

132kV Grid Connection & Battery Energy Storage Site (BESS)



Location:
Burwell, Cambridgeshire



Client:
Ethical Power
Connections Ltd. (on
behalf of SMS Plc.)



Value:
£30m



Civil Engineering

Structural
Engineering

Building Consultancy

Geotechnical and
Geoenvironmental
Engineering

Project Management

Specialist services

Burwell BESS is a lithium-ion battery storage power plant capable of storing and releasing up to 56.2MWh of power, which is the equivalent amount required to serve thousands of homes with electricity.



The system of lithium-ion batteries is able to store clean power such as wind and solar when electricity demand is low and release it to the network when demand is high, playing an important role in enhancing the country's renewable energy mix. The site is one of the largest projects of its kind to come online in the United Kingdom to date.

Engineering and Design Factors

Due to the location of the site, with The Weirs watercourse surrounding three sides, Alan Wood & Partners were required to call on their considerable skill and expertise to design a new access bridge to carry both construction plant and power transformer delivery vehicles and enable the development to be constructed. Due to programme constraints, Alan Wood & Partners also designed structural steel grillages supported from pier foundations, to assist site teams with battery and PCS installation, and ensure critical equipment could be located above predicted flood levels.

Description of the Works

Working directly for the EPC contractor, Alan Wood & Partners were engaged to provide full civil and structural engineering services for the proposed BESS and 132kV grid connection, which included geotechnical design, structural design of all plant foundations, transformer bunds, switch rooms, plant support grillages, site-wide surfacing and drainage. In addition, Alan Wood & Partners undertook the design of a new 10m access bridge, across The Weirs to enable construction plant to access the site.

Core services

Civil Engineering / Structural Engineering

Sectors

Energy and Renewables

