

January 2025

Contullich Fire Risk Management Statement

As mentioned in the Fire Statement submitted as part of the planning application, the proposed fire risk management strategy does not require manual intervention in a fire event. This is due to the following mitigation, which will be developed further during detailed design and following battery product selection.

- Equipment is spaced to mitigate against fire spread by meeting the NFPA 855 spacing criteria as well as meeting the spacing recommendations outlined in FM Global Property Loss Prevention datasheet 5-33 (Interim revision July 2023). This results in a layout that allows a minimum distance of 3m between batteries enclosures and any other infrastructure.
- The UL 9540A test results show that during the deliberate initiation of a thermal runaway the following was observed.
 - No flaming outside the initiating battery rack was observed.
 - Surface temperatures of modules within the target battery rack adjacent to the initiating battery rack do not exceed the temperature at which thermally initiated cell venting occurs.
 - Wall surface temperature rise does not exceed 97°C above ambient.
 - Explosion hazards were not observed during the test.
- Key battery health and environment parameters will be continuously monitored with alarms sent to a control centre. Automatic electrical disconnection will be enacted by the Battery Management System should operational temperature, current or voltage limits be breached. There will be multiple levels of alarms prior to protection limits which warn the operator of proximity to safe operating limits.
- Each BSE will have a dedicated fire and explosion protection system, comprising flammable gas detection and venting, fire detection and alarm, and an automatic fire suppression system.

If, during development of the detailed design and liaison with the local Fire and Rescue Service, it was determined that fire water would be used for cooling of battery enclosures (rather than simply boundary cooling to prevent spread), an appropriate bunding solution would be included within the design to ensure potentially polluted fire water is captured in the site drainage system.

As shown on the infrastructure layout drawing the compound surface material is to be confirmed during the detailed design phase of the project. If it is identified that fire water is required to be captured, this could be done so through the use of a high void ratio stone. This high void ratio stone would be sealed within the compound area via the use of an impermeable membrane and a cut-off valve installed in the drainage network. The valve would be located upstream of the attenuation basin. The valve would be left open to enable the site to drain during normal use and then closed prior to the application of fire water to capture run-off. The resulting stored water would then be tested and disposed of off-site if required.