





STATEMENT OF ENVIRONMENTAL EFFECTS (SEE)

Proposed Battery Energy Storage System at ALDI Muswellbrook BESS

Shell Energy Projects Pty Ltd atf Shell Energy Projects Unit Trust ABN 91 559 338 109

10/04/2025





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1. Initial Response by Personnel Onsite

This statement of environmental effects (SEE) has been prepared by Shell Energy (the Applicant) in support of a Development Application (DA) for the installation of a battery energy storage system (BESS) on land part of 31-35 RUTHERFORD ROAD MUSWELLBROOK 2333 (the site).

This SEE describes the proposed development of the site in context of relevant planning controls and policies applicable to the proposed development. Furthermore, the SEE provides an assessment against the relevant matters for consideration under section 4.15 of the *Environmental Planning and Assessment Act 1979* (EPA Act).

The proposed works have an estimated cost of \$500,000 and development consent is sought in accordance with Part 4 of the *Environmental Planning and Assessment Act 1979* (EP&A Act).

The planning and environmental assessment has been undertaken in Chapter 6 of this SEE. In accordance with the assessment and supplementary documentation, the proposed development is considered appropriate to its contact and surrounding and within the planning parameters and would have little impact.

The proposal is considered of environmental benefit to the local area by storing clean energy and offsetting emission from the distribution center whilst causing minimal impacts on the site and surrounding area and contributing towards reducing emissions and increasing resource efficiency. The proposal is consistent with the local environmental plan and all other state and commonwealth planning and environmental legislation and policies. For these reasons, it is considered that the proposed facility is in the public interest.

This report should be read in conjunction with the supporting documentation listed in **Table 1** below.

Document Title	Consultant/OEM/Company
Battery Datasheet	Sungrow
Battery System Layout	Shell Energy
Container Sound Pressure Level	Sungrow
Gas Fire Extinguishing System	Sungrow
Fire Fighting (Suppression) System Interpretation	Sungrow
Owner's Consent	Aldi Stores (A Limited Partnership)
Minutes of Pre-lodgement Meeting	Local Council

Table 1 List of supporting documents.





2. Site Context

2.1 Site Description

Aldi Muswellbrook BESS is located at 31-35 RUTHERFORD ROAD MUSWELLBROOK 2333 (the site) and is legally described as Lot 1 in Deposited Plan DP1090457. The site is adjacent to Rutherford road (North).

The surrounding land uses are predominately commercial (retail). The location of the site is shown in the figure below.

Under the Muswellbrook Local Environmental Plan 2009 (MLEP), the site is zoned E1 Local Centre.



Figure 1 Site Location Map | Source: Google 2025

2.2 Existing Development

The site currently accommodates an Aldi Retail Store and associated car parking. The rooftop has a PV Solar system installed. Vehicular access to the site is from Rutherford road and Woolybutt way.







Figure 2 Site Aerial Photograph | Source: Nearmap 2025



Figure 3 Site Zoning Definition Map | Source: NSW Planning Portal 2025





3. The Proposal

3.1 The Proposed Development

The proposal is for a battery energy storage system (BESS) that would store electricity from the existing rooftop solar panels. Excess solar energy and low-cost energy from grid (when available) will be used to charge the batteries. Storing and using more energy generated by the rooftop panels means that **Aldi Muswellbrook BESS** can draw less energy from the grid and consequently reduce demand on the power network and improve its reliability, which is the objective of this project under the ARENA grant funding.

The BESS is to be installed on the **Western side of the building** as per the layout picture below and will be fenced in. Shell Energy now seeks consent for:

Installation of 1x ST535kWh-250kW-2h Battery with total footprint dimensions of 4.5m and 5.8m.

The BESS Location would be fenced with Square & Rectangular Hollow Steel Fencing with the following dimensions:

- Height 2400mm Heavy-Duty,
- Gates 1000mm (wide opening) Heavy Duty Pressed Spear Top (hinged) Single Gates
- Single Gate Posts 100mm x 100mm galvanized SHS Posts (4 no.), complete with post cap and set into concrete footings 300mm diameter x 750mm deep.
- Fence posts 75mm x 75mm galvanized SHS Posts (14 no.), complete with post cap and set into a concrete footing 300mm diameter x 750mm deep.







Figure 4 BESS Footprint diagram on aerial imagery | Source: Shell Energy 2025

Please find enclosed a set of plans and elevations.

The estimated cost of works is \$500,000.00, which broken down by component in Table 2 below.

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Table 2 Estimated cost of works | Source: Shell Energy 2025
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ltem	Estimated Cost			
Materials	\$281,600.00			
Construction	\$125,440.00			
Logistics	\$10,080.00			
Authority Approvals	\$82,880.00			
Total \$ \$ \$00000000				

3.2 Traffic and Access Details

There is a single vehicular access to the site car park and another to the main site for trucks and other vehicles. The BESS proposed is to be located adjacent to the building at the rear and out of the way of the vehicles accessing the. The most suitable point of access for the construction and ongoing maintenance of the BESS will be from **Rutherford Road**. This location will not impede car spaces and any vehicle or public access ways on site.





3.3 Electricity Details

There is an existing electrical supply to site and detailed engineering has been completed to connect the BESS to the existing infrastructure and DNSP approval has been received for this project. These feasibility works were completed for proposal and approval of funding from ARENA to proceed with the project.

3.4 Construction Details

The construction of a BESS facility fundamentally consists of three stages:

- Site preparation.
- Installation of the BESS equipment units; and
- Installation of the fencing.

Site preparation will include clearing of any vegetation, establishing temporary fencing for the construction zone and demarcation of the site controls. This will also include preparation of BESS slab to best suit the installation based on soil quality and site flood levels. This stage also includes AC cable reticulation to the point of connection in the main switchboard and bringing it to the point of connection in BESS location.

In the second stage, the BESS equipment is delivered to site and is installed in the design location and fasted with the slab/piers. Once completed electrical termination from the BESS connection point is undertaken to the BESS and a test run of the BESS is conducted.

Appropriate construction management measures, incorporating soil erosion and sediment controls, would be implemented.

Past this stage when the testing of the BESS unit is completed, the fencing is installed and signed off from the Fencing OEM to make sure that it meets the guidelines and relevant Australian regulations.

Construction would be contained entirely within the site and is not anticipated to adversely impact on the surrounding road network.

3.5 Sustainability

It is extremely important for NSW, and Australia as a whole, for renewable energy delivery to become a key consideration for combating climate change and achieving Net Zero by 2050 or earlier by aligning with several state strategies and objectives including:

- Australia's Long Term Emissions Reduction Plan (Cth); and
- NSW Net Zero Plan 2050.

In September 2022, the Australian Energy Market Operator (AEMO) stated that NSW faces a potential supply gap from 2025-026 unless new-generation storage and transmission projects are advanced in time to compensate for closing coal plants and anticipated rising power demand. The proposed BESS facility at the site is one way that contributes to achieving Net Zero and providing a new-generation storage facility and hence sits on the Smart Energy hubs funding from ARENA.





3.6 Acoustic Details

Noise generated during the construction phase would be of short duration and would be in accordance with the standards outlined in the Environmental Protection Regulation 1998 and Environmental Protection (Noise) Policy 1997. Construction would take place during the day and works would proceed in accordance with council's noise controls.

Once installed, there would be some low-level noise from the ongoing operation of the BESS facility and noise emanating from the facility is at a comparable level to an air conditioning unit operation and would generally accord with the background noise levels prescribed by Australian Standard AS1055.

Please find enclosed a BESS cabinet Sound Level Test. Please see Chapter 6.5.10 for further detail.

4. Planning Framework

4.1 State Environmental Planning Policy (Planning Systems) 2021

State Environmental Planning Policy (Planning Systems) 2021 identifies the types of development that are deemed to have state significance due to the size, economic value or potential impacts that a development may have.

Electricity generating works and heat, or co-generation is a development type that is identified under clause 20 of Schedule 1 of the Planning Systems SEPP as being state significant development where it meets the following criteria:

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 a capital investment value of more than \$30 million, or

(b) has a capital investment value of more than \$10 million and is located in an environmentally sensitive area of State significance.

The proposed development is not "electricity generating works" and would cost less than \$30 million and is not SSD under section 4.36 of the EPA Act. Therefore, Council is the consent authority rather than the Minister of Planning.

4.2 State Environmental Planning Policy (Transport and Infrastructure) 2021

The State Environmental Planning Policy (Transport and Infrastructure) 2021 does not specifically state any clauses relevant to the BESS and as per council advice the applicant will submit a DA for the BESS as an alteration to the existing structure.

4.3 State Environmental Planning Policy (Exempt and Complying Development Codes) 2008

The fence proposed for this system is a Specified Development as per The Exempt and Complying Development





Codes SEPP 2008 Part 5 Division 1 Subdivision 12 Section 5.23 and the specifications are defined in Section 5.24. The proposed fence will be compliant to this clause.

The proposed BESS will be integrated into the local alarm system in accordance with The Exempt and Complying Development Codes SEPP 2008 Part 8 Division 1 Section 8.2 and the development standards outlined in Division 2 Subdivision 5 Section 8.7.

The Exempt and Complying Development Codes SEPP 2008 does not specify any clauses relevant to the BESS construction itself and hence is not applicable otherwise therefore the council is the approving authority for the application submitted henceforth.

4.4 Muswellbrook Local Environmental Plan 2009

Muswellbrook Local Environmental Plan 2009 is the primary environmental planning instrument applying to the site and the proposed development.

The site is zoned **E1 Local Centre** in accordance with the **MLEP**. The proposed development is consistent with the zone objectives as outlined below:

• Zone El Local Centre

1 Objectives of zone

• To provide a range of retail, business and community uses that serve the needs of people who live in, work in or visit the area.

• To encourage investment in local commercial development that generates employment opportunities and economic growth.

• To enable residential development that contributes to a vibrant and active local centre and is consistent with the Council's strategic planning for residential development in the area.

- To encourage business, retail, community and other non-residential land uses on the ground floor of buildings.
- To ensure that land uses in the local centre do not adversely impact the amenity of nearby residential areas.
- To maintain heritage character and values in streetscapes.
- 2 Permitted without consent

Building identification signs; Environmental protection works; Flood mitigation works; Home occupations; Sewage reticulation systems; Water reticulation systems

3 Permitted with consent

Amusement centres; Backpackers' accommodation; Bed and breakfast accommodation; Boarding houses; Car parks; Centre-based child care facilities; Commercial premises; Community facilities; Entertainment facilities; Function centres; Highway service centres; Home businesses; Home industries; Hostels; Hotel or motel accommodation; Information and education facilities; Local distribution premises; Medical centres; Oyster aquaculture; Passenger transport facilities; Places of public worship; Public administration buildings; Recreation areas; Recreation facilities (indoor); Registered clubs; Respite day care centres; Restricted premises; Roads; Service stations; Serviced apartments; Sex services premises; Shop top housing; Signage; Tank-based





aquaculture; Veterinary hospitals; Water recycling facilities

4 Prohibited

Any development not specified in item 2 or 3.

4.5 Guidelines and Policies

4.5.1 NSW Net Zero Plan 2050

The Net Zero Plan Stage 1: 2020-2030 is the foundation for NSW's action on climate change and goal to reach net zero emissions by 2050. It outlines the NSW Government's plan to protect our future by growing the economy, creating jobs and reducing emissions over the next decade. This includes the installation of solar-battery systems. This proposed development is in adherence to this plan and part of ARENA funding.

4.5.2 Australia's Long-Term Emissions Reduction Plan (Cth)

The Long-Term Emissions Reduction Plan sets the goal for Australia to achieve net zero emissions by 2050. It outlines how this goal will be achieved with a particular focus on the necessary technology. The Plan identifies renewable energy storage as essential in reducing emissions in Australia. This proposed development is in adherence to this plan and part of ARENA funding.

5. Assessment

The proposed development has been assessed in accordance with the relevant matters for consideration listed in section 4.15 of the EP&A Act.

5.1 Environmental Planning Instruments

The proposed development has been assessed in accordance with the relevant state and local environmental planning instruments in Chapter 5. The assessment concludes that the proposal complies with the relevant provisions within the relevant instruments.

5.2 Draft Environmental Planning Instruments

No draft environmental planning instruments are relevant to this proposal.

5.3 Development Control Plan

Central Coast Development Control Plan provides detailed planning controls relevant to the site and the proposal. While there is no specific chapter on battery energy storage systems, the proposed BESS would be an alteration to the existing structure use and the site's core activities would remain unaffected and the BESS would not have a detrimental impact upon the commercial floorspace, services and facilities offered by the site.





5.4 Planning Agreement

No planning agreements are relevant to this proposal.

5.5 Likely Impacts of the Proposal

The proposed development has been assessed considering the potential environmental, economic, and social impacts as outlined below:

5.5.1 Easement

Not applicable as no easements are affected.

5.5.2 Flora and Fauna

The proposal doesn't required any removal or Pruning of the tree as it will be installed beneath thee tree where enough space is available to accommodate the BESS.

5.5.3 Hazards

No relevant hazards have been identified apart from other items outlined in this section.

5.5.4 Contamination

The NSW Environment Protection Authority maintains the Contaminated Land Public Record that contains information about contaminated sites. A search of the record for Preliminary Investigation Orders, Declaration of Significantly Contaminated Land, Approved Voluntary Management Proposals, Management Orders, Ongoing Maintenance Orders and Site Audit Statements yields no results for the site.

5.5.5 Heritage

The subject site is not a heritage listed building nor is it within a conservation area and there would be no detrimental impact on heritage.

5.5.6 Bushfire Risk

The site is not identified as Bushfire Prone Land.





Your Property



Your search result

You have conducted a search of the online bush fire prone land tool for the land in the map above. This search result is valid for the date the search was conducted. If you have any questions about the Bush Fire Prone Land Tool please contact bushfireprone.mapping@rfs.nsw.gov.au

The parcel of land selected is not identified as bush fire prone however you could still be affected by a bush fire.

Think about where you work, travel or holiday. These areas may be at risk of a bush fire.

Remember, discuss with your family about what to do if a bush fire were to happen near you. It may save your life, your community and your family.

For more information on making a plan for bush fire check out our guide to making your bush fire survival plan.

Figure 5 NSW RFS Bush Fire Prone Land map of the site.

5.5.7 Flood Risk

The site is not identified as impacted by any flood risk from the NSW Planning Portal.

5.5.8 Demolition and Construction

The proposal does not involve any demolition. Construction will take place within any hours conditioned as part





of any development consent.

5.5.9 Utilities

The site is currently connected to the electrical grid and the proposed system has been engineered as per the relevant standards and authority approvals have been received for the design completed. The proposed BESS facility does not require any water during operation and the facility is unmanned therefore no wastewater is produced.

If a waste management plan is requested prior to commencement of works as part of the development consent, then the applicant will provide an adequate plan to adhere to the consent provided.

5.5.10 Noise

The proposed BESS facility would be at the rear of the building. The nearest receptors are **in close proximity to the BESS to the West and divided by a solid wall**. This relationship is shown in the figure below.

The noise associated with the construction of the facility would not be significant. Construction would take place during the day and works would proceed in accordance with council's noise controls.

A noise test report has been undertaken for the BESS equipment and shown in the table below.

Test Site	Distance (m)	Noise Value (dB)	Limiting Value (dB)	Conclusion	Notes
Front	1	73.1	80	Pass	If the noise exceeds 70dB, a label may be required.
Back	1	72.9	80	Pass	
Left	1	72.9	80	Pass	
Right	1	67.2	80	Pass	

Table 3 BESS Noise Test Results | Source: Sungrow

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Figure 6 Proposed BESS location with distance notations with neighbouring residential developments | Source: Shell Energy 2025

The proposed development is situated **in close proximity** to the closest noise receptor to the West however it is separated by a solid wall. As per the table above the system proposed is measured at no more than 73.1 dB at a distance of 1m in open air. Due to the distances between neighbouring properties and the proposed BESS location and as per the various guidelines from the NSW EPA it will not have detrimental effects to the neighbouring properties in terms of the noise produced.

5.5.11 Access, Transport and Traffic

There will be no impact on the local traffic and public access ways.

5.5.12 Visual Impact

The proposed BESS is located externally adjacent to the wall and be fenced into a compound so will have minimal visual impact on the site.

5.5.13 Fire Safety

The Sungrow BESS cabinets have an inbuilt fire detection and fire suppression system that has been designed to mitigate the risk of fire and increase the fire safety of this product. A document containing more details is submitted as a supporting document with this application.

5.5.14 Economic and Social

The BESS would provide economic and social benefits by providing grid stability and improving reliability. The installation of the BESS with an existing solar energy system will help protect our future, reducing emissions and





contributing to NSW's transition to a modern energy system by ensuring energy supply is available when needed and the electricity system has the right technology in place to operate reliably.

5.5.15 Climate Change

As detailed in Chapter 5.5 above, the proposed BESS facility would help in the effort to protect our future by reducing emissions over the next decade through the installation of a BESS. Growing renewable energy is part of ensuring a smooth transition for NSW to a modern energy system that includes ways of ensuring energy supply is available when needed and the electricity system has the right technology in place to operate reliably and this includes a range of technological solutions including batteries.





5.6 Suitability of the Site

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

- The proposed BESS development would not have any detrimental impacts on the objectives of the relevant E1 Local Center Zone of the subject site.
- The primary purpose of the BESS is to store electricity drawn from the existing solar panels and from the grid when available cheaply for the use and supply of renewable power for the site and providing grid stability.
- The proposed BESS infrastructure works are to be co-located with rooftop solar panels and will not conflict with the ongoing use of the surrounding land and it does not change the current use of the land.
- The proposal is considered of economic, environmental, and social benefit to the local area whilst causing minimal impacts on the site and surrounding area as well as contributing towards reducing emissions and increasing resource efficiency.
- The site has been designed in consideration of the surrounding locality and would not have a detrimental impact on the visual amenity or character of the site or the wider landscape; and
- The location of the BESS development within the site is such that it would not have detrimental effect on the residential amenities enjoyed by surrounding development.

5.7 Submissions

It is acknowledged that submissions arising from the public notification of this application will need to be assessed by Council.

5.8 Public Interest

The proposed development is considered in the public interest for the following reasons:

- The proposal complies with the relevant State and local planning controls; and
- No adverse environmental, social, or economic impacts will result from the proposal.

The proposal will provide the capacity for the site to utilise renewable energy by providing the infrastructure needed to store captured solar energy for use later. This will allow the site to draw less energy from the grid and thus reduce demand on the local power network and improve its reliability. Additionally, the proposal will result in a reduction in greenhouse gas emissions from the site and support NSW's and Australia's goal to achieve net zero emissions by 2050. Therefore, the proposal is in the public interest as it facilitates the delivery of several public benefits.

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6. Conclusion

The proposal is for the installation of a battery energy storage system at the site would form a component of the renewable energy system.

It is considered that the proposal is in accordance with the objectives of the Muswellbrook Local Environmental Plan 2009, and *State Environmental Planning Policy (Transport and Infrastructure) 2021* and other state and federal legislations, that allows development for alterations to an established use with consent.

The environmental impact assessment undertaken pursuant to Section 4.15 of the EPA Act 1979 has determined that the proposal would not cause any significant environmental impact and would have minimal impact upon the amenity of the area.

The proposal is considered of environmental benefit to the local area by storing clean energy and offsetting emission from the site whilst causing minimal impacts on the site and surrounding area and contributing towards reducing emissions and increasing resource efficiency. For these reasons, it is considered that the proposed facility is in the public interest.

Therefore, for the reasons stated above and having regard to the environmental planning assessment set out in this SEE, it is respectfully requested that council grant development consent for the proposed works.



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