

Holly Lane Energy Park

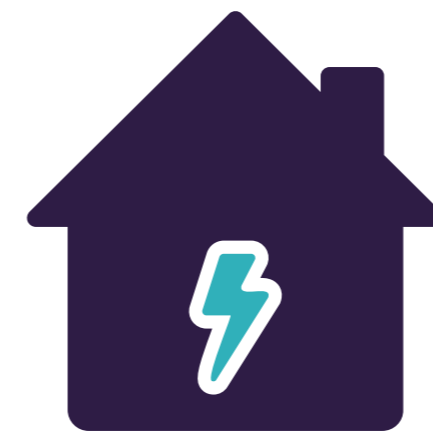
Site information

The development is split over two land parcels the main site includes a ground mounted solar farm with an export capacity of approximately 28MW and the smaller eastern site includes a battery storage facility with a capacity of up to 75MW, substation and point of connection compound allowing connection into the existing 132 kV line which passes through the eastern site. The solar farm will generate electricity equivalent to the average annual consumption of around 11,000 homes.

Site location and overview

The project includes a solar farm extending to 48 hectares on the main site, which is located 650m south of Balsall Common, and a small compound approximately 2 ha containing the substation, point of connection and battery energy storage infrastructure, located to the east of the solar farm, which is 2.5 km southeast of Balsall Common and 1.1 km southwest of Burton Green.

The solar farm and the majority of the grid route lie within the administrative area of Solihull Metropolitan Borough Council and the battery storage, point of connection and remaining grid route lie within the administrative area of Warwick District Council.



The solar farm will generate electricity equivalent to the average annual consumption of around 11,000 homes.

Development components

> Photovoltaic Panels

Each panel will be approximately 2.2m x 1.1m x 5cm.

> Mounting System

The mounting system comprises upright galvanised steel posts which are screwed or pushed into the ground and an aluminium support frame which is bolted together. The complete assembly including the modules will be angled to face south. The lower part of the assembly will be 0.7m off the ground while the top of the assembly will be up to 3m high. The system is designed to be 'reversible' leaving only small holes to be back filled when removed upon the completion of the project.

> Inverters

Inverters are required to convert the direct current (DC) generated by the photovoltaic modules to grid compatible alternating current (AC).

> Substation and batteries

An electricity substation will be installed on site close to the point of connection to the 132kV overhead line which crosses part of the site. The compound will also house battery storage containers and associated inverters and transformers. Cabling from the panels / inverters will be routed to the switchgear kiosk at the solar farm via a network of shallow trenches which will be back filled. A buried cable in the public highway will then link the solar farm and substation.

> Fencing

We are proposing a 'deer fence' (wooden post and metal mesh) up to 2.4m in height around the solar farm. The point of connection and battery storage compound would have a painted palisade fence at a height of 2.5m.

> CCTV

We propose installing CCTV cameras on the site. The cameras will be located inside the site and will point inwards. Typically installed at a height of 3m height of 2.4m at the solar farm and 4m at the point of connection and battery storage compound.

Operation

The solar farm will begin to generate electricity following commissioning and being connected to the grid. The photovoltaic panels will continue to generate electricity for a project lifespan of 40 years after which all infrastructure would be decommissioned and removed from the site. The batteries will be available to import and export electricity for the same 40 year period.

The site will be monitored remotely and will not require any permanent staff to be located on site. The proposed development requires low maintenance and as such there will be infrequent visits to service the installation.

To ensure agricultural practices continue the grass in and around the solar array will be grazed by sheep and the soils taken out of intensive agricultural practice and allow to rest and naturally improve. Proposals for substantial biodiversity net gain will also be included through habitat enhancement and creation, primarily by removing the land from intensive agriculture and replacing it with species rich grassland and creating new wildflower areas and woodland.

Grid connection

Exagen has received a grid connection offer from Western Power Distribution confirming that a connection is possible into the existing 132kV overhead line crossing the eastern site. The electricity from the solar farm will be transmitted via an underground cable from the solar farm switchgear kiosk to the substation. The route is likely to follow along Table Oak Lane, Meer End Road and the A452.

Construction

> Timing

Works will commence upon gaining the necessary planning and grid connection approvals.

> Construction access

Access to the main site is proposed off Holly Lane in the northwest, via an existing agricultural access point that will be widened to provide a safe access junction. Holly Lane provides connectivity onto the A4177 and the wider trunk road network avoiding minor roads through small settlements. Access to the Point of Connection site is possible directly off the A452 (Birmingham Road) at the northeast of the Site, by extending the existing junction used to access local farms. Off this a new access road will be constructed north west to the development area. Vehicle type and routing will be examined moving forward to minimise disruption to the local road network.

> Site preparation

This will involve the preparation of the site to receive the delivery of equipment. This may involve the construction of a temporary access track and will involve the preparation of areas for the storage of equipment and the housing of temporary pre-fabricated site offices.

> Layout & construction

The locations for the uprights will be identified using GPS to ensure accuracy. Uprights will be screwed or pushed into ground to avoid the use of concrete foundations. The mounting framework will then be assembled by hand. The solar PV panels also fixed to frame, again by hand. Shallow trenches will be excavated between the panels, the inverters and the substation position. Cables will be laid in the trenches and back filled.

> Restoration

All areas subject to temporary works including some access tracks and other temporary infrastructure, would be reinstated to a condition in keeping with the quality of the areas before works commenced. All construction waste (largely comprising packaging) will be disposed of in accordance with local regulations.

> Local contractors

Local contractors will be used as far as possible in the construction process.

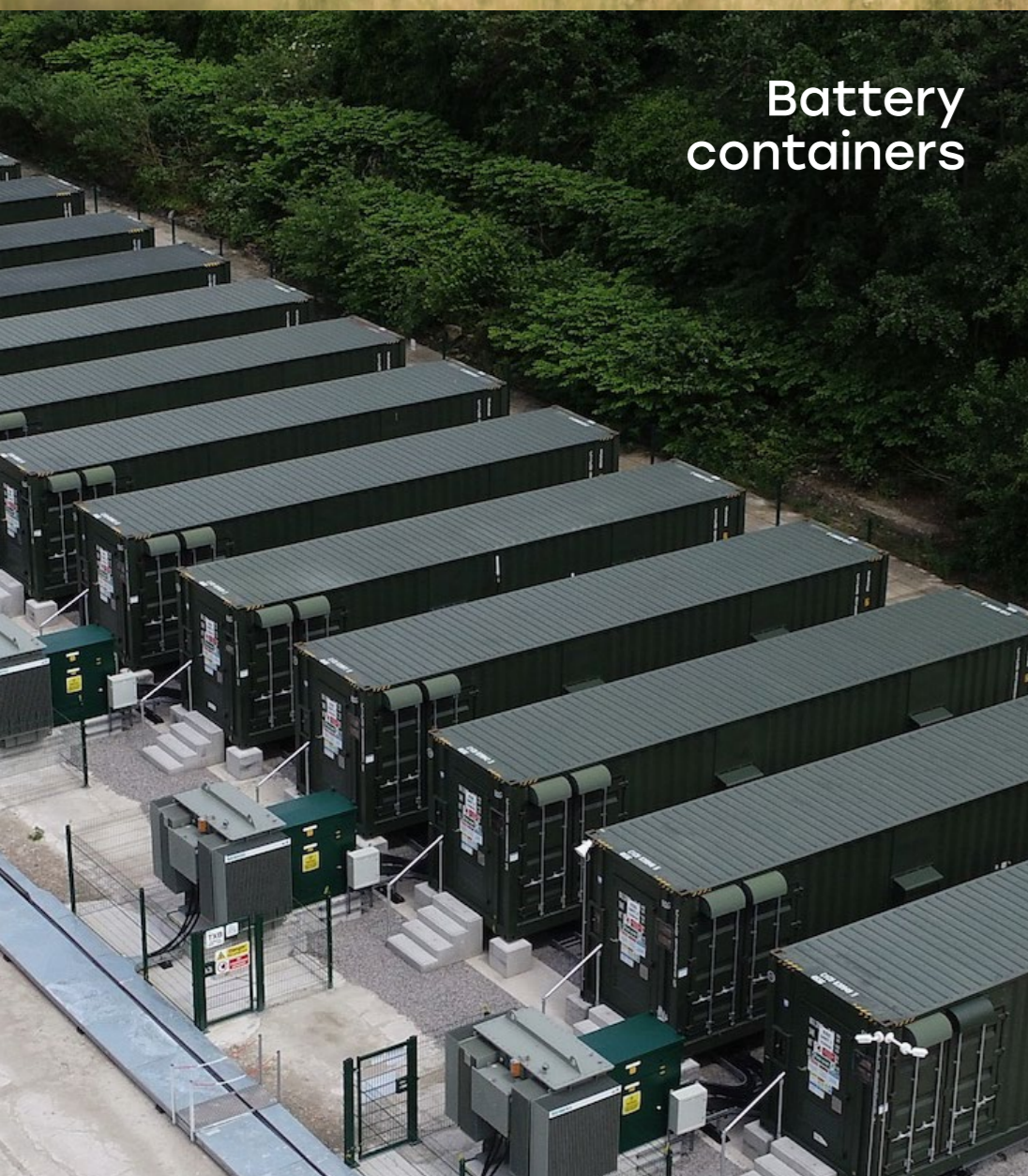
Solar panels



Mounting frames



Battery containers



Deer fencing

