



High Peak Borough Council
Market Place
Buxton
SK17 6EL

Mercia Power Response Ltd
Sam Henson – Project Manager
Strelley Hall
Main Street
Nottingham
NG8 6PE

22 June 2023

Dear Sir Madam,

Re: Installation Of Battery Energy Storage Units at Constructed Back-Up Electricity Generation Facility at Compound B Backup Power Generation Facility Graphite Way, Hadfield Glossop.

Mercia Power Response (MPR) is operating three back up electricity generation facilities at Compound B Backup Power Generation Facility Graphite Way, Hadfield Glossop as consented under Ref: HPK/2017/0424.

MPR would like to have the option to install three small-scale battery energy storage unit adjacent to complement the existing operational reciprocating engines. As a result, we are submitting this planning application for three battery storage units and ancillary electrical infrastructure.

I provide a short summary of these proposals. Please also find attached relevant drawings.



Need for the Units

We would like to increase the capability and flexibility of the existing electrical generation Site by adding the small-scale battery energy storage units.

The closure of traditional thermal generation plants (e.g. coal and gas power stations) is presenting new challenges in order to ensure reliable and continued supply of electricity. At the same time, increasing volumes of intermittent renewable generation capacity (largely wind and solar energy) has been installed onto the grid network. Battery energy storage technology can help counteract these issues as explained below.

- They facilitate more renewable energy generation into the National Grid network. Renewable energy is a variable source of energy generation so storage capacity in the form of batteries provides a reserve electrical supply that can be called upon during periods of low wind or low sunshine.
- They provide a rapid-acting backup energy supply for when energy demand is greater than forecasted demand and/or times of plant unavailability.
- They now play a vital role in maintaining grid stability which prevents events such as power surges and outages, both of which are very damaging to electrical infrastructure and mean the system becomes unreliable.
- They directly prevent the need for expensive network reinforcements and upgrades locally and nationally, making more money available to replace other ageing assets or connect new generation schemes.

Design and Access

Use

The use of the wider Site will not change from the use as a backup electricity generation facility as approved under Ref: HPK/2017/0424.

The proposed generation units will principally consist of an electrical battery storage unit and associated ancillary equipment. The battery units can be operated remotely and very quickly to respond automatically to the requirements of the National Grid network.

The units will be installed and maintained by MPR.



Amount

Each of the three proposed Battery Energy Storage Units will consist of the following items:

All dimensions in meters, shown L x W x H (Length x Width x Height)

- 1 no. Battery storage unit (6.05 x 2.45 x 2.60)
- 1 no. Electrical transformer (1.70 x 1.80 x 1.90)
- 1 no. High voltage DNO electrical substation building (4.10 x 2.70 x 2.80)
- 1 no. Low voltage feed kiosk (1.40 x 0.60 x 1.55)
- Low level lighting fixed to battery containers and substation building
- Mesh boundary fencing (2.4m height)

Layout and Appearance

The proposed arrangement within the existing wider site is shown in plan on layout drawing 'MPR-HADB1-001'.

The battery storage units will be an off-white colour. The fencing will be dark green. Transformers will be a grey steel finish. The DNO substation kiosk and LV kiosk will also be dark green.

Ground Works

The items of equipment will be located on reinforced concrete foundation bases/plinths to spread the loads evenly. These will be lightly reinforced concrete slabs and strip foundations extending no more than 1m depth.

Shallow excavations will be necessary for the slab foundations and also for various cables and trenches.

Fencing, Boundary Treatments and Security

The Site compound will be enclosed by a new secure 2.4m high wire mesh fencing.

Site Lighting

Low-level lighting will be fitted over the main doors to each of battery storage units and substation building.

Access and Traffic

There will be no additional highways impacts from the installation of the proposed units. Therefore, no further assessment of traffic impacts is considered to be required.



Hours of Operation and Construction

Due to the important role the battery units will serve in providing services to stabilise the national electrical grid network, the units may be available for operations at all times of the day and night. The availability of the electricity storage units will therefore be 24 hours, 7 days per week. The actual operational hours will be dictated by the demands of the electrical grid network requirements.

The construction will be restricted to the hours 07:00 to 18:00 Monday to Friday and 08:00 to 13:00 Saturday and Sunday.

Should you require any further information or clarification please do not hesitate to contact me.

Regards,

Sam Henson

Project Manager



Mercia Power Response Ltd, Strelley Hall, Main Street, Nottingham, NG8 6PE
Mob: 07375 956777 | Tel: 0115 906 1289 | Email: samuel.henson@merciapr.co.uk



Drawing List:

Drawing detail	
Layout Drawing	<i>MPR-HADB1-001</i>
Location Plan	<i>MPR-HADB1-002</i>
Elevations Plan - Battery	<i>MPR-CUB1-002</i>
Elevations Plan – LV Kiosk	<i>MPR-CUB1-003</i>
Elevations Plan - Transformer	<i>MPR-CUB1-004</i>
Elevations Plan – DNO HV Substation	<i>MPR-CUB1-005</i>
Elevations Plan – Mesh Fencing	<i>MPR-CUB1-006</i>