CLEVE HILL SOLAR PARK

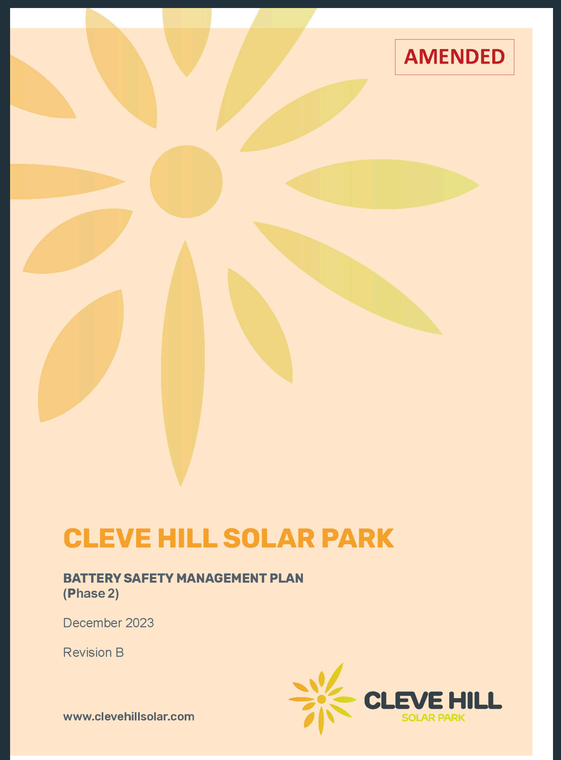
Fire Safety Exclusion Zones.

- Emergency Response Plan Zone - 40 metres
- Thermal Runaway Exclusion Zone - 29 metres
- Electrical Compound
- Phase 1 Battery Units (to be constructed)
- Phase 2 Battery Units (not being constructed)

Graveney

The exclusion zones in the event of a fire are completely within the project site boundary.

Approved Documents to view and take away.


AMENDED

CLEVE HILL SOLAR PARK

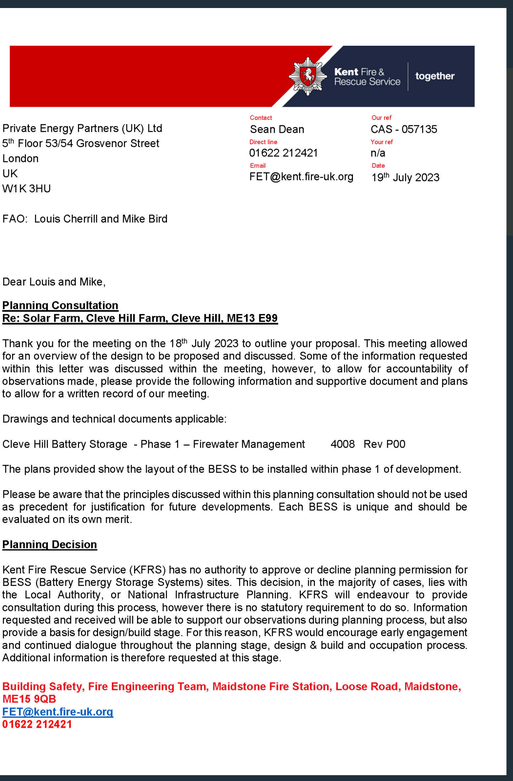
BATTERY SAFETY MANAGEMENT PLAN
(Phase 2)

December 2023

Revision B

www.clevehillsolar.com

CLEVE HILL
SOLAR PARK


Kent Fire & Rescue Service | together

Private Energy Partners (UK) Ltd
5th Floor 53/54 Grosvenor Street
London
UK
W1K 3HU

Contact: Sean Dean
Direct line: 01622 212421
Email: FET@kent.fire-uk.org

Our ref: CAS - 057135
Your ref: n/a
Date: 19th July 2023

FAO: Louis Cherrill and Mike Bird

Dear Louis and Mike,

Planning Consultation
Re: Solar Farm, Cleve Hill Farm, Cleve Hill, ME13 E99

Thank you for the meeting on the 18th July 2023 to outline your proposal. This meeting allowed for an overview of the design to be proposed and discussed. Some of the information requested within this letter was discussed within the meeting, however, to allow for accountability of observations made, please provide the following information and supportive document and plans to allow for a written record of our meeting.

Drawings and technical documents applicable:

Cleve Hill Battery Storage - Phase 1 – Firewater Management 4008 Rev P00

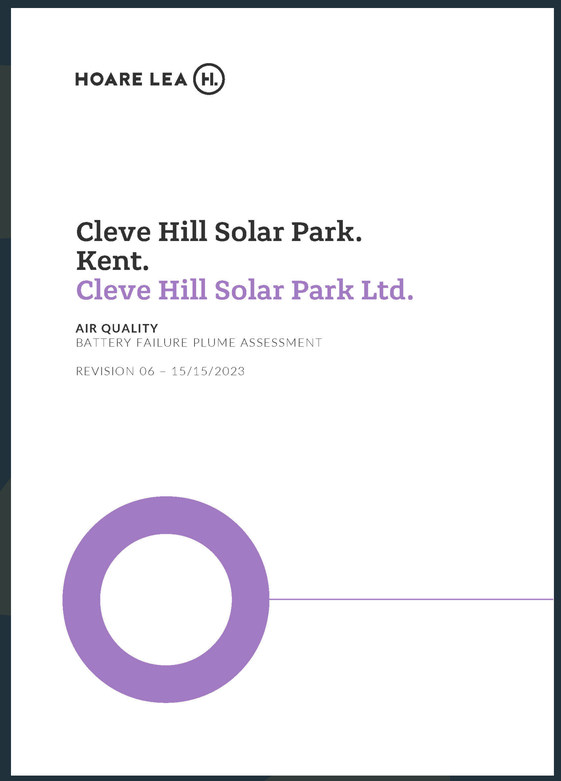
The plans provided show the layout of the BESS to be installed within phase 1 of development.

Please be aware that the principles discussed within this planning consultation should not be used as precedent for justification for future developments. Each BESS is unique and should be evaluated on its own merit.

Planning Decision

Kent Fire Rescue Service (KFRS) has no authority to approve or decline planning permission for BESS (Battery Energy Storage Systems) sites. This decision, in the majority of cases, lies with the Local Authority, or National Infrastructure Planning. KFRS will endeavour to provide consultation during this process, however there is no statutory requirement to do so. Information requested and received will be able to support our observations during planning process, but also provide a basis for design/build stage. For this reason, KFRS would encourage early engagement and continued dialogue throughout the planning stage, design & build and occupation process. Additional information is therefore requested at this stage.

Building Safety, Fire Engineering Team, Maidstone Fire Station, Loose Road, Maidstone, ME15 9QB
FET@kent.fire-uk.org
01622 212421


HOARE LEA

Cleve Hill Solar Park.
Kent.
Cleve Hill Solar Park Ltd.

AIR QUALITY
BATTERY FAILURE PLUME ASSESSMENT

REVISION 06 – 15/15/2023

You can view and take away copies of these materials here.

BATTERY SAFETY MANAGEMENT PLAN

Construction Emergency Response Team.

What is the CERT?

Committed by Cleve Hill Solar Park Ltd within the Battery Management System, The Construction Emergency Response Team or CERT is a team of key senior team members from each of the Project's appointed contractors and technology specialist.

The CERT is fundamental to ensuring the safety of all contractors, sub-contractors and the public during the installation of the batteries and associated equipment.

Key Updates

» The CERT was officially formed in full in April 2025 following final contract awards, and have regular meetings in accordance with the BSMP. The CERT are completing the development's construction emergency response plan which shall be shared with the key stakeholders prior to the first deliveries of the batteries.

» The CERT has overseen the finalisation of the Firewater provisions and hydrant network design and now installation, which is expected to be completed and fully operational before June 2025.

» Continual engagement with Kent Fire and Rescue has been maintained through the process and are actively engaged with the CERT on various technical and safety matters.

BATTERY SAFETY MANAGEMENT PLAN

Construction Emergency Response Team.

The CERT's Responsibilities

1. Completing the development's Construction Emergency Response Plan, including but not limited to:
    - » Review and further develop the responsibility matrix (RACI) for decision making and protocols for incident response – shared across the facility and response teams.
    - » Review the Energy Management System, Battery Management System and Fire alert / alarm systems and further detail the functions, capabilities and control hierarchy.
    - » Review and further detail the Standard Operating Procedures (SOPS) with specific emphasis on safe shutdown and isolation procedures, emergency response procedures and decommissioning procedures. Review and further detail the development's system monitoring data analytics for real time support in an emergency event.
2. Liaising with the local emergency services and making them aware of the detailed project programme, identify key milestones such as the battery delivery dates, installation commencement, commissioning commencement and any other periods of construction which may pose a higher risk of fire hazards being present.
3. Maintaining regular meetings and periodic reviews of the construction progress ensuring fire safety is maintained.
4. Provide continual updates to the local emergency services and notify them of any changes to key construction milestones, new hazards, or changes to the Emergency Response Plan.
5. Perform real life scenario-based testing to evaluate the effectiveness of the Emergency Response Plan.
6. Ensure the recommendation of the air quality assessment as summarised in section 8.3 and 8.4 of the BSMP are enforced.
7. Ensure the protocols, guidelines, and standards of the BSMP are followed.

Get to know the Construction Emergency Response Team.

Cleve Hill

Cleve Hill Solar Park Limited is a private limited company that is building the large-scale solar and energy storage project.

The project, owned by Quinbrook Infrastructure Partners, will generate renewable power through photovoltaic panels.

Stantec

Stantec is a global design and consulting firm specializing in sustainable engineering, architecture, and environmental consulting, Stantec are appointed as the Project's Principal Designers.

Gallagher

The Gallagher Group is a family-owned construction company, primarily based in the southeast of England, with roots in civil engineering and groundworks. Gallagher are the appointed specialist Civils Contractor and active Principals Contractor for the Project

DUNAMIS

Dunamis are an Independent Connections Provider specialising in the design and build of HV infrastructure, part of the Fulcrum group, Dunamis are the project's appointed specialist electrical contractor. Dunamis shall also take over the role as Principal Contractor following the completion of the civils works phase.

CATL

CATL is a global leader of new energy innovative technologies, committed to providing premier solutions and services for new energy applications worldwide and are top of the Bloomberg Tier 1 BESS suppliers. CATL are the selected specialist technology provider of the Battery Systems for the project.

ALTENSO

SMA Altenso Gmbh is a specialist division of Power Conversion System manufacturer SMA AG Gmbh focusing on PV-Hybrid, off-grid, battery and hydrogen project. SMA Altenso are the project's appointed specialist Power Conversion System suppliers and system integrator.

MAMMOET

Mammoet is a specialist lifting and transportation contractor with over 200 years' experience in complex and large-scale projects. Mammoet has been appointed to manage and undertake the transportation and lifting of the battery equipment across the project.

HABITAT

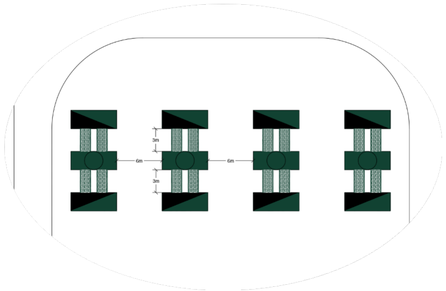
Habitat Energy is the leading UK company that specialises in optimising and trading battery storage and renewable energy assets.

Habitat Energy has been appointed to operate the battery systems once commissioned.

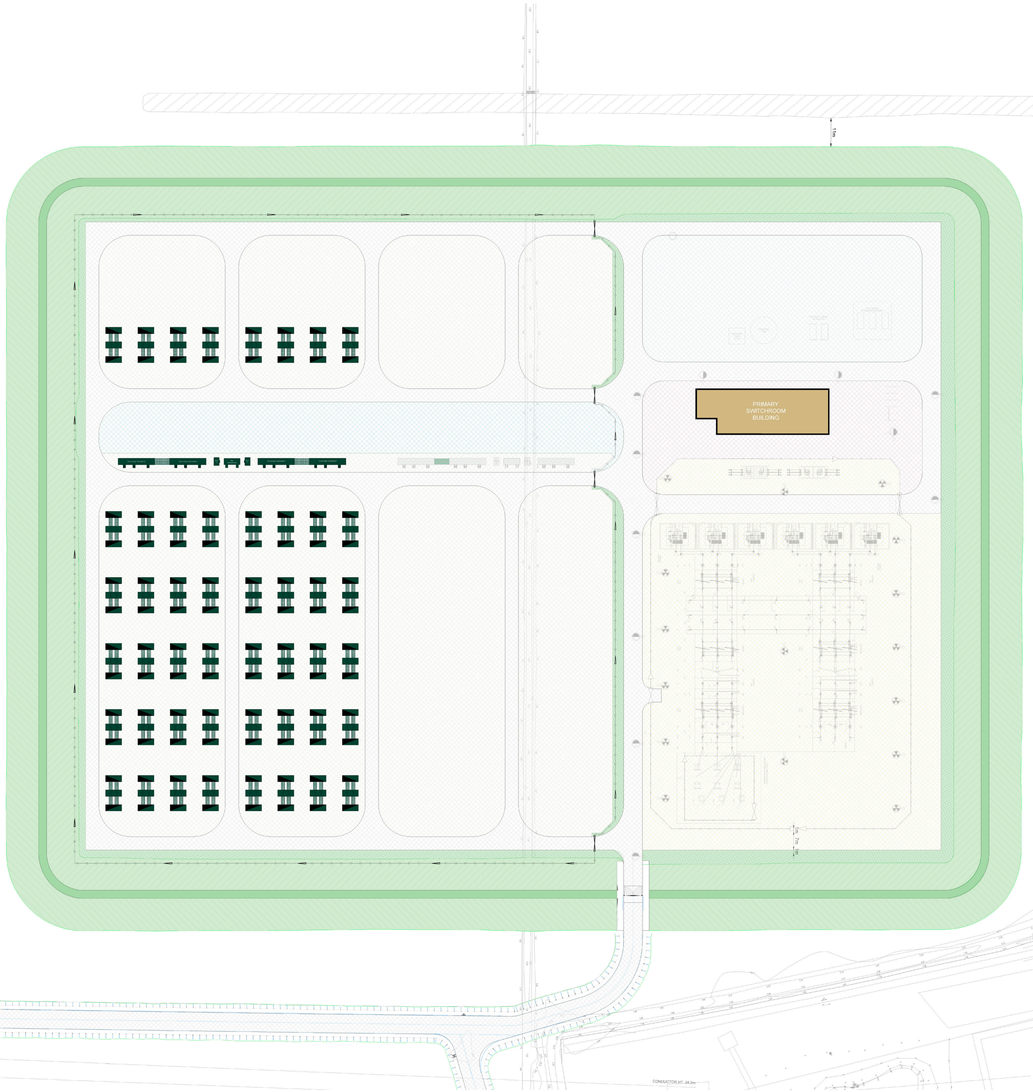
BATTERY SAFETY MANAGEMENT PLAN

Key Site Elements.

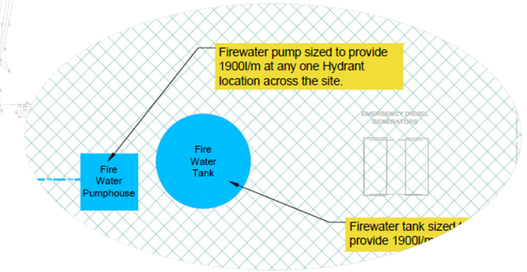
Spacing



3m Spacing between PCS & BESS Blocks
6m Spacing between Power Blocks
6m+ Spacing between BESS Secondary infrastructure
20m+ Spacing between other buildings & equipment

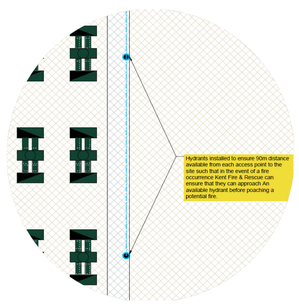


Onsite Water



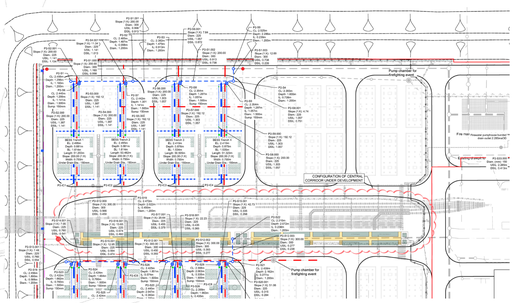
250,000+ litres of onsite water storage
1900 l/m flow rate
Full redundance N-1 pumping station.

Fixed Hydrant Network



Commissioned and Operational prior to the **first battery deliveries**
Regular inspection and testing during construction

Drainage



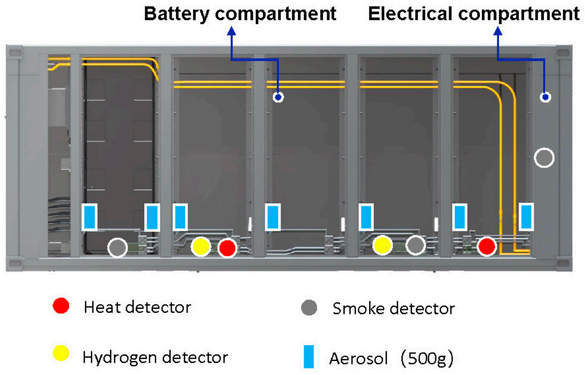
Independent firewater drainage system and onsite retention.

BATTERY SAFETY MANAGEMENT PLAN

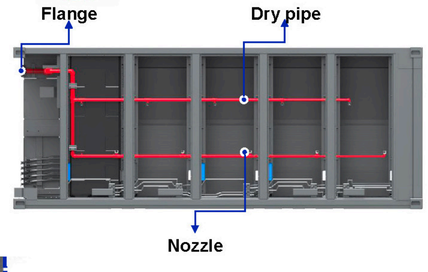
Technology.

Thermal Management System Liquid Cooling

Fire Detection & Suppression Systems



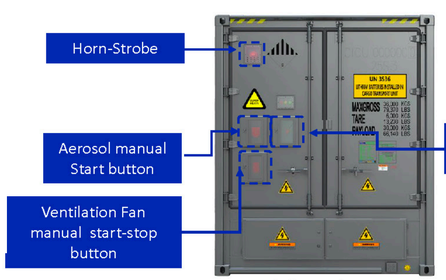
Fire Detection & Suppression Systems

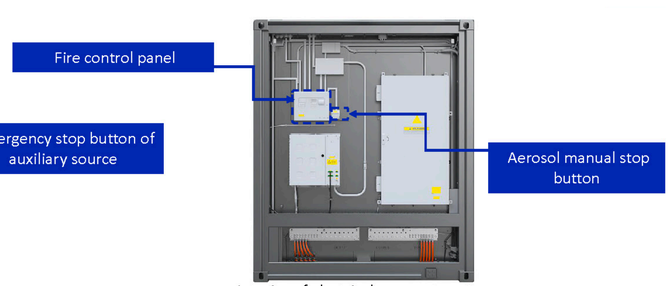


Item	Remark	
Manufacturer	CATL	
Cell Chemistry	Lithium Ferro Phosphate (LFP)	
Enclosure Dimensions (L x W x H)	6058mm (L) x 2438mm (W) x 2896mm (H)	
No. Modules / Block	40	
No. Racks / Block	5	
No. Modules / Rack	8	
Energy Capacity / Block	4.073 MWh +/-	
Voltage Range	1164.8~1497.6 VDC	
C-Rating	0.5	
Operational Ambient Temperature	-30°C up to +50°C	
Battery Management System	Included	
Auxiliary Power	Uo 230/400v	
Thermal Management System	Liquid Cooling	
Fire Detection System	Automatic (see	
Fire Suppression System	Automatic Aerosol Type	
Fire Fighting Equipment	Dry Pipe System	
IP Ratings	Battery Room	IP55
	Electrical Room	IP55
	TMS	IP67
	Module	IP67
Compliance Standards	Cell & Module	UN38.3
		UL1973
		IEC62619
		UL9540A
	Container	UL1973
		NFPA855
		UL9540A
		IEC 62477
		IEC 62619
		IEC 62933-5-2
		IEC 63056
		IEC 61000-4/

Battery Module Lithium Ferro Phosphate (LFP)

Controls Panels (Fire Alarm, BMS)





BATTERY SAFETY MANAGEMENT PLAN

Key measures laid out in Emergency Response Plan.

1 Roles and responsibilities

2 Preparation and planning for emergencies

Including battery technology and recognising abnormalities/failure; fire alarm and detection systems; fire hydrant system; muster points; notifying emergency services; chain of command; meeting point and grab bag for emergency services.

3 Medical Emergency Plan

4 Fire Incident Emergency Plan

5 Environmental Emergency Plan

6 Communications with Kent Fire and Rescue Service

Including regular updates; notification of any significant changes; site familiarisation; sharing ERP details and any revisions.

7 CATL Battery Specification

8 Safety & training

Including differences in behaviour of battery fires; fire detection systems – what to do if alarm sounds; who to notify.

BATTERY SAFETY MANAGEMENT PLAN

Immediate Next Steps.

1. CERT finalisation of the Construction Emergency Response Plan in collaboration with key stakeholders.

2. Complete and commission fire water systems.

3. Arrange and perform the initial real life scenario-based testing to evaluate the effectiveness of the Emergency Response Plan.

4. Formal Appointment of the Operational Emergency Response Team