



By email: [REDACTED]

07/08/2025

Attention: Jennie Townsend

Dear Jennie,

Fire Safety Statement – Radcliffe BESS located on Land to the east of Shore Top Farm Planning Ref. 71888

The following information is presented to respond to your email on Wednesday 6 August 2025, requesting additional information regarding the fire safety management systems to be employed on the Radcliffe Battery Energy Storage System (BESS).

Grid scale BESS facilities are no longer a new technology. The fire safety management systems are constantly improving, both by way of reduced combustion risk and improved emergency response planning from operators and fire and rescue services. As a result, safety related incidents involving BESS facilities are rare in the UK.

BESS facilities are fitted with remote and automatic detection systems for fire detection, alarms, emergency shut off, and fire suppression. New BESS facilities are also designed to contain fires to individual units and prevent cascading thermal events to other containers.

For the proposed Radcliffe BESS, pre-application consultation was sought from the Greater Manchester Fire and Rescue Service (FRS) and formal written advice received in September 2024 (**Appendix 1**). The advice made no objection to the proposal, subject to compliance with advice relating to access road standards, provision of an on-site static water tank supply for firefighting purpose, separation between units and vegetation, and emergency/risk management.

The advice received from the FRS is consistent with the NFCC Grid Scale Battery Energy Storage System Planning Guidance for FRS document, and Approved Document B Volume 2 for buildings other than dwellings under The Building Regulations 2010. To assist Bury Council's consideration of the proposal, a compliance table is provided within Table 1 below, confirming how the proposal complies with the guidance offered in the Greater Manchester Fire and Rescue Service advice letter. The BESS facility is also consistent with draft NFCC planning guidance, which was subject to public consultation in August 2024. The draft guidance is intended to replace the existing 2022 NFCC guidance but has not yet been adopted.

Accordingly, fire risk has been appropriately mitigated in accordance with relevant policy guidance and to the extent deemed acceptable by the Fire and Rescue Service.



Should you require any further information, please do not hesitate to contact me on the below details.

Yours faithfully,

Dylan Mitchell
Planning Manager - Low Carbon Alliance

t. +44 [REDACTED]

e. [REDACTED]

4th Floor, Hamilton House, Mabledon Place, London WC1H 9BB
www.lowcarbonalliance.co.uk | [LinkedIn](#)



Table 1: Fire Safety Planning Guidance

No.	Requirement	Design Response
Access		
1	Vehicular access for a fire appliance to within 45m of all points on site.	The proposed access roads and compound layout facilitate access for a fire appliance within 45m of all points on site, as shown in the swept path analysis at Appendix K of the Construction Traffic Management Plan (CTMP) submitted with the application.
2	Access roads on and to the site should be a minimum width of 4.5m and capable of carrying a minimum of 12.5 tonnes.	The proposed access roads match the minimum 4.5m access width. The access roads have been designed to carry the minimum 12.5 tonne vehicle, using a 300mm sub-base and 50mm granite chipping surface layer. A cross-section plan of the access road is shown in drawing no. 121-10008, Revision 4, dated 06.08.2025, prepared by MSTP. This plan supersedes the earlier Revision 3 plan, which had incorrectly shown a 4m width. The new plan now matches the red line boundary which already had a 4.5m width.
3	If the access road is more than 20m long a turning circle, hammerhead, or other turning point for fire appliances will be required. The maximum length of any cul-de-sac network should be 250m.	The access road is more than 20m long and therefore a turning point for the fire appliance is required. Sufficient manoeuvring areas are available for a fire tender vehicle to enter the hardcore compound and turn around, as shown in the swept path analysis at Appendix K of the CTMP submitted with the application. The proposal does not include a cul-de-sac and so the 250m standard is not applicable.
4	At least 2 separate access points to the site to account for opposite wind conditions/direction.	The proposal includes an access arrangement with two approaches, one from the west and another from the east, as shown in the site layout plans. The proposed access arrangement provides two options for fire tender vehicles in the event that smoke affects visibility on one of the access approaches.
5	Roads/hard standing capable of accommodating fire service vehicles in all	The existing and proposed access track is an all-weather surface track with no steep topography. The maximum slope does not exceed 5.6% (approximately 1:18 grade).



	weather conditions. As such there should be no extremes of grade.	
6	A perimeter road or roads with passing places suitable for fire service vehicles.	The access road acts as a perimeter road on the southern, eastern and western sides of the compound. Areas for suitable passing of fire tender vehicles exist at several points along the access track, including a dedicated passing bay adjacent Yew Tree Farm and at any point along the field crossing.
7	Road networks on sites must enable unobstructed access to all areas of the facility.	The access road provides an unobstructed path for vehicles to access the compound, as shown in the swept path analysis at Appendix K of the CTMP submitted with the application.
8	Turning circles and passing places.	As outlined against requirement 6 above, there is a dedicated passing bay adjacent Yew Tree Farm, as well as other informal opportunities. Additionally, passing can be undertaken at any point along the field crossing. Swept Path Diagrams are included within Appendix K of the CTMP showing the turning circles of the fire tender vehicles can be accommodated within the access tracks and site compound.
Water Supply		
9	Where a fire hydrant is not available within 350m of the site, a hydrant or an alternative water provision will be required.	Advice received in the Greater Manchester Fire and Rescue Service letter at Appendix 1 confirms that there are no fire hydrants within 350m of the compound area and therefore requested an on-site water tank is provided. Accordingly, an on-site water tank capable of holding 203m ³ (203,000 litres) of water is proposed, which is in excess of the 180,000 litres specified in the 2024 consultation draft of the NFCC criteria.
10	On site water tanks need to be clearly signed, clearly visible and always accessible.	The water tank is proposed to be located within the compound with a 9m clearance to the nearest battery. The location is clearly visible on approach to the site and accessible to a fire tender vehicle, as shown in the swept path analysis at Appendix K of the CTMP submitted with the application. Suitable signposting will be installed to ensure the location of the water tank is clear.



11	Consideration and provisions of adequate water supplies to support any proposed/provided suppression systems.	The BESS cabinets will be fitted with either a dry pipe or aerosol-based suppression system, neither of which require a water supply. The final suppression system is yet to be chosen but will be compliant with the following British Standards: • BS EN 12094-1:2003 – Fixed firefighting systems. Components for gas extinguishing systems Requirements and test methods for electrical automatic control and delay devices. • BS 7273 -1 – Code of practice for the operation of fire protection Measures. • BS 5839-1 – Fire detection and fire alarm systems for buildings. • BS EN 15004-1:-2019 – Fixed firefighting systems. Gas extinguishing systems. Design, installation and maintenance. • BS EN 15004-2:2020 – Fixed Firefighting Systems-Gas Extinguishing Systems FK-5-1-12. • BS 6266:2011 – Fire protection for electronic equipment installations- Code of practice.
Separation Distances		
11	A standard minimum spacing between units of 6 metres is suggested unless suitable design features can be introduced to reduce that spacing. If reducing distances a clear, evidence based, case for the reduction should be shown, this may be reduced with the provision of suppression systems and information from an engineer /expert detailing the rationale for the reduction on distance.	The battery units have been placed back to back, with 0.2m separation, consistent with standard industry practice and the manufacturers specifications. The manufacturer specification allows for 0m separation between battery units as the Heat Flux studies they have conducted demonstrate that fires will be contained to one unit even when placed back to back with no separation. The aim of the 6m separation requirement is described in the 2022 NFCC guidance as one of the primary tactics employed to prevent further unit to unit fire spread and is based on a 2017 study that is no longer reflective of the fire safety improvements that have been made since then. Since 2017, the technology has developed with new models released that don't require any separation and for this reason, the 2024 consultation draft of the NFCC criteria no longer includes the 6m requirement and instead states that an emergency response plan should demonstrate there is adequate separation between the BESS enclosures. Moreover, automatic suppression systems are provided and manoeuvring areas of 5m and 6m are still available in the areas surrounding the back to



		back units, allowing firefighter access. Taking into account the draft NFCC guidance and the manufacturers specifications, the 0.2m separation is deemed appropriate.
12	Any combustible vegetation within 10m of the units is cleared and kept clear.	The minimum distance between the battery units and the nearest vegetation is 10m, as shown on the Proposed Site Layout Compound Area submitted with the application (drawing 121-10002, Revision 014, dated 20.03.25, prepared by MSTP).
Emergency Response Management		
13	Provide any site specific emergency response and risk management plans, detailing advice in relation to emergency response implications, giving as much information as possible with regards to site contacts/specialists.	It is appropriate to prepare the emergency response and risk management plan at the pre-commencement stage, when the exact battery storage specification is chosen and when the relevant emergency site contacts and the like are known. The battery specification has not been selected at this stage as the technology is constantly improving and may change between now and the time of installation. The applicant would be accepting of a suitably worded condition requiring the submission of an emergency response and risk management plan. The plan will be prepared in consultation with Greater Manchester FRS and at a minimum, include the following information: • How the FRS will be alerted. • A facility description, including infrastructure details, operations, number of personnel and operating hours. • A site plan depicting key infrastructure: site access points and internal roads, firefighting facilities (water tanks, pumps, booster systems, fire hydrants, fire hose reels etc), drainage, and neighbouring properties. • Details of the emergency response co-ordinator including the subject matter expert for the site. • Safe access to and within the facility for emergency vehicles and responders, including to key site infrastructure and fire protection systems. • Details and explanation of warning systems and alarms on site and locations of alarm annunciators with alarm details (smoke, gas, temperature).



		• Hazards and potential risks at the facility and details of their proposed management. • The role of the FRS at incidents involving a fire, thermal event or fire spreading to the site. • Emergency shutoff or isolator locations. • Environmental protection measures. • Post-incident recovery procedures. • A risk management plan identifying hazards and risks specific to the facility. • Any other matters raised during consultation with the FRS.
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Appendix 1: Greater Manchester Fire Service Pre-Application Advice



Your Reference N/A

Our Reference N/A

Contact **Dave Morris**
morridw@manchesterfire.gov.uk

Chief Fire Officer
Dave Russel, BSc, MIFireE

Greater Manchester Fire and Rescue
Service
146 Bolton Road
Swinton
Manchester
M27 8US

Tel: 0161 736 5866
www.manchesterfire.gov.uk

Proposed BESS site
Shore Top Farm
Off Wood Street
Ringley Road West.

For the attention of Claudia Dietz

17th September 2024

Dear Claudia,

Planning Application No:	N/A
Address:	Shore Top Farm Off Wood Street Ringley Road West
Proposal:	BESS site Shore Top Farm

The following is a pre planning consultation, and **not a full planning response** hence the following advice is somewhat generalised utilising the information currently available.

The information provided below is taken from the NFCC Grid Scale Battery Energy Storage System Planning Guidance for FRS document, and Approved Document B Volume 2.

With your planning application, please provide as much information as you are able in relation to items listed below and within System Design 1-12 of the current NFCC document.

The Fire Service requires vehicular access for a fire appliance to within 45m of **all** points on site.

Access roads on and to the site should be a minimum width of 4.5m and capable of carrying a minimum of 12.5 tonnes. Additionally, if the access road is more than 20m long a turning circle, hammerhead, or other turning point for fire appliances will be required. The maximum length of any cul-de-sac network should be 250 m.

Access to site should include:

- At least 2 separate access points to the site to account for opposite wind conditions/direction.
- Roads/hard standing capable of accommodating fire service vehicles in all weather conditions. As such there should be no extremes of grade.
- A perimeter road or roads with passing places suitable for fire service vehicles.
- Road networks on sites must enable unobstructed access to all areas of the facility.
- Turning circles, passing places etc size to be advised by FRS depending on fleet.

As a minimum, it is recommended that hydrant supplies for boundary cooling purposes should be located close to BESS containers. There should be a hydrant capable of providing a minimum of 1900 litres per minute for at least 2 hours as close as practicable to the units. The current nearest hydrant is plate number 37002014, located opposite 110 Ringley Road West, junction of Wood Street, **this is in excess of 350m of the proposed site, meaning that further hydrants or an alternative water provision will be required.**

Any provided/proposed-on site water tanks need to be clearly signed, clearly visible and always accessible.

Consideration and provisions of adequate water supplies to support any proposed/provided suppression systems.

A standard minimum spacing between units of 6 metres is suggested unless suitable design features can be introduced to reduce that spacing. If reducing distances a clear, evidence based, case for the reduction should be shown, this maybe reduced with the provision of suppression systems and information from an engineer /expert detailing the rationale for the reduction on distance.

It is recommended that any combustible vegetation within 10m of the units is cleared and kept clear.

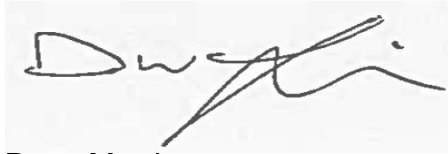
Provide any site specifics emergency response and risk management plans, detailing advice in relation to emergency response implications, giving as much information as possible with regards site contacts/specialists etc.

Due to the proposed location of this site it is strongly recommended that you liaise with the following agencies, Electricity North West, United Utilities, The Environment Agency, this is not an exhaustive list.



Please don't hesitate to contact me if I can be of any further assistance.

Yours sincerely

A handwritten signature in black ink, appearing to read 'Dave Morris', with a stylized flourish at the end.

Dave Morris
Fire Safety Enforcement Officer
Greater Manchester Fire and Rescue Service

On behalf of the Greater Manchester Combined Authority

