



Date: 23/04/2026
Our reference: 20260423-01jp
Your reference: 26001439

South Australian Country Fire Service Development Assessment Services BUSHFIRE PLANNING HAZARD PROTECTION RESPONSE

Application	Crown Development (Energy Infrastructure Facility)
Nature of Development	Variation to Crown application 711/V030/17 to modify transmission line connection point, shift approved Battery Electric Storage System area, location of associated infrastructure and increase in capacity to 300MW/1200MWh.
Development Number	26001439
Development/Property Name	Riverland Solar Farm and BESS
Location	278 Nikalapko Rd Stuart SA 5320 + 2 more location(s)
Owner	Phil Reid
Applicant	Department for Energy and Mining

LEGISLATIVE FRAMEWORK

Instrument	<i>Hydrogen and Renewable Energy Act 2023 (HRE Act) and Hydrogen and Renewable Energy Regulations 2024 (HRE Regulations)</i>
Overlay	Hazards (Bushfire – General) Overlay
Fire Authority/ Response Area	South Australian Country Fire Service/Morgan Response Area



DECISION/SUMMARY

The South Australian Country Fire Service (SACFS) welcomes and supports development in regional and rural areas of South Australia.

This advice/comment is relevant to the following documents:

- Preliminary Layout dated 26.03.2018
- Project Overview dated 19.03.2019
- 20260116_planningVariationRequest_riverland_appendices-13281840

An officer of the SACFS has undertaken a review of the aforementioned document(s) provided on the Plan SA portal, for the planning application.

SACFS has regard for the bushfire hazard(s) to and from the site, and any mitigation measures required to prevent spread of fire to the site, or the environment as a result of the activities within the site. SACFS provides the following comments:

Bushfire Hazard Overlay

The site is located within the areas designated:

- Hazards (Bushfire – General) Overlay

The Desired Outcomes (DO) for the Hazards (Bushfire – General) Overlay identifies:

DO 1 Development, including land division responds to the general level of bushfire risk by siting and designing buildings in a manner that mitigates the threat and impact of bushfires on life and property taking into account the increased frequency and intensity of bushfires as a result of climate change.

DO 2 To facilitate access for emergency service vehicles to aid the protection of lives and assets from bushfire danger.

Fire Response Capability

The site is within the Morgan fire station (CFS) Response Area.

Land Use

Performance outcomes for Land Use do not apply in this hazard overlay.

Siting

The SACFS recommends establishing and maintaining an Asset Protection Zone (APZ) to create a setback/buffer to any infrastructure using mineral earth breaks, roadways and/or areas of managed vegetation to prevent or prohibit the spread of bushfires to and from the site, minimising the risk to life, and or damage to buildings and property and maintain a fuel reduced zone for safe movement of occupants and firefighters.

SACFS notes the 'indicative area for temporary construction facility' does not meet this requirement.

SACFS recommends all buildings and infrastructure such as Substation, Inverter stations, BESS and Control Buildings or other similar assets, should be located no less than 15 metres from the property boundaries/site boundary perimeter fence or existing vegetation being retained, for the purposes of maintaining an APZ and to achieve maximum exposure of no more than BAL 12.5 kW/m².

See Access/Egress and Vegetation Management recommendations for more detail.

Access/Egress

Any internal road networks should be designed to achieve compliance with the access/egress requirements as detailed below.

SACFS notes the proposal does not include roads of adequate design to satisfy the desired outcomes of this hazard overlay.

Perimeter roads with a minimum formed road width of 6 metres should be incorporated to achieve adequate separation between infrastructure and areas of bushfire hazard to support safer access for the purposes of fire fighting or provide mineral earth breaks for passive protection from spread of fire to and from the site.

All access/egress roads on the project site:

- Perimeter roads shall be incorporated to achieve adequate separation between infrastructure and areas of bushfire hazard including areas of remnant vegetation being retained within the boundaries of the allotments to support safer access for the purposes of fire fighting or provide mineral earth breaks for passive protection from spread of fire to and from the site.
- Shall include two (2) separate and safe exit points located on opposite ends of the road to enable multiple avenues of evacuation in the event of a bushfire.
- Shall be constructed with a formed, compacted, self-draining, all-weather surface.
- Roads shall have a minimum formed road width of 6 metres, or if constructed less than 6 metres wide, access shall include appropriately sized passing bays or turning areas, spaced no more than 200 metres apart to support safer access for the purposes of fire fighting:
 - Passing bays minimum width of 6 metres and length of 17 metres, or
 - 'T' or 'Y' shaped turning area with a minimum formed length of 11 metres and minimum internal radii of 9.5 metres.
- Incorporating cul-de-sac endings or dead end roads has either:
 - A turning area with a minimum formed surface radius of 12.5m, or
 - 'T' or 'Y' shaped turning area with a minimum formed length of 11 metres and minimum internal radii of 9.5 metres.
- Roads shall include turning areas spaced no more than 600 metres apart to support safer access for the purposes of fire fighting:
 - 'T' or 'Y' shaped turning area with a minimum formed length of 11 metres and minimum internal radii of 9.5 metres.
- Where the road is constructed less than a minimum formed road width of 6 metres:
 - Understorey vegetation either side of the access road shall be reduced to a maximum height of 10cm for the distance required on either side to achieve the full 6 metres width.
 - Trees shall not be located closer to the road than the distance equivalent to their mature height.
- Shall be constructed with a minimum external radius of 12.5m for all road curves.
- Shall not exceed a gradient of 16 degrees (29%).
- Shall incorporate solid all-weather crossings over any water-course capable of supporting fire-fighting vehicles with a gross vehicle mass (GVM) of 21 tonnes.
- Vegetation overhanging the access road shall be pruned to achieve a minimum vehicular clearance of not less than 4 metres width and a vertical height clearance of 4 metres.
- Shall allow fire-fighting vehicles to safely enter and exit the site in a forward direction by incorporating a loop road around the site.

- All access gates to be readily accessible to attending fire service units, this may be with the use of a Lockwood 003 type padlocks in accordance with AS4428.17.

Note: Other fire safety measures pertaining to roads may be prescribed by the National Construction Code.

Vegetation Management (buildings and infrastructure such as Substation, Inverter stations, BESS, and Control Buildings):

- Vegetation management shall be established and maintained within 15 metres of each Substation/Control Building/BESS or other similar assets as follows:
 - The understorey plants within the Asset Protection Zone (APZ) shall be maintained such that when considered overall a maximum coverage of 30% is attained, and so that the leaf area of shrubs is not continuous.
 - No understorey vegetation shall be established within 10m of the Substation/Control Building site (Understorey is defined as plants and bushes up to 2m in height).
 - Grasses within the zone shall be reduced to a maximum height of 10cm during the fire danger season (e.g. by grazing, slashing or chemical treatment)
 - The APZ shall be maintained to prevent the accumulation of dead vegetation during the fire danger season.
- A single row of trees and/or shrubs are permitted for screening purposes, in accordance with the below:
 - Located no less than 10 metres from all infrastructure and not connected to other hazardous vegetation.
 - Located no less than 10 metres from the access road.
 - Shrubs shall not be planted under trees. Species, with a single stem habit are preferred, with the lower limbs removed to prevent them connecting with grassy understorey.
 - Screening plants should have low flammability characteristics, be kept in optimum health, pruned regularly and any dead vegetation removed.

Water Supply

There is no reticulated water in the area. Static fire water tanks for both bushfire, BESS and building fires will be required to assist in effective Fire Service intervention and suppression.

SACFS notes the current proposal does not meet this requirement.

Fire water tank (72,000L) to be made available to SA Fire Service Policy 14 requirements and include both large and small-bore suction outlets as per the policy and as follows:

- Access to the fire water tank shall be constructed of all-weather construction, with a minimum formed road surface width of 6 metres.
- Located at the main entrance to the site. If unable to achieve this, then clear signage is to be provided to clearly and quickly identify the location of the fire water tank/s.
- Fire water tanks shall be identified with signage in accordance with AS 2419.1.
- Provision shall be made adjacent the fire water tank for a nominally level hardstand area (capable of supporting fire-fighting vehicles with a gross vehicle mass (GVM) of 21 tonnes) that is a distance equal to or less than 5 metres from the water supply outlet.

- The fire water tank is required to be available to all BESS system pod/containers within 90 metres of hose lay of the static fire water tank. If this cannot be achieved, then additional static fire water tanks or a dry hydrant system may be required.

Emergency Response Planning

The Bushfire Management Plan and the Emergency Management Plan will need to be established and reviewed and updated every 12 months by the company and/or its operators. Revised versions to be forwarded to the relevant SACFS Regional Office to use as a reference. The safety of first responders must be a priority, and emergency response plans should not require firefighters to open or enter the BESS compartment at any time.

The SACFS requires the company and/or its operators to remotely monitor the installed systems and be able to remotely shut down any live systems. In addition, a representative of the company and/or its operator is to be on site within 60 minutes of the 000 call for fire service attendance.

During the construction and decommissioning phases and whilst undertaking maintenance, proponents should provide the provision of basic fire-fighting equipment at each site, including fire extinguishers, knapsacks, and other equipment suitable for initial response actions.

The company and/or its operators will be required to engage with the Regional SACFS representative on a regular basis, regarding on-site training and site inductions for emergency service personnel.

Manifest Box (or similar)

Given the complexities that the subject site presents, SACFS further recommends the installation of a Manifest Box at the main entrance of the site. This box (which looks a bit like a small meter box), should be red with white writing 'Fire Protection system' or similar, and clearly visible to fire crews as they access the site. Information contained should include, but is not limited to, a list of emergency contact phone numbers and a site plan highlighting vehicle access, turning ability, buildings and infrastructure locations, fire water i.e., fill locations, all fire protection equipment, and any on-site hazards or storage of dangerous materials i.e., LPG, fuels or chemicals. Access to the Manifest Box, if locked, must be readily accessible using a Lockwood 003-type padlock, in accordance with AS 4428.17.

BUILDING CONSIDERATIONS and BESS:


All class 2 – 9 buildings will need to comply with National Construction Code (NCC) and to include all the minimum *Deemed to satisfy* fire and life safety provisions.

Additional notes for Energy facilities or BESS:

- Access and working clearances for large emergency service vehicles to the "Electrical Transmission Area/control room area" needs to be incorporated. This includes a reasonable clear and safe working environment.
- Servicing of the detection and suppression system (if installed) within the racks will be maintained to the manufacturer's and to SA Ministerial Building Standard MBS 002 "Maintaining the performance of essential safety provisions" requirements and recorded.
- The SACFS will not accept BESS container fire detection system monitoring requests unless required by the NCC.
- If a battery rack is required to be open at any time (including an emergency event), this will be done by the Company and/or its operator's staff and not the Fire Authority.

- Developers and operators should have regard for the Australasian Fire and Emergency Services Authorities Council. (2025) Large-scale battery energy storage system installations (AFAC Publication No. 3105), AFAC, Melbourne, Australia Council 2025.

SACFS, as the referral agency, reserves the right to request additional information and provide further comment, under the Planning Development and Infrastructure Act and Regulations, in particular, but not limited to Regulation 45 (3) during the Building Rules approval process.

Prepared By: Leah Bertholini Manager DAS	Signature: 	Date: 23/04/2026
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