

East Claydon Battery Storage Scheme

Frequently Asked Questions

WHAT TIMEFRAME IS STATERA PLANNING FOR?

We intend to submit a planning application for the Battery Storage Scheme to Buckinghamshire Council before Christmas 2023. We expect a decision to be made by Buckinghamshire Council by Q2 2024. Construction would be likely to start in 2025 with the scheme going live in 2026.

HOW DOES THE PROJECT HELP THE UK TO BE NET ZERO BY 2050?

The scheme would materially help Buckinghamshire meet its renewable energy target and would also assist in meeting national targets for both energy supply and low carbon energy development.

We still need electricity when the wind isn't blowing and the sun isn't shining. If we want a future of clean energy from renewables, we need to store it to balance peaks and troughs. Otherwise, we are dependent on fossil fuels and nuclear to fill the gap.

The scheme can fulfil the annual electricity need of about 440,000 UK households (assuming an average annual usage of 2,900kWh per household).

WHAT ARE THE VISUAL IMPACTS OF THE SCHEME?

We need new infrastructure around the UK's main electricity substations to meet carbon reduction targets. One important challenge is to ensure that this infrastructure makes as little visual impact on the landscape and certainly no more than is justified by the national (and global) interest in achieving net zero.

We believe we have struck the right balance in hiding this development from some views and softening its appearance in the local landscape. A Landscape and Visual Impact Assessment will be submitted with our planning application and will show how the development will sit within the landscape and where it will be visible.

WILL FOOTPATHS BE AFFECTED?

We do not intend to close or divert any legal public rights of way. Current views from these paths and routes will change both during construction and once the development is operational, but no paths will be blocked, and people will always be able to move freely as they do currently. New and existing landscaping will limit views of the development from footpaths.

We are planning to provide a path around a newly created wildlife area which will link up to the public footpath network and can be enjoyed by members of the public during the life of the scheme.

WHAT ARE THE IMPACTS ON WILDLIFE?

We have conducted ecological studies to ensure that we not only protect existing habitats where possible, but we enhance the local landscape overall for the benefit of wildlife and nature.

Developers are now required to improve biodiversity and contribute to the recovery of nature. We must ensure that our developments have habitats for more species than before we started.

Over 59% of the land forming part of the battery development will be used for landscaping and to improve biodiversity which will help minimise impact on wildlife and provide a biodiversity net gain.

WILL THE PROJECT BE NOISY?

A full noise impact assessment has been carried out and will be submitted with the application. The noise emitted from the proposed development will not exceed World Health Organisation standards.

Battery storage plants do require a large number of inverters to change electricity from alternating current (AC) to direct current (DC). Cooling these devices generates noise, but this noise can be mitigated to an acceptable level.

WHAT HAPPENS AT THE END OF THE SCHEME'S OPERATIONAL LIFE?

It is a common misconception that once a battery scheme comes to its operational end, the land becomes 'brownfield', which means it was previously developed. If planning permission is granted, the battery scheme development is considered to be "temporary", for a period usually up to 40 years. Once this time has lapsed, the land reverts to its original use, in this case agricultural.

We will be responsible for reinstating the site at the end of its operation life. This will involve removing all of the battery storage infrastructure and returning it to agricultural land.

WILL THE DEVELOPMENT CAUSE FLOODING?

A flood risk assessment and drainage strategy has been undertaken for the site. The battery storage site will include adequate drainage and attenuation ponds to collect rainwater runoff from the site.

All site access tracks will be rolled stone (or similar) and are permeable, allowing water to soak through.

WHY HAS THIS SITE IN EAST CLAYDON BEEN CHOSEN FOR A BATTERY STORAGE SCHEME?

Unlike oil and gas infrastructure, which has historically been determined by the location of naturally occurring reserves in particular pockets of the country, energy storage developments need to connect into the existing electricity grid at points across the UK.

The existing National Grid substation near East Claydon provides a rare opportunity to connect a battery in a location where land is both available and suitable to develop this infrastructure.

The UK has a target of a clean energy grid by 2035, which means we need to increase the land allocated to renewable energy developments.

Statera Energy is bringing this scheme forward as the Government is relying on the private sector to develop, construct and operate renewables and energy storage infrastructure.

HOW MUCH TRAFFIC WILL THERE BE?

During construction there will be an average of 9 deliveries per day associated with the battery development. These movements will be conducted following a strict management protocol and several mitigations measures will be put in place such as signage and banksmen, who direct vehicle movements around sites.

Once operational, the site will be visited on a weekly basis for operational and maintenance purposes.

IS THERE A FIRE RISK?

There is some fire risk associated with BESS due to thermal runaway. Our batteries will be compliant with industry standards. We have designed the scheme to reduce this risk by spacing the batteries further apart and will carry out regular maintenance.

Thermal runaway begins when the heat generated within a battery exceeds the amount of heat that is lost to its surroundings. If the cause of excessive heat creation is not remedied, the condition will worsen.

Fire protection consists of two key systems:

1. Cooling systems maintain battery temperatures within safe limits. Historically, these have been air cooled units (HVAC), but future projects are likely to use liquid cooling which brings cooling to the cells within groups of batteries.
2. Battery managements systems have multiple levels of safety protection, including the following at both pack and cell level: over voltage, under voltage, over temperature, under temperature and communication fault. These typically have 3 different levels of response of increasing intervention:
 - a. Level 1 – report a warning.
 - b. Level 2 – reduce charge / discharge power by 50 %.
 - c. Level 3 – reduce power to 0% The batteries are housed in containers to suppress any fire breakout. Previous systems we have built suppress fire with gases that are released automatically when high temperatures and/or smoke are detected.

HOW WILL THE COMMUNITY BENEFIT?

Energy storage is an essential component of a modern grid system allowing surplus energy generated at off peak times to be stored for later use. This increases efficiency in the system that will lead to greater energy security and best value for customers in the long term.

As part of the proposed site layout, we have included a path around a newly created wildlife area which will link up to the public footpath network and can be enjoyed by members of the public.



Over 59% of the site will be used for biodiversity enhancement including planting native trees, creation of wildflower meadows, creation of ponds, creation of scrubland, and erecting bird boxes which will be delivered as part of the development. Detailed landscaping has been designed in consultation with the council's landscape and ecology officers and Berkshire Buckinghamshire and Oxfordshire Wildlife Trust.

Through our programme of engagement, we have sought views from the community on how the development can make a positive contribution to the area.