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Our Reference
J897-191/NH/HM

Your Reference
HPK/2024/0467

Date
16 December 2024

Norome Campanile
Grenergy Renewables UK Ltd
Green Lane
Leeds
LS25 2AF

ncampanile@grenergy.eu

Dear Norome Campanile

Town and Country Planning Act 1990 (as amended)
Planning Application Number: HPK/2024/0467
Address of proposed BESS site: Land West of Buxton Road, Dove Holes
Eastings and Northings: 392707 / 306457

We write to you in relation to the planning application for the above proposed BESS site dated 14 November 2024.

We have no objections relating to the proposal.

Whilst Derbyshire Fire and Rescue Service (DFRS) is not a statutory consultee in relation to this proposed project, we welcome opportunities to work and engage with developers to ensure projects are delivered safely and that operators meet the statutory responsibilities that we enforce.

As BESS sites fall outside the scope of the Building Regulations, thus removing the Service's opportunity to comment under Approved Document B, we would recommend that the developer and operator apply relevant sector specific guidance to ensure safe practice is employed in the construction, operation and decommissioning of the site.

Once the site is occupied, the site as a whole; including the battery storage containers and ancillary buildings will fall into the scope of the Regulatory Reform (Fire Safety) Order 2005. This places certain fire safety duties on the person responsible for the site which includes carrying out and regularly reviewing the fire safety management plan

and the fire risk assessment to protect relevant persons by identifying fire risks and removing or reducing them to as low as is reasonably practicable.

To assist developers, responsible persons and Fire and Rescue Services with the requirements of BESS sites, the NFCC have produced a guidance document which can be found at https://nfcc.org.uk/wp-content/uploads/2023/10/Grid-Scale-Battery-Energy-Storage-System-planning-Guidance-for-FRS.pdf. This guidance gives advice on how to reduce the risk of fire and fire spread and the requirements for firefighting purposes. It can be summarised as follows:

BESS site developers must ensure the risk of fire is minimised by:

- Procuring components and using construction techniques which comply with all relevant legislation.
- The inclusion of Automatic Fire Detection systems in the development design.
- Including automatic fire suppression systems in the development design. DFRS recommends a water sprinkler system as fires involving lithium-ion batteries have the potential for thermal runaway and other systems would be less effective in preventing re-ignition.
- Including redundancy in the design to provide multiple layers of protection.
- Designing the development to contain and restrict the spread of fire using fire-resistant materials.
- Ensuring the BESS site is located with due considerations of impact on communities, sites and infrastructure. Prevailing wind directions should be factored into the location of the BESS site to minimise the impact of a fire involving lithium-ion batteries due to the toxic fumes produced.
- Developing an emergency response plan with DFRS to minimise the impact of an incident during construction, operation and decommissioning of the facility.
- The emergency response plan should include details of the hazards associated with lithium-ion batteries, isolation of electrical sources to enable firefighting activities, measures to extinguish or cool batteries involved in fire, management of toxic or flammable gases, minimise the environmental impact of an incident, containment of fire water run-off, handling and responsibility for disposal of damaged batteries, establishment of regular on-site training exercises.
- The emergency response plan should be maintained and regularly reviewed by the occupier and any material changes notified to DFRS
- Considering the environmental impact of the BESS site by preventing ground contamination, water course pollution and the release of toxic gases.

The BESS site facilities should be designed to provide:

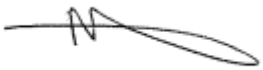
- Adequate separation between containers.
- Adequate thermal barriers between switch gear and batteries,
- Adequate ventilation or air conditioning systems to control the temperature. Ventilation is important since batteries will continue to generate flammable gas if they are hot. Also, carbon monoxide will be generated until the batteries are completely cooled through to their core.
- A very early warning fire detection and alarm system, such as aspirating smoke detection/air sampling system.

- Carbon Monoxide (CO) detection within the BESS containers.
- Sprinkler protection within BESS containers. The sprinkler system should be designed to BS 12845 or equivalent and designed specifically to reduce or eliminate the risk.
- Sufficient water for manual firefighting. An external fire hydrant should be in close proximity of the BESS containers. − The water supply should be able to provide a minimum of 1,900 l/min for at least 120 minutes (2 hours). Further hydrants should be strategically located across the development. These should be tested and serviced at regular intervals by the operator. If the site is remote from a pressure fed water supply, then an Emergency Water Supply (EWS) meeting the above standard should be incorporated into the design of the site e.g. an open water source and/or tank(s). If above ground EWS tanks are installed, these should include facilities for the FRS to discharge (140/100mm RT outlet) and refill the tank.
- A safe access route for fire appliances to manoeuvre within the site (including turning circles). An alternative access point and approach route should be provided and maintained to enable appliances to approach from an up-wind direction.
- As the majority of BESS are remotely monitored, consideration should include the fixing of an Information Box (IB) at the FRS access point. The purpose of the IB is to provide information for first responders e.g., Emergency Response Plan, to include water supplies for firefighting, drainage plans highlighting any Pollution Control Devices (PCDs) / Penstocks etc for the FRS.
- DFRS are aware that large scale BESS sites are a fairly new technology, and as such risks may or may not be captured in current guidance in pursuance of the Building Regulations 2010 (as amended) and the Regulatory Reform (Fire Safety) Order 2005. This will highlight challenges the FRS have when responding to Building Regulations consultations. For this reason, we strongly recommend applying the *National Fire Protection Association (NFPA) 855 Standard for the Installation of Stationary Energy Storage Systems* along with guidance from the *NFCC Grid Scale Battery Energy Storage System Planning*.

Once the site is near to completion, DFRS must be notified, and arrangements made with us, so that fire crews may visit the site to familiarise themselves with the location, site access, site layout, available water supplies and access information.

If we can be of any further assistance to you in this matter please do not hesitate to contact me.

Yours sincerely



Authorised Fire Safety Inspecting Officer
And on behalf of the Derbyshire Fire and Rescue Authority