Our Ref: 3147
Your Ref: SSD-72430958

24 June 2025

Samantha Wynn
Department of Planning, Housing & Infrastructure
Locked Bag 5022
Parramatta NSW 2124
Via email

email: samantha.wynn@dpie.nsw.gov.au
CC: joshua.stanbury@ses.nsw.gov.au

Dear Samantha,

**State Significant Development Application for Finley Battery Energy Storage System**

Thank you for the opportunity to provide comment on the State Significant Development Application for Finley Battery Energy Storage System (BESS), at Riverina Highway, Finley NSW 2713.

The NSW State Emergency Service (NSW SES) is the agency responsible for dealing with floods, storms and tsunami in NSW. This role includes, planning for, responding to and coordinating the initial recovery from floods. As such, the NSW SES has an interest in the public safety aspects of the development of flood prone land, particularly the potential for changes to land use to either exacerbate existing flood risk or create new flood risk for communities in NSW.

The NSW SES recommends that consideration of flooding issues is undertaken in accordance with the requirements of NSW Government's Flood Prone Land Policy as set out in the Flood Risk Management Manual 2023 (the Manual) and supporting guidelines, including the Support for Emergency Management Planning and relevant planning directions under the *Environmental Planning and Assessment Act, 1979*. Some of the key considerations relating to emergency management are further detailed in Appendix A.

It is understood that the Finley BESS project comprises a BESS with capacity of 100 Megawatt AC (MWAC) / 200 Megawatt Hour (MWh) and is expected to employ around 55 workers during the construction phase, and around 2 FTE during the operation phase.[1] The proposal includes the following:

- Site establishment works including clearing of grassed area within the BESS boundary and underboring for the transmission cable, bulk earthworks and temporary construction compound;

[1] Premise. 2025. Traffic Impact Assessment – Finley BESS, page 11

- Construction of hardstand, control room and switch gear, auxiliary transformer, battery enclosures, and inverter and transformer stations;
- Development site road works to formalise internal access road to accommodate heavy vehicles movements off Canalla Road and two light vehicle accesses to Broockmanns Road;
- Installation of approximately 80 x 20-foot modular containers comprising of Lithium-Ion batteries with the appropriate cooling and protection system and approximately 40 inverters located externally to the modular containers;
- Construction of 132 kV TL route ~480m length underground transmission cable to facilitate connection to the existing Transgrid Finley 132/66 kV Substation and associated high voltage steel poles;
- Construction of ancillary works including parking areas, water tanks, storage structures, stormwater management infrastructure, CCTV, security lighting and fencing; and Vegetation buffer.
- Ancillary to the BESS would be the associated Transgrid substation upgrade works occurring within Lot B DP 961693. An underground transmission cable connection would cross Broockmanns Road, Canalla Road and Mulwala No. 19 channel via underbore to traverse the land owned by Transgrid (Lot B DP961693) and connection to the substation.

**In summary**, we:

- **Note** the site and surrounding access roads are completely inundated in a 1% AEP event, with flood depths up to 0.5 metres in the pre-development scenario[2] and between 0.5 - 1 metres in some isolated areas of the site in post-development scenario.[3] However, more frequent or rarer events were not modelled to understand the full extent of the flood risks to life and property at the site, for example if the site becomes isolated prior to complete inundation.
- **Recommend** the flood impact assessment, prepared in accordance with the Flood Risk Management Guideline LU01 – Flood Impact and Risk Assessment, should include consideration of:
    - flood risks at the site and access/egress roads (including any internal roads and the broader road network) from the full range of flooding events, up to and including the PMF event.
    - any risk of isolation and the duration of inundation. The impact of flooding on the roadways should go beyond immediately adjacent to the site to fully understand any evacuation constraints and ensure that people are able to evacuate the site to a safe area above the PMF level, before complete inundation of the site occurring. This is particularly important as this is a flash flood environment. **Evacuation must not require people to drive or walk through flood water.**
    - climate change impacts, in line with NSW Government guidelines.

[2] Premise. 2025. Water Impact Assessment – Finley Battery Energy Storage System. Appendix C, Figure 31

[3] Ibid., Appendix D, Figure 35

- **Note** there are several other proposed BESS projects in Finley, with two proposed BESS sites and the operational Finley Solar Farm located adjacent to the subject site.[4] We **recommend** considering cumulative impacts of the proposed developments on the flood behaviour in this area, particularly considering the increase in impervious surfaces through the construction of hardstand areas, paved internal roads, etc.[5]
- **Recommend** seeking advice from the Department of Climate Change, Energy, the Environment and Water (DCCEEW) regarding the impact of the proposed development on flood behaviour at the site and for adjacent and downstream areas, understanding that the post-development modelling scenario shows development results in an afflux both offsite and onsite (in excess of 0.25 metres) in a 1% AEP event[6], noting that no other event magnitudes were modelled.
- **Recommend** considering flood resilience of the infrastructure, which is likely to be damaged or contaminated by flood water, to events up to and including the PMF. This could include placing any sensitive infrastructure such as battery storage, inverters, etc., above the PMF level, if feasible, to minimize risk to property and financial losses.
- **Recommend** considering site design and stormwater management that reduces the impact of flooding and minimises any risk to site users and the community.

You may also find the following Guidelines available on the NSW SES website useful:

- Reducing Vulnerability of Buildings to Flood Damage
- Managing Flood Risk Through Planning Opportunities

Please feel free to contact Ana Chitu via email at rra@ses.nsw.gov.au should you wish to discuss any of the matters raised in this correspondence. The NSW SES would also be interested in receiving future correspondence regarding the outcome of this referral via this email address.

Yours sincerely,

Elspeth O'Shannessy

Elspeth O'Shannessy
Manager Emergency Risk Assessment
**NSW State Emergency Service**

[4] Urbis. 2025. Engagement Outcomes Report – Finley Battery Energy Storage System SSDA, page 9
[5] Premise. 2025. Environmental Impact Statement - Finley Battery Energy Storage System, page 24
[6] Premise. 2025. Water Impact Assessment – Finley Battery Energy Storage System. Appendix D, Figure 39

## ATTACHMENT A: Principles Outlined in the Support for Emergency Management Planning Guideline[7]

**Principle 1 Any proposed Emergency Management strategy should be compatible with any existing community Emergency Management strategy.**

Any proposed Emergency Management strategy for an area should be compatible with the strategies identified in the NSW State Flood Plan[8] and the Berrigan Shire Flood Emergency Sub Plan, [9] where evacuation is the preferred emergency management strategy for people impacted by flooding.

**Principle 2 Decisions should be informed by understanding the full range of risks to the community.**

Decisions relating to future development should be risk-based and ensure Emergency Management risks to the community of the full range of floods are effectively understood and managed. Risk assessment should consider the full range of flooding, including events up to the Probable Maximum Flood (PMF) and not focus only on the 1% Annual Exceedance Probability (AEP) flood. Climate change should also be considered, in line with NSW Government guidelines.

The site is situated within a relatively flat agricultural landscape and region comprised of a network of artificially constructed irrigation channels. No natural watercourses have been observed as transecting the development site, however, there are artificial irrigation channels within the site and in the surrounding region. Drainage and flow regimes in proximity to the development site are considered to be predominantly influenced by natural depressions, with runoff being captured by local farm dams and irrigation channels during flow events.[10]

It is understood that in a 1% AEP event, the site is completely inundated with flood depths up to 0.5 metres in the pre-development scenario.[11] In the post-development scenario, flood depth can reach 1 metres depth in some isolated areas.[12] We further note that the access roads, Broockmans Road and Canalla Road, are also completely inundated with up to 0.5 metres depth and H1 – H2 flood hazard level in a 1% AEP event,[13] however more frequent events were not modelled to understand if the site becomes isolated prior to inundation, and neither were modelled higher magnitude event to understand the full extent of the flood risks to life and property at the site.

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[7] NSW Government. 2023. Principles Outlined in the Support for Emergency Management Planning Guideline

[8] NSW Government. 2024. NSW State Flood Plan. Section 5.1.7, page 34

[9] NSW SES. 2023. Berrigan Shire Flood Emergency Sub Plan. Section 1.6.2, page 7

[10] Premise. 2025. Water Impact Assessment – Finley Battery Energy Storage System, page 19

[11] Ibid., Appendix C, Figure 31

[12] Ibid., Appendix D, Figure 35

[13] Ibid., Appendix C, Figure 31 & 34

We recommend the flood impact assessment, prepared in accordance with the Flood Risk Management Guideline LU01 – Flood Impact and Risk Assessment, should include consideration of flood risks at the site and access/egress roads (including any internal roads and the broader road network) from the full range of flooding events, up to and including the PMF event, any risk of isolation and duration of inundation. The impact of flooding on the roadways should go beyond immediately adjacent to the site to fully understand any evacuation constraints and ensure that people are able to evacuate the site to a safe area above the PMF level, before complete inundation of the site occurring. Climate change impacts should also be considered, in line with NSW Government guidelines.

In addition, it is understood that there are several other proposed BESS projects in Finley, with the sites of proposed South Coree BESS and the proposed Berrigan BESS located adjacent to the proposed project area, north of Broockmanns Road; the Finley Solar Farm, which is currently operational, is also located adjacent to the project site, just south of Broockmanns Road.[14] We recommend considering cumulative impacts of the multiple proposed and existing developments on the flood behaviour in this area, particularly considering the increase in impervious surfaces through the construction of hardstand areas, paved internal roads, etc.[15]

We also recommend seeking advice from the Department of Climate Change, Energy, the Environment and Water (DCCEEW) regarding the impact of the proposed development on flood behaviour at the site and for adjacent and downstream areas, understanding that the post-development modelling scenario shows development results in an afflux both offsite and onsite (in excess of 0.25 metres) in a 1% AEP event[16] – noting that no other event magnitudes were modelled.

We recommend considering flood resilience of the infrastructure, which is likely to be damaged or contaminated by flood water, to events up to and including the PMF. This could include placing any sensitive infrastructure such as battery storage, inverters, etc., above the PMF level, if feasible, to minimize risk to property and financial losses.

**Principle 3 Development of the floodplain does not impact on the ability of the existing community to safely and effectively respond to a flood.**

The ability of the existing community to effectively respond (including self-evacuating) within the available timeframe on available infrastructure is to be maintained. It is not to be impacted on by the cumulative impact of new development.

Risk assessment should have regard to flood warning and evacuation demand on existing and future access/egress routes. Consideration should also be given to the impacts of localised flooding on evacuation routes. Evacuation must not require people to drive or walk through flood water.

[14] Urbis. 2025. Engagement Outcomes Report – Finley Battery Energy Storage System SSDA, page 9
[15] Premise. 2025. Environmental Impact Statement - Finley Battery Energy Storage System, page 24
[16] Premise. 2025. Water Impact Assessment – Finley Battery Energy Storage System. Appendix D, Figure 39

**Principle 4 Decisions on development within the floodplain does not increase risk to life from flooding.**

Managing flood risks associated with flooding requires careful consideration of development type, likely users, and their ability respond to minimise their risks. This includes consideration of:

- **Isolation** – There is no known safe period of isolation in a flood, the longer the period of isolation the greater the risk to occupants who are isolated.
- **Secondary risks** – This includes fire and medical emergencies that can impact on the safety of people isolated by floodwater. The potential risk to occupants needs to be considered and managed in decision-making.
- **Consideration of human behaviour** – The behaviour of individuals such as choosing not to remain isolated from their family or social network in a building on a floor above the PMF for an extended flood duration or attempting to return to a building during a flood, needs to be considered.

**Principle 5 Risks faced by the itinerant population need to be managed.**

Any Emergency Management strategy needs to consider people visiting the area or using a development.

**Principle 6 Recognise the need for effective flood warning and associated limitations.**

An effective flood warning strategy with clear and concise messaging understood by the community is key to providing the community an opportunity to respond to a flood threat in an appropriate and timely manner.

The critical storm duration for the local catchment to be 1.5 hours, and for the broader catchment area identified the 9-hour storm duration.[17] This suggests the local catchment is subject to flash flooding, with a rapid catchment response, giving people little to no warning time to appropriately respond in a flooding event. As there are no formal flash flood warning available for this area, Severe Weather Warnings and Thunderstorm Warnings will be the most likely form of advice about the potential for flood producing storms and rainfall.

**Principle 7 Ongoing community awareness of flooding is critical to assist effective emergency response.**

The flood risk at the site and actions taken to reduce risk to life should be communicated to any site users (includes increasing risk awareness, preparedness actions, appropriate signage and emergency drills), during and after the construction phase, for the life-span of the development. However, it is important to note that the NSW SES is opposed to the imposition of development consent conditions requiring private flood evacuation plans rather than the application of sound land use planning and flood risk management.

[17] Ibid., page 49