routes.
- Installation of foundations to support new equipment.
- Delivery of prefabricated BESS units and associated equipment.
- Placement of BESS units infrastructure onto piers.
- Connection of BESS units to inverters.
- Commissioning and testing of electrical systems.
- Removal of temporary construction facilities and restoration of disturbed areas.

3.2.2 Construction Plant and Equipment

Construction equipment will include:

- Mobile crane for placement of prefabricated BESS units.
- Equipment for piling preparation and installation
- Excavators and trenching equipment for cable installation.
- Telehandlers and forklifts for material movement.
- Light vehicles and delivery trucks.
- Temporary site amenities.

Where possible, equipment will be sourced locally to support regional economic activity.

3.2.3 Source and Quantity of Materials

Materials will be delivered to site via road transport and include:

- Prefabricated lithium-ion BESS containers.
- Piers and mounting hardware.
- Copper and aluminium cabling.
- Site signage and monitoring equipment.

3.2.4 Staffing Requirements

Construction will be staged to allow progressive installation and commissioning. It is anticipated that up to 20 personnel will be required during peak construction, including electricians, civil contractors, and supervisory staff. Local employment will be prioritised where feasible, using NSW contractors.

3.3 Operation and Maintenance

The BESS will operate autonomously with remote monitoring and control via SCADA systems. Routine maintenance will be limited to periodic inspections, servicing, and vegetation management, typically requiring only light vehicles and minimal on-site presence.

3.4 Decommissioning

The BESS installation is expected to have an operational life of approximately 20–25 years. At the end of this period, the infrastructure will either be decommissioned or the operational life extended.

Decommissioning will involve the removal of all above- and below-ground infrastructure, including:

- Disconnection and removal of BESS containers, and associated cabling.
- Removal of steel piles and mounting structures.
- Restoration of disturbed areas to pre-development condition or an alternative suitable land use.

The BESS containers will either be processed locally or internationally at a suitably qualified facility. Remaining components such as cabling, steel, and electrical equipment will be recycled locally where feasible or disposed of at appropriately licensed facilities.

A Decommissioning Environmental Management Plan (DEMP) will be prepared within 36 months prior to the commencement of decommissioning to guide the removal process and ensure compliance with environmental and safety standards.

4 Statutory Planning Considerations

This section outlines the statutory framework applicable to the proposed BESS installations at the Deniliquin Solar Farm. It identifies the relevant planning controls under local, state, and Commonwealth legislation and confirms the permissibility of the development.

- State Environmental Planning Policy
- NSW Electricity Infrastructure Roadmap (2020)
- Large-Scale Battery Storage Guidelines (NSW Department of Planning, Housing and Infrastructure, 2023)
- NSW Climate Change Policy Framework (NSW Department of Climate Change, Energy, the Environment and Water)
- Murray Regional Plan 2041 (NSW Department of Planning, Housing and Infrastructure, 2023)
- Edward River Local Strategic Planning Statement (Edward River Council)

4.1 State Environmental Planning Policy (SEPP) 2021

4.1.1 SEPP (Infrastructure) 2021

The Infrastructure SEPP facilitates the delivery of infrastructure across NSW. Under Clause 34(7), development for the purpose of a solar energy system may be carried out with consent on any land. The BESS is considered ancillary to the existing solar energy infrastructure and is therefore permissible with consent.

Clause 45 of the SEPP also applies, as the BESS will connect to Essential Energy's existing transmission infrastructure. Consultation with Essential Energy has commenced to ensure compliance.

4.1.2 SEPP (State and Regional Development) 2011

This SEPP identifies developments of state or regional significance. The original solar farm proposal was considered regional development due to its capital investment value and land ownership arrangements. The BESS component, as an extension of the approved infrastructure, is consistent with the original planning pathway and will be assessed by Leeton Shire Council.

4.1.3 SEPP No. 55 (Remediation of Land)

SEPP 55 requires consideration of land contamination prior to development. The BESS will be installed on previously cleared and developed land within the solar farms. No evidence of contamination has been identified, and the land is considered suitable for the proposed use without remediation.

4.1.4 Division 4 (Electricity Generating Works or Solar Energy Systems)

The division 4 of the Infrastructure SEPP states that electricity generating works, including the making or generating of electricity or the storage of electricity, are permissible in prescribed non-residential zones, including but not limited to RU1 (Primary Production). This provides the site with legislative consent to apply for the approval of the development under this SEPP and demonstrates compliance with the land use zoning.

4.2 Commonwealth Legislation

4.2.1 Environment Protection and Biodiversity Conservation Act 1999 (EPBC Act)

A Protected Matters Search Tool (PMST) was undertaken and considered in the ecological assessment. The assessment concluded that the proposal would not significantly impact any MNES. Therefore, referral under Part 9 of the EPBC Act is not required.

4.2.2 Renewable Energy (Electricity) Act 2000

The proposal supports renewable energy generation and contributes to the Large-scale Renewable Energy Target (LRET). Under Division 4 of the Act, CleanPeak Energy must be accredited as a Renewable Energy Generator to create Renewable Energy Certificates (RECs).

4.3 NSW Legislation

4.3.1 Environmental Planning and Assessment Act 1979 (EP&A Act)

The proposal requires development consent under Part 4 of the EP&A Act. As the BESS is part of an existing solar farm development, it is considered local development and will be assessed by Leeton Shire Council. The SEE has been prepared to support the DA in accordance with the EP&A Act and Regulation.

4.3.2 NSW Renewable Energy Planning Framework

Under the NSW Renewable Energy Planning Framework for Large Scale Solar Energy, battery energy storage systems are mentioned several times, mostly describing the pathway for approvals and application processes. For the Deniliquin site, the battery addition would seek to add 20MW of power to the site, being below the mentioned 30MW trigger for a designated development. In accordance with this, and the planning components listed above, approval will be sought via local council.

4.3.3 NSW Climate Change Policy Framework

The development of the Deniliquin solar farm is aligned with the NSW Climate Change Policy that seeks to reduce emissions by 50% by 2030 and reach net-zero by 2050. By providing the solar farm with additional power storage and distribution capabilities, the sites ability to provide “green” energy is increased and diversified, further aligning itself with the goals of this framework.

The further development of the site also aligns with the general directions of the framework outlined in section 5, specifically by “Taking advantage of opportunities to grow new industries in NSW”.

4.4 Local Legislation

4.4.1 Riverina Murray Regional Plan 2041

The proposed Battery Energy Storage System (BESS) is assessed against the Riverina Murray Regional Plan 2041, which provides the NSW Government’s strategic land-use framework for the region over a 20-year horizon.

The Regional Plan identifies the Riverina Murray as a key location for the transition to a low-carbon economy, with renewable energy generation and associated infrastructure forming a central pillar of regional economic diversification. In particular, large-scale solar development

has emerged as a dominant land use, accounting for a significant proportion of recent major projects in the region.

The Plan recognises that achieving net zero emissions by 2050 will require not only generation assets, but also energy storage technologies, including battery systems, to ensure reliability, manage peak demand, and support the integration of intermittent renewable energy sources.

4.4.1.1 Strategic Alignment with Renewable Energy Infrastructure

The proposal is consistent with Objective 13 – Support the transition to net zero by 2050, which seeks to:

- Facilitate renewable energy generation and storage
- Enable supporting infrastructure such as transmission and grid stabilisation
- Encourage co-location and integration of energy-related land uses
- Minimise land use conflict associated with renewable energy development

The Riverina Murray region is identified as a key contributor to NSW's future energy mix through the establishment of the Southwest Renewable Energy Zone (REZ), which is intended to cluster renewable generation and storage infrastructure and connect it efficiently to the grid.

Although the subject site is associated with an existing solar farm, the addition of a BESS is consistent with the REZ model and broader strategic intent, as it:

- Enhances the operational efficiency of the existing solar facility
- Supports grid stability and dispatchability
- Reduces energy curtailment and improves utilisation of existing infrastructure
- Aligns with regional objectives for integrated renewable energy systems

4.4.1.2 Consistency with Infrastructure and Land Use Planning

The Regional Plan emphasises the need to align development with existing and planned infrastructure, particularly electricity transmission networks and supporting utilities.

The BESS is inherently linked to the existing solar farm and associated grid infrastructure and therefore:

- Represents an incremental intensification of an already approved land use
- Avoids the need for significant additional land clearing or new infrastructure corridors
- Optimises the use of existing transmission capacity, consistent with strategic infrastructure planning principles

This approach is consistent with Objective 11 – Plan for integrated and resilient utility infrastructure, which promotes:

- Co-location of infrastructure

- Efficient use of existing assets
- Coordinated planning between land use and infrastructure investment

4.4.1.3 Land Use Compatibility and Rural Context

The site is located within a rural landscape where agricultural production remains a primary land use. The Regional Plan highlights the importance of:

- Protecting productive agricultural land
- Minimising land use conflict
- Managing cumulative impacts of renewable energy development

The addition of a BESS to an existing solar farm is considered compatible with these objectives as:

- It does not materially increase the land footprint beyond the approved development envelope
- It avoids further fragmentation of agricultural land
- It maintains the established land use character associated with renewable energy infrastructure

Accordingly, the proposal is consistent with Objective 12 – Strategically plan for rural industries, which seeks to balance agricultural productivity with emerging land uses such as renewable energy.

4.4.1.4 Environmental and Natural Hazard Considerations

The Regional Plan requires that all new development respond to environmental constraints and natural hazards, including:

- Flooding
- Biodiversity impacts
- Climate change resilience

The Riverina Murray region is subject to significant flood risk associated with the Murray and Murrumbidgee river systems, and strategic planning requires that development:

- Is appropriately sited and designed to avoid unacceptable risk
- Incorporates resilience measures to mitigate potential impacts
- Minimises environmental disturbance and biodiversity loss

As the BESS is co-located within an existing approved solar development, environmental impacts are expected to be limited and can be managed through detailed design and mitigation measures consistent with the avoid–minimise–offset hierarchy.

4.4.1.5 Socio-Economic and Community Considerations

The Regional Plan identifies that renewable energy developments can generate:

- Short-term construction impacts, including workforce accommodation pressures
- Increased demand on local infrastructure and services
- Opportunities for regional employment and economic diversification

The proposed BESS is expected to have:

- A relatively small construction workforce compared to large-scale solar projects
- Minimal ongoing operational workforce requirements
- Positive contributions to regional energy security and economic resilience

These outcomes are consistent with the Plan's broader objectives to support economic growth while managing the cumulative impacts of major projects on local communities.

4.4.1.6 Circular Economy and Decommissioning

The Regional Plan identifies renewable energy infrastructure, including solar and storage technologies, as an emerging source of waste and encourages planning for:

- Recycling and re-use of materials
- End-of-life management of components
- Development of circular economy industries

The proposal will incorporate consideration of lifecycle and decommissioning requirements, ensuring consistency with regional objectives to minimise waste and support resource recovery.

4.4.1.7 Conclusion

The proposed BESS is strongly aligned with the strategic direction of the Riverina Murray Regional Plan 2041. In particular, it:

- Directly supports the transition to a net zero emissions economy
- Is consistent with the development of integrated renewable energy systems
- Optimises the use of existing infrastructure and approved land uses
- Minimises environmental and land use conflict through co-location
- Contributes to regional economic resilience and energy security

Subject to the detailed assessment of site-specific constraints, the proposal is therefore considered to be well-founded within the regional strategic planning framework.

4.4.2 Edward River Local Strategic Planning Statement (LSPS) 2020

The proposed Battery Energy Storage System (BESS) has been assessed against the Edward River Local Strategic Planning Statement (LSPS) 2020, which establishes the 20-year land use vision and planning priorities for the Edward River Local Government Area (LGA), including Deniliquin.

The LSPS provides the local policy framework guiding land use decisions and gives effect to regional planning objectives at a finer scale. It identifies eight planning priorities focused on:

- Protecting and enhancing agricultural productivity
- Supporting industrial growth and economic diversification
- Coordinating infrastructure provision
- Managing environmental values and natural hazards

The proposal has been considered against these priorities to assess its consistency with the local strategic planning framework.

4.4.2.1 Consistency with Planning Priority 2 – Industry

Planning Priority 2 seeks to strengthen the local economy by supporting:

- Industrial development, including freight, logistics and warehousing
- Co-location of complementary industries
- Investment in industrial land that minimises amenity and land use conflicts

Deniliquin is identified as a key industrial centre within the LGA, with an established manufacturing and logistics base supported by strong regional transport connections.

The proposed BESS is consistent with this priority as it:

- Represents energy infrastructure aligned with emerging industrial uses
- Supports the diversification of the local economy
- Is co-located with an existing solar farm, thereby:
 - improving land use efficiency
 - minimising additional land disturbance
 - reducing potential land use conflict

The proposal is therefore consistent with the LSPS objective to encourage complementary and co-located industrial development.

4.4.2.2 Consistency with Planning Priority 1 – Agriculture

Planning Priority 1 recognises agriculture as the dominant land use within the LGA and seeks to:

- Protect high-value irrigated agricultural land
- Manage conflict between agricultural and non-agricultural uses

- Support value-added and complementary industries

The subject land is located within a rural context where agricultural activities are a key economic driver. The LSPS places a strong emphasis on protecting this land from incompatible development.

The proposal is compatible with this priority as:

- It is located within an existing approved solar farm, representing an established land use
- It does not materially increase the footprint of development or further fragment agricultural land
- It does not introduce new sensitive receptors or increase conflict with surrounding agricultural operations

Accordingly, the proposal is considered to be consistent with the intent of protecting agricultural productivity while enabling compatible development.

4.4.2.3 Consistency with Planning Priority 6 – Infrastructure

Planning Priority 6 seeks to align development with available infrastructure and ensure that investment occurs in locations with sufficient servicing capacity.

The LSPS notes that the existing electricity network is generally capable of accommodating future development within the LGA.

The proposed BESS directly supports this objective by:

- Enhancing electricity infrastructure performance and reliability
- Optimising the use of existing network connections
- Reducing the need for new infrastructure corridors through co-location with existing development

The proposal is therefore strongly aligned with the LSPS objective of coordinated and efficient infrastructure planning.

4.4.2.4 Consistency with Planning Priority 7 – Climate Change and Natural Hazards

Planning Priority 7 highlights the importance of managing risks associated with:

- Flooding
- Bushfire
- Increasing temperatures and extreme weather events

The LSPS requires that development:

- Avoid high hazard areas where possible
- Be responsive to floodplain risk management studies

- Incorporate resilience measures in design The proposal acknowledges these requirements and will:
- Be designed to respond to identified flood constraints and hazard risks
- Incorporate appropriate engineering and siting measures to ensure resilience
- Be supported by detailed assessments addressing natural hazard considerations

Subject to these measures, the proposal is consistent with the LSPS approach to risk-based land use planning.

4.4.2.5 Consistency with Planning Priority 8 – The Environment

Planning Priority 8 seeks to protect environmental assets, including:

- River systems and waterways
- Biodiversity and wildlife habitat
- Natural landscapes that contribute to local identity

The LSPS also recognises the need to improve environmental mapping and understanding to inform decision-making.

The proposal is consistent with this priority as:

- It is located within an already disturbed and approved development footprint
- It minimises the need for additional vegetation clearing
- Environmental impacts can be managed through detailed design and mitigation measures

As such, the proposal is not expected to result in significant additional environmental impacts and is considered to be consistent with the LSPS environmental objectives.

4.4.2.6 Conclusion

The proposed BESS demonstrates a high level of consistency with the Edward River LSPS. In particular, it:

- Supports industrial growth and economic diversification
- Promotes efficient use of existing infrastructure
- Minimises conflict with agricultural land uses through co-location
- Responds appropriately to natural hazard and environmental considerations

While the LSPS places strong emphasis on protecting agricultural land and managing natural hazards, these considerations can be addressed through detailed design and assessment.

Overall, the proposal is considered to be well aligned with local strategic planning priorities and represents a logical extension of existing approved development within the Edward River LGA.

4.5 Feasible Alternatives

4.5.1 Overview

In developing the proposed BESS at the Deniliquin Solar Farm, CleanPeak Energy considered a range of feasible alternatives relating to technology type, coupling configuration, siting, and the consequences of not proceeding with the development. The following section summarises the alternatives assessed and the rationale for the preferred option.

4.5.2 Alternative 1 – No Development

The ‘no development’ alternative would result in the continued operation of the existing Deniliquin Solar Farm without energy storage capability. Under this scenario, surplus solar energy generated during daylight hours would continue to be curtailed or exported at low or negative spot prices, reducing the commercial and environmental value of the existing renewable energy asset.

Without the BESS, the solar farm would remain unable to dispatch energy during evening peak demand periods, limiting its contribution to New South Wales renewable energy and grid reliability objectives. This alternative is inconsistent with the NSW Government's energy policy direction and does not represent a responsible use of the existing approved renewable energy infrastructure.

4.5.3 Alternative 2 – Alternative Battery Chemistry

Alternative battery chemistries were considered, including Nickel Manganese Cobalt (NMC) lithium-ion technology, which offers higher energy density than Lithium Iron Phosphate (LFP). However, NMC chemistry carries a higher thermal runaway risk profile, which would require more extensive fire suppression infrastructure and result in greater regulatory complexity for a site identified as bushfire-prone land.

Lithium Iron Phosphate (LFP) technology, as proposed using the SUNGROW ST2752UX units, offers a more stable electrochemical profile, a longer cycle life, and a lower risk of thermal runaway, making it the preferred chemistry for a rural semi-industrial setting.

4.5.4 Alternative 3 – Alternative Siting Within the Solar Farm

Multiple locations within the existing solar farm boundary were assessed for the placement of the BESS units. Siting criteria included proximity to existing inverter stations and DC arrays (to minimise cable runs and integration complexity), access via existing internal roads, avoidance of any remnant vegetation, and minimisation of land disturbance.

The preferred location was selected as it satisfies all siting criteria, requires no vegetation removal, avoids environmentally sensitive areas, and utilises previously cleared and levelled land.

5 Environmental Impact Assessment

This chapter provides a detailed description of the potential environmental impacts associated with the construction and operation of the proposal. All aspects of the environment potentially impacted upon by the proposal are considered. Site-specific mitigation measures are provided to ameliorate the identified potential impacts.

5.1 Visual Amenity

5.1.1 Existing Environment

The proposed BESS will be located entirely within the boundaries of the existing Deniliquin Solar Farm, which has previously received development approval and is operating. The solar farm site is situated in a flat, semi-rural landscape with low population density and limited sensitive visual receptors. The surrounding land uses include rural properties, with some industrial and agricultural operations nearby.

The existing solar farm infrastructure, including PV panels, inverters, and fencing, has already altered the visual character of the site. The addition of the BESS will not significantly change the existing landscape character, as the proposed infrastructure will be of smaller scale and appearance to the current built form and will be visually contained within the established solar farm footprint. As the BESS are placed within the existing solar farm boundary, the visual amenity is protected by the existing landscape visual buffer, this can be seen in the landscape plan in Appendix A and the elevation drawings in Appendix C

5.1.2 Potential Impacts

The BESS infrastructure will consist of containerised battery units, inverters, and associated electrical equipment, all of which will be low-profile and consistent with the existing solar farm components. These elements will be installed within the internal area of the solar farm and will not extend beyond the approved site boundaries.

The BESS infrastructure will be similar to the height of existing PV arrays and will not introduce substantial impacts that would increase visual prominence. The infrastructure will not be visible from public roads or nearby residences beyond what is already visible due to the solar farm. No elevated viewpoints exist in the surrounding area that would allow for broader visibility of the BESS installation.

There will be no change to the external fencing, access points, or landscaping as part of the BESS proposal. The potential for sun glint or glare is negligible, as the BESS does not include reflective surfaces and will not alter the orientation or layout of the existing PV arrays.

5.1.3 Mitigation Measures

Given the minimal visual impact of the BESS, no additional mitigation measures are considered necessary beyond those already implemented for the solar farm. The following measures will continue to apply:

Mitigation Measures	
Visual Amenity	
V1	The BESS will be located within the existing fenced boundary of the solar farm, ensuring containment of visual elements.
V2	All infrastructure will be designed to match the scale and appearance of existing components.
V3	Any disturbed areas during installation will be stabilised and restored in accordance with the existing Environmental Management Plan.

5.2 Biodiversity

5.2.1 Existing Environment

A detailed flora assessment was undertaken for the Deniliquin Solar Farm in accordance with DELWP native vegetation assessment guidance. The study covered the full development area, including the land where the proposed BESS is to be installed. The assessment identified the site as highly disturbed agricultural land with a long history of grazing and cultivation, resulting in a ground layer dominated by pasture species.

The proposed BESS locations are situated entirely within cleared, previously developed solar farm areas, and do not intersect any remnant trees or mapped native vegetation.

5.2.2 Potential Impacts

The BESS works will occur within an already-disturbed footprint and do not require any native vegetation removal. No ground disturbance extends into areas containing remnant trees, mapped native vegetation, or any areas identified as sensitive under DELWP's native vegetation framework.

5.2.3 Mitigation Measures

The BESS will be delivered in a manner that avoids and minimises impacts to any retained vegetation and fauna. Existing solar farm biodiversity requirements and controls will continue to apply. If vegetation or tree removal is required, it will be minimised and managed in accordance with the applicable permitting and offset framework. Biodiversity credits have already been obtained for the solar farm component of the site and are viewable in Appendix E.

Ref	Mitigation Measures
Construction and decommissioning	
B1	Erosion and sediment controls as per the original development consent
B2	Update the existing Construction Environmental Management Plan which includes: - A procedure to stabilise and rehabilitate areas disturbed by construction progressively during works, if required. - Weed control measures including separation of noxious weeds and disposed of separately from other material and disposal of all ground cover as exotic.

	• Strict erosion and sediment control measures in areas where disturbance is taking place, particularly around drainage lines. • Appropriate environmental controls to manage biodiversity during construction. • A stop works procedure during and immediately following heavy rainfall.
B3	A decommissioning plan, which is to be submitted within 36 months of prior of Project decommission, will include a flora and fauna section to manage removal of infrastructure from the site and rehabilitation of disturbed areas.
Operation	
B4	The Operational Environmental Management Plan should include: • Provision for weed monitoring and control of noxious weeds. • A procedure or plan for monitoring vegetation cover and composition and allow for adaptive management. • Vehicle speed limits, to reduce risk of collision with fauna.

5.3 Noise

5.3.1 Existing Environment

The proposed BESS will be located within the existing Deniliquin Solar Farm, in a rural-industrial setting with a small number of dispersed sensitive receivers (rural dwellings). Existing noise sources in the locality include intermittent traffic on local roads, agricultural activity and existing solar farm electrical equipment.

Baseline acoustic conditions are typical of a rural environment, with ambient noise levels generally low outside of short-duration events (e.g. farm machinery and traffic).

The BESS is sited within previously disturbed areas adjacent to existing electrical infrastructure. This siting is intended to minimise any potential for off-site noise impacts.

5.3.2 Potential Impacts

Based on the above detailed existing environment and the perceived noise levels from the equipment, there are little concerns that the operational noise of the new equipment will exceed an acceptable noise level to any of the receivers. Standard construction noise controls and a complaints management process will be implemented to minimise temporary impacts during installation.

5.3.3 Mitigation Measures

Standard construction and operational noise management measures will be implemented for the BESS, consistent with typical industry practice and EPA guidance. These measures include management of construction hours, proactive communication, and a complaints response process:

Ref	Mitigation Measures
Construction and decommissioning	
N1	Construction will only be undertaken during the following times: Monday-Friday: 7am - 6pm
N2	Notification to nearby sensitive receivers will be conducted prior to construction to provide information regarding the duration of and the proposed construction hours.
N3	A complaint handling procedure has been implemented and will be reviewed prior to construction. Community members can lodge noise-related complaints via the company's website. The procedure includes: - A clearly accessible online form for contacting CleanPeak Energy - Automatic acknowledgment of receipt and a defined response timeframe. - Escalation steps if the issue is not resolved promptly. - Maintenance of a complaints register for transparency and reporting.
Operation	
N4	Conduct periodic checks during operation to confirm compliance with EPA Noise Policy for Industry.
N5	Continue preventive maintenance to prevent abnormal noise emissions.

5.4 Traffic and Transport

5.4.1 Existing Environment

Existing traffic volumes on key roads were assessed as low to moderate (with some heavy vehicle movement) based on observations during the site visits and operation. Vehicle access to the proposed works will be via an unsealed private driveway and locked gate on Burke Road Coleman Road. There are no formal roads or car parking arrangements and pedestrian access is restricted.

5.4.2 Potential Impacts

Key traffic and transport impacts for the BESS proposal relate to the delivery of prefabricated battery units and associated electrical equipment, as well as the movement of personnel and minor machinery during installation. These activities will occur over a short duration and are expected to generate significantly fewer vehicle movements than the original solar farm construction.

During installation, traffic to the site will include light commercial vehicles and a limited number of heavy vehicles for equipment delivery. The peak traffic volumes are expected to be low, with no more than a few heavy vehicles per day and minimal disruption to the surrounding road network.

Vehicle access will be via the existing unsealed driveway and locked gate on Bourke Road, and three site entrances on Coleman Road. No new access roads or modifications to existing infrastructure are required. All vehicle movements will be confined to internal access tracks and hardstand areas within the solar farm boundary.

The BESS installation will not affect existing services such as school buses, and the risk of traffic collision, road degradation, or dust generation is considered minimal. Construction activities

will be scheduled during standard daytime hours to avoid peak traffic periods and reduce potential impacts.

Once operational, the BESS will require only occasional access for maintenance and monitoring. These activities will be managed remotely where possible, with infrequent site visits by technicians. As such, operational traffic impacts will be negligible.

5.4.3 Mitigation Measures

Mitigation measures to minimise potential impacts associated with traffic management are provided below. Mitigation measures for operations are not considered to be warranted.

Ref	Mitigation Measures
T1	Preparation of a Construction Traffic Management Plan (TMP). Controls will include: • Timing of deliveries accessing the site to ensure sufficient space and to ensure queuing and idling of construction vehicles in streets is minimised. • Loading and unloading arrangements for materials and equipment (large or small). There will be no loading and unloading of materials outside the site boundaries. • Arrangements for trucks entering and exiting the site. This must be in a forward motion only. No reversing into site at all times.
T2	Maintain safe entry and exit points to site.
T3	Preparation of a Decommissioning Environmental Management Plan to include vehicular access and loading arrangements. A decommissioning plan, is to be submitted within 36 months of Project commencement

5.5 Aboriginal Heritage

5.5.1 Existing Environment

The proposed BESS will be located within the existing Solar Farm boundaries, which has previously undergone assessment for Aboriginal heritage. The solar farm site has already been developed and consists of PV infrastructure, access tracks, fencing, and associated equipment. The land was previously cleared and disturbed through agricultural use, and the solar farm development has further modified the site.

The BESS installation area is located entirely within the previously assessed and disturbed footprint of the solar farm, and no new land disturbance is proposed beyond minor trenching and pad installation.

5.5.2 Potential Impacts

Ground disturbance associated with the BESS installation will be minimal and confined to previously cleared and compacted areas. As such, the likelihood of uncovering, damaging, or disturbing Aboriginal heritage items is considered extremely low.

No new excavation will occur outside the solar farm boundary, and the nature of the works - primarily placement of prefabricated battery units and limited trenching - does not introduce additional risk to Aboriginal heritage values.

Given the absence of known Aboriginal sites and the previously disturbed condition of the land, the BESS proposal is not expected to harm any Aboriginal objects or items of cultural heritage significance.

5.5.3 Mitigation Measures

The following management and mitigation measures will be implemented in the event of an unexpected find:

Ref	Mitigation Measures
AB1	If any Aboriginal object is discovered and/or harmed in, or under the land, while undertaking the proposed development activities, the proponent must: • Not further harm the object; • Immediately cease all work at the particular location; • Secure the area so as to avoid further harm to the Aboriginal object; • Notify OEH as soon as practical on 131555, providing any details of the Aboriginal object and its location; and • Not recommence any work at the particular location unless authorised in writing by OEH. In the event that skeletal remains are unexpectedly encountered during the activity, work must stop immediately, the area secured to prevent unauthorised access and NSW Police and OEH contacted.

5.6 Waste

5.6.1 Existing Environment

The BESS will be installed within the existing Solar Farm, which has established waste management procedures in place. The site is already developed and does not currently generate significant waste beyond routine maintenance. Waste management for the BESS component will be governed by the Waste Management Plan in Appendix C, which outlines procedures for construction, operation, and decommissioning phases in accordance with relevant NSW legislation and guidelines.

5.6.2 Potential Impacts

Waste generated by the BESS proposal will occur during construction, operation, and eventual decommissioning. The types of waste expected include:

- **General solid waste (non-putrescible):** Packaging materials, cable offcuts, pallets, recyclable materials (e.g. paper, plastics, metals).
- **General solid waste (putrescible):** Food waste and litter from site personnel.
- **Hazardous waste:** Batteries (including lithium-ion), chemical residues, paints, and oils.
- **Liquid waste:** Sewage from temporary amenities, waste oils.
- **Special waste:** Tyres and other regulated items.
- **Building and demolition waste:** Generated during decommissioning.

The WMP classifies these waste streams in accordance with the EPA Waste Classification Guidelines (2014) and outlines management strategies based on the Waste Hierarchy defined in the WARR Act 2001—prioritising avoidance, reuse, recycling, and energy recovery before disposal.

Waste quantities will be monitored and updated quarterly, with tracking systems in place for both hazardous and non-hazardous waste. The NSW EPA’s online waste tracking system will be used for scheduled hazardous waste streams, while lithium-ion batteries will be managed under the Australian Dangerous Goods Code and recycled through licensed facilities listed in the WMP (Appendix B).

5.6.3 Mitigation Measures

A description of the measures that would be implemented to avoid, minimise, mitigate, offset, manage and/ or monitor the potential impacts associated with the waste generated, as a result of the proposal, are provided below.

Ref	Mitigation Measures
W1	A Waste Management Plan (WMP) has been prepared as part of the CEMP to manage any construction waste. The plan identifies: • Types and volumes of waste likely to be generated. • The procedure for assessing, classifying and storing waste in accordance with the Environment Protection Authority’s (EPA) Waste Classification Guidelines (EPA, 2014). • Storage and treatment of waste (including stockpiles). • Methods of transport and disposal of wastes (including waste that possesses hazardous characteristics) to ensure that any waste leaving the site is transported and disposed of lawfully and does not pose a risk to human health or the environment. • Opportunities for reducing waste, re-using materials and increasing recycling.
W2	Waste management strategies and mitigation measures will be communicated to all employees and contractors during site induction, prior to commencing works at the site.
W3	All records demonstrating lawful disposal of waste are required to be kept for at least six years.
W4	Waste generated from the Proposal will be managed in accordance with the principles of the waste hierarchy. A decommissioning environmental management plan will be prepared for the proposed facility with a Waste Management Plan that includes the following: • Before dispatching any waste from the facility the waste material will be assessed and classified in accordance with the EPA Waste Classification Guidelines Part 1: Classification of Waste (2014). • Any waste dispatched from the premises is to be sent to a facility that can legally accept the waste.

	• The proposed facility will comply with the relevant POEO waste-tracking requirements for any wastes assessed or classified as hazardous waste, industrial waste or 'Group A' waste. • The facility will keep documented evidence e.g. waste tracking data demonstrating the lawful disposal of contaminated products, waste or residues generated at the facility. A decommissioning plan, which is to be submitted within 36 months of Project commencement.
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5.7 Bushfire

5.7.1 Existing Environment

This Site is located on Bushfire Prone Land identified by the NSW Fire Service bush fire prone land mapping tool. The frequency of fire on the Site and surrounding area is unknown.

The prevalence of grassland vegetation is considered a natural factor limiting the potential intensity of a bush fire event.

5.7.2 Potential Impacts

The proposed BESS installation does not significantly increase bushfire risk given the cleared and managed condition of the site and its absence from bushfire-prone mapping. However, certain activities and external factors require consideration:

- **Grass Fire Exposure:** A fire originating in adjacent rural land could expose BESS enclosures to radiant heat or ember attack.
- **Construction Activities:** Works such as slashing, hot works, and operation of fuel-powered plant may present minor ignition hazards if not properly controlled.
- **Access Constraints:** Inadequate vegetation management or obstruction of internal roads could hinder emergency response during a fire event.
- **Residual Risk:** While the likelihood of bushfire impact is low, unmanaged grass or combustible materials near the BESS could elevate risk.

These potential impacts are considered manageable through standard bushfire protection measures, vegetation control, and site access planning, including an Asset Protection Zone (APZ). No additional substation is required, and Essential Energy will continue to maintain transmission infrastructure in accordance with bushfire safety protocols. The site has been assessed by a FRNSW accredited practitioner, and the Bushfire report is available in Appendix D.

5.7.3 Mitigation Measures

The following management and mitigation measures will be implemented to address potential impacts from the risk of bush fires:

Ref	Mitigation Measures
BF1	The BESS will comply with <i>Planning for Bush Fire Protection</i> , and relevant Australian Standards unless otherwise agreed by a suitably qualified bushfire consultant.
BF2	Public access to the facility will be restricted via secure fencing and locked gates.
BF3	Vegetation will be managed through continued grazing and slashing to maintain low fuel loads.
BF4	Access roads and tracks will be maintained to ensure emergency vehicle access.
BF5	Electrical equipment will be installed in accordance with AS 3000:2007 and manufacturer specifications.
BF6	The BESS system will be grounded and include fire detection and suppression systems as per the Fire Safety Study recommendations.
BF7	Grass height is to be kept below 100mm in height.
BF8	Construction and layout of equipment shall be in accordance with CFA model guidelines for renewable systems unless otherwise approved.

5.8 Fire Safety

5.8.1 Existing Environment

The proposed BESS will be installed within the existing Solar Farm footprint on cleared, levelled land. Fire safety considerations relate to internal hazards associated with lithium-ion battery technology and associated electrical equipment. These hazards differ from external vegetation risks and require specific design and operational controls.

5.8.2 Potential Impacts

The installation of a containerised lithium-ion BESS introduces inherent fire safety considerations, primarily associated with electrical faults, mechanical damage, or thermal runaway within battery cells. While these risks are well-understood in the industry and are mitigated at the design and system level, they must still be acknowledged for completeness.

The primary fire safety risks include:

- **Thermal runaway** within battery cells or modules caused by electrical faults, mechanical damage, or extreme temperatures.
- **Propagation of fire** between modules or units if containment measures fail.
- **Release of flammable gases** during a fault event, creating potential for ignition or explosion.
- **Toxic emissions** during a fire event, requiring safe ventilation and emergency response protocols.
- **Access limitations** for fire brigade intervention if site layout and hardstand areas are obstructed.

These risks are inherent to battery energy storage systems but are significantly reduced through compliance with international standards and integrated safety systems.

5.8.3 Mitigation Measures

Ref	Mitigation Measures
FS1	All BESS units comply with UL 9540A thermal runaway containment testing and AS/NZS 5139 installation requirements.
FS2	Continuous monitoring of voltage, temperature, and current with automatic isolation under fault conditions.
FS3	Smoke, heat, and hydrogen gas detectors integrated with Fire Alarm Control Panel (FACP) and BMS for early warning and shutdown.
FS4	Aerosol fire suppression system installed in each container, activated automatically or manually.
FS5	Deflagration vent panels and emergency ventilation fans to prevent pressure build-up and gas accumulation.
FS6	Dedicated hardstand area (6 m × 36 m or otherwise approved size), turnaround space, and static water supply (≥45 kL) for fire brigade operations.
FS7	Warning signage for energy storage hazards and 20 m vehicle exclusion zone around BESS compounds.
FS8	Routine inspections, vegetation clearance around BESS, and induction for all personnel on emergency procedures.

5.9 Air Quality

5.9.1 Existing Environment

The air quality in Deniliquin is generally good and is typical of that found in a rural setting in NSW due to the relatively low population and distance from industrial pollution sources. Local air quality can be affected by traffic fumes, agricultural practices and industrial activities.

5.9.2 Impact Assessment

Dust generation may occur as a result of earthworks and vehicle movements. However, as works will be minor, temporary and construction would progress so that some arrays will be finished before others have started limiting the extent of any exposed ground. As such, air quality impacts during construction and decommissioning would be minor.

During operation the Proposal is expected to have a positive impact on regional and national air quality as the plant would not generate any emissions and would reduce Australia's reliance on fossil fuels for electricity generation. Vehicle emissions from maintenance activities are expected to be negligible.

5.9.3 Mitigation Measures

Mitigation strategies that would be employed during these phases to manage the potential for adverse air quality impacts are presented, below:

Ref	Mitigation Measures
A1	A water cart (or other means) would be utilised to manage dust on all access roads and exposed dusty surfaces in response to visual cues and complaints.
A2	Temporarily excavated soil and other materials that exhibit significant dust lift off would be wet down, stabilised or covered to manage dust.
A3	Development of a complaints procedure to promptly identify and respond to complaints.

6 Environmental Management Summary

6.1 Licences and approvals required

No additional licences, permits or approvals have been identified as required for the proposed BESS.

6.2 Environmental Framework

The environmental risks associated with the proposed solar farm would be managed by implementing a Proposal-specific suite of mitigation measures detailed in Section 5 and summarised below in section 6.3.

All measures would be managed through the implementation of a Construction Environmental Management Plan (CEMP), an Operation Environmental Management Plan (OEMP) and a Decommissioning Environmental Management Plan (DEMP). These plans would be prepared sequentially, prior to each stage of works or operations. These plans will include the following sub-plans:

- Traffic Management Plan (TMP)
- Soil and Water Management Plan (SWMP)
- Erosion and sediment (ERSED) Control Plan
- Waste Management Plan (WMP)

These plans would detail the environmental management responsibilities of specific staff roles, reporting requirements, monitoring requirements, environmental targets and objectives, auditing and review timetables, emergency responses, induction and training, complaint response procedures and adaptive management mechanisms to encourage continuous improvement.

6.3 Summary of Mitigation Measures

This section provides a summary of the site-specific environmental mitigation measures identified in described in section 5 of this planning report. These mitigation measures will be implemented throughout construction, operation and decommissioning of the Proposal, should it proceed, to minimise any potential adverse impacts arising from the proposed works on the surrounding environment. The mitigation measures are summarised in below.

Mitigation Measures	
Visual Amenity	
V1	The BESS will be located within the existing fenced boundary of the solar farm, ensuring containment of visual elements.
V2	All infrastructure will be designed to match the scale and appearance of existing components, as confirmed in the elevation plans (Appendix C)
V3	Any disturbed areas during installation will be stabilised and restored in accordance with the existing Environmental Management Plan.
Biodiversity	
Construction	
B1	Erosion and sediment controls as per the original development consent
B2	Update the existing Construction Environmental Management Plan which includes: - Minimising vegetation clearing and disturbance. In particular, works are to avoid impacts to mature trees along the southern border. Wherever practicable, excavations and vehicle/machinery movements will occur outside the canopy dripline of these trees. - A procedure to stabilise and rehabilitate areas disturbed by construction progressively during works, if required. - Weed control measures including separation of noxious weeds and disposed of separately from other material and disposal of all ground cover as exotic. - Strict erosion and sediment control measures in areas where disturbance is taking place, particularly around drainage lines. - Appropriate environmental controls to manage biodiversity during construction. - A stop works procedure during, and immediately following heavy rainfall.
B3	A decommissioning plan, which is to be submitted within 36 months of prior of Project decommission, will include a flora and fauna section to manage removal of infrastructure from the site and rehabilitation of disturbed areas.
Operation	
B4	The Operational Environmental Management Plan should include: - Provision for weed monitoring and control of noxious weeds. - A procedure or plan for monitoring vegetation cover and composition and allow for adaptive management. - Vehicle speed limits, to reduce risk of collision with fauna.
Noise	
Construction and decommissioning	
N1	Construction will only be undertaken during the following times: Monday-Friday: 7am - 6pm

Mitigation Measures	
N2	Notification to nearby sensitive receivers will be conducted prior to construction to provide information regarding the duration of and the proposed construction hours.
N3	A complaint handling procedure has been implemented and will be reviewed prior to construction. Community members can lodge noise-related complaints via the company's website. The procedure includes: • A clearly accessible online form for contacting CleanPeak Energy • Automatic acknowledgment of receipt and a defined response timeframe. • Escalation steps if the issue is not resolved promptly. Maintenance of a complaints register for transparency and reporting.
Operation	
N4	Conduct periodic checks during operation to confirm compliance with EPA Noise Policy for Industry.
N5	Continue preventive maintenance to prevent abnormal noise emissions.
Traffic and Transport	
T1	Preparation of a Construction Traffic Management Plan (TMP). Controls will include: • Timing of deliveries accessing the site to ensure sufficient space and to ensure queuing and idling of construction vehicles in streets is minimised. • Loading and unloading arrangements for materials and equipment (large or small). There will be no loading and unloading of materials outside the site boundaries. • Arrangements for trucks entering and exiting the site. This must be in a forward motion only. No reversing into site at all times.
T2	Maintain safe entry and exit points to site.
T3	Preparation of a Decommissioning Environmental Management Plan to include vehicular access and loading arrangements. A decommissioning plan, is to be submitted within 36 months of Project commencement
Aboriginal Heritage	
AB1	If any Aboriginal object is discovered and/or harmed in, or under the land, while undertaking the proposed development activities, the proponent must: • Not further harm the object; • Immediately cease all work at the particular location; • Secure the area so as to avoid further harm to the Aboriginal object; • Notify OEH as soon as practical on 131555, providing any details of the Aboriginal object and its location; and • Not recommence any work at the particular location unless authorised in writing by OEH. In the event that skeletal remains are unexpectedly encountered during the activity, work must stop immediately, the area secured to prevent unauthorised access and NSW Police and OEH contacted.
Waste	

Mitigation Measures	
W1	A Waste Management Plan (WMP) has been prepared as part of the CEMP to manage any construction waste. The plan identifies: • Types and volumes of waste likely to be generated. • The procedure for assessing, classifying and storing waste in accordance with the Environment Protection Authority's (EPA) Waste Classification Guidelines (EPA, 2014). • Storage and treatment of waste (including stockpiles). • Methods of transport and disposal of wastes (including waste that possesses hazardous characteristics) to ensure that any waste leaving the site is transported and disposed of lawfully and does not pose a risk to human health or the environment. • Opportunities for reducing waste, re-using materials and increasing recycling.
W2	Waste management strategies and mitigation measures will be communicated to all employees and contractors during site induction, prior to commencing works at the site.
W3	All records demonstrating lawful disposal of waste are required to be kept for at least six years.
W4	Waste generated from the Proposal will be managed in accordance with the principles of the waste hierarchy. A decommissioning environmental management plan will be prepared for the proposed facility with a Waste Management Plan that includes the following: • Before dispatching any waste from the facility the waste material will be assessed and classified in accordance with the EPA Waste Classification Guidelines Part 1: Classification of Waste (2014). • Any waste dispatched from the premises is to be sent to a facility that can legally accept the waste. • The proposed facility will comply with the relevant POEO waste-tracking requirements for any wastes assessed or classified as hazardous waste, industrial waste or 'Group A' waste. • The facility will keep documented evidence e.g. waste tracking data demonstrating the lawful disposal of contaminated products, waste or residues generated at the facility. A decommissioning plan, which is to be submitted within 36 months of Project commencement.
Bushfire	
BF1	The BESS will comply with <i>Planning for Bush Fire Protection</i> (CFA) and relevant Australian Standard unless otherwise approved.
BF2	Public access to the facility will be restricted via secure fencing and locked gates.
BF3	Vegetation will be managed through continued grazing and slashing to maintain low fuel loads.
BF4	Access roads and tracks will be maintained to ensure emergency vehicle access.

Mitigation Measures	
BF5	Electrical equipment will be installed in accordance with AS 3000:2007 and manufacturer specifications.
BF6	The BESS system will be grounded and include fire detection and suppression systems as per the Fire Safety Study recommendations.
BF7	Grass height is to be kept below 100mm in height.
Fire Safety	
FS1	All BESS units comply with UL 9540A thermal runaway containment testing and AS/NZS 5139 installation requirements.
FS2	Continuous monitoring of voltage, temperature, and current with automatic isolation under fault conditions.
FS3	Smoke, heat, and hydrogen gas detectors integrated with Fire Alarm Control Panel (FACP) and BMS for early warning and shutdown.
FS4	Aerosol fire suppression system installed in each container, activated automatically or manually.
FS5	Deflagration vent panels and emergency ventilation fans to prevent pressure build-up and gas accumulation.
FS6	Dedicated hardstand area (6 m × 36 m or otherwise approved size), turnaround space, and static water supply (≥45 kL) for fire brigade operations.
FS7	Warning signage for energy storage hazards and 20 m vehicle exclusion zone around BESS compounds.
FS8	Routine inspections, vegetation clearance around BESS, and induction for all personnel on emergency procedures.
Air quality	
A1	A water cart (or other means) would be utilised to manage dust on all access roads and exposed dusty surfaces in response to visual cues and complaints.
A2	Temporarily excavated soil and other materials that exhibit significant dust lift off would be wet down, stabilised or covered to manage dust.
A3	Development of a complaints procedure to promptly identify and respond to complaints.

7 Conclusion

The proposed Deniliquin BESS represents a minor, low-impact enhancement to the existing approved solar farm. The BESS will operate entirely within previously developed areas of the site, requiring no native vegetation removal and generating only small-scale, temporary construction disturbance. Environmental risks associated with the proposal - including noise, visual disturbance, waste, bushfire and fire safety - are limited in scale and are readily managed through standard construction and operational controls.

The site has already been assessed through prior approvals for the solar farm, including flora assessment, and planning verification of the site's suitability for renewable energy infrastructure. The BESS does not alter the approved use of the land, expand the development footprint, or introduce any new environmental or amenity risks.

With the implementation of the mitigation measures outlined in this Planning Report, the proposal is expected to operate with no material adverse impact on the environment, neighbouring land, or the broader community. The BESS will improve the functionality and resilience of the existing solar farm, supporting efficient renewable energy generation and contributing to New South Wales's clean energy objectives.

Appendix A

Landscape Plan

Appendix B

Waste Management Plan

Appendix C

Elevations

Appendix D

Bushfire Report