A proposed University of Surrey's solar facility

A strategic energy collaboration

The University of Surrey is a research-intensive university, dedicated to life-changing education whilst building a community of people and ideas that seek to inspire students to achieve great things.
The University aims at becoming carbon neutral by 2030 and to achieve this, the University has teamed up with SSE Energy Solutions to propose a new solar energy facility

SSE Energy Solutions provides low carbon energy infrastructure, including solar energy generation and battery storage to support local decarbonisation
SSE Energy Solutions is part of SSE plc which is committed to investing £12.5billion in crucial low carbon infrastructure in the next five years to support achieving a net-zero carbon society

Why solar energy?

Solar power has an important role to play in tackling climate change

- The UK government aims to increase the current solar capacity by five fold (up to 70GW) by 2035.
- The Surrey County Council aims to expand renewable energy generation capacity across the county with a focus on solar PV installations - 15% of energy from solar PV by 2032

The University project:

- will contribute to local and national targets
- will help to reduce UK fossil fuel imports, supporting security of supply.
- will help the University increase their clean energy generation and consumption

- Solar panels are quick to install, and once it is in place the solar facility will be able to produce electricity for thirty-five years

- At the end of its life, it's easy to remove
- The materials - mainly steel, silicon, aluminium and copper - are all easily recycled.

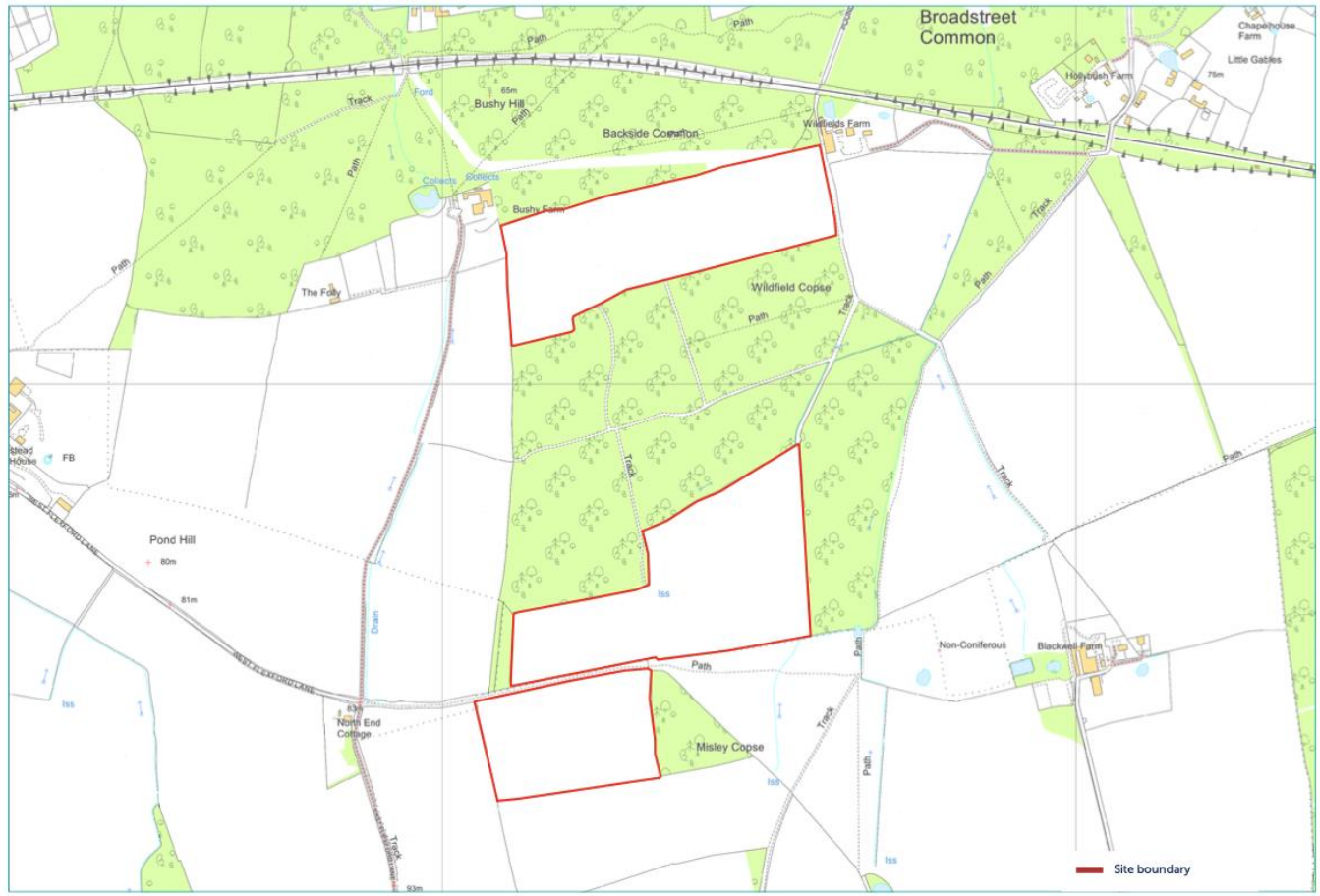
The location

WE BELIEVE THAT THIS IS AN EXCELLENT SITE FOR OUR SOLAR ENERGY PROJECT

It is large enough to provide space for the number of panels and receives enough sunlight to ensure that energy generation is efficient.
This is in combination with planned solar rooftops on University's buildings

- The site was selected after consideration of all the land owned by the University, taking into account existing and proposed uses and environmental constraints

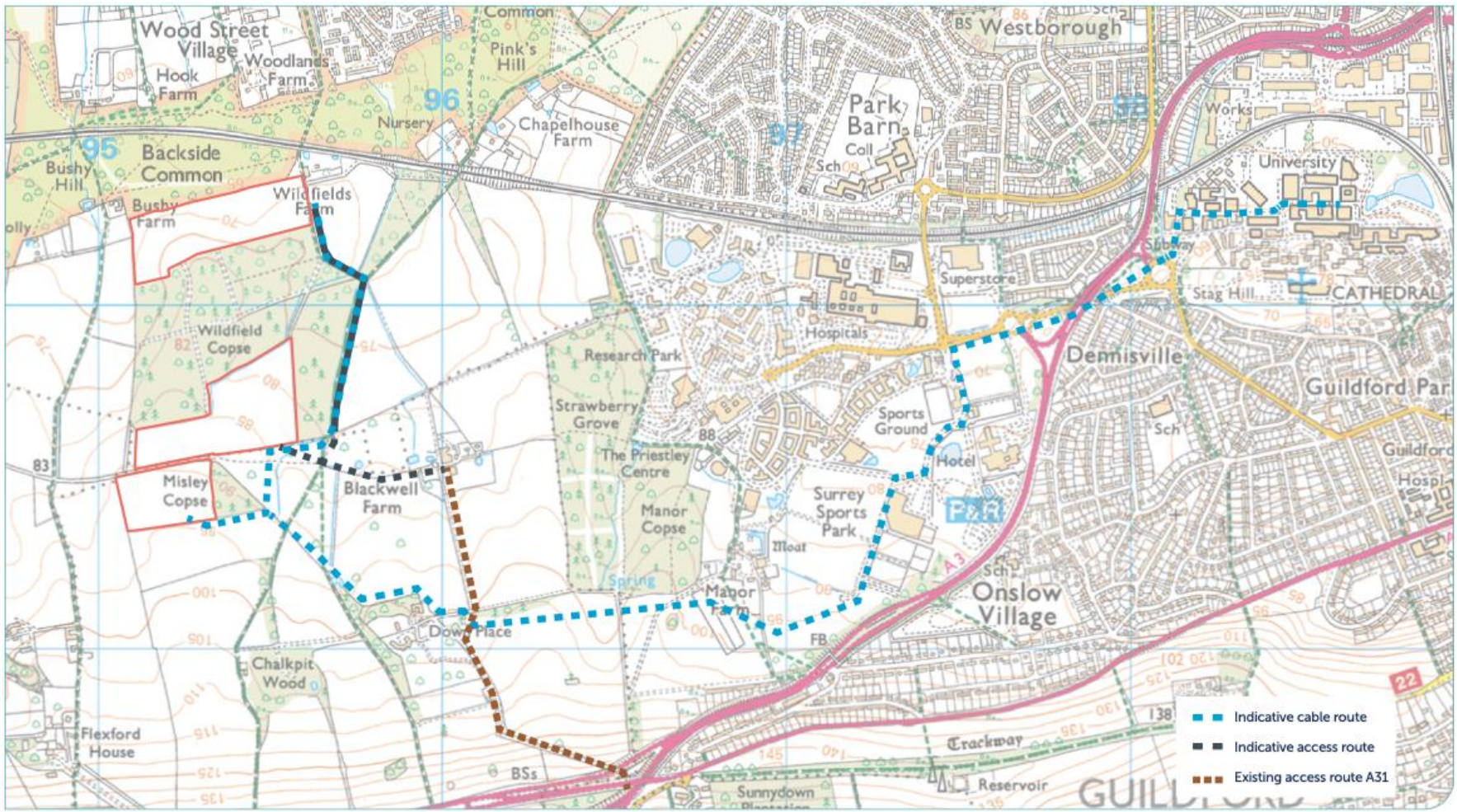
- area of about 21.6 hectares
- 12.2MW capacity



Viewpoint 1 from the A31 Hog's Back looking south towards the proposal. Photograph of existing view

Viewpoint 1. Photomontage 15 years after completion. Plant growth estimated at average 6m height

ACCESS AND CABLING



Our proposal

The main part of the proposal will be the rows of PV panels on metal frames, set no more than three metres above the ground at the highest point.

The rows will face south and have an angle of around 25 degrees to the ground. There will be gaps between the rows to prevent overshadowing and to allow access around them for maintenance.

Each of the three fields will be surrounded by a 2.45 metre high deer fence, with a field gate at each field entrance. Poles up to 4.5m high will be installed to support movement sensors and cameras for site security.

There will be a transformer in each field, inside a rectangular box that will look like a small shipping container.

As the frames will be supported by posts driven into the ground, there is very little impact on the ground itself. Less than 5% of the land will actually be disturbed by the installation of the panels.

Biodiversity and environment enhancement

Existing hedges, trees and woodland around the fields are valuable for nature conservation, and there are some areas of ancient woodland.

- The layout of the solar panels has been designed to ensure that there are suitable buffers to the adjacent woodland and hedges to avoid and minimise potential for adverse impacts on these.
- Tracks to access the fields, and underground cable routes, will use existing openings in the hedges where possible.

We recognise that agricultural land is an important resource.

- The quality for agriculture varies across the site, but most of the land is of a lower quality (grade 3b).
- Conditions on planning permission will require that after 35 years the solar panels would be removed.
- The soils will be in a better condition than today, having been taken out of intensive agriculture for this time.

The area beneath, between and around the panels will be managed to become a haven for wildlife.

Solar panels create sheltered spots for insects, reptiles and ground nesting birds.

- They provide habitats that support a range of plant and animal life.
- This will be encouraged by sowing of native grass and wildflowers, selected to be of value for locally native species, and by careful management to maximise the wildlife benefits.

Chemical pesticides and fertilisers will no longer be applied to the land within the site

- This will allow the soil to recover from years of intensive agriculture and will improve the quality of water that runs off the site into the local drainage network.

The existing field boundaries will be kept and added to with new planting

- Instead of annual cutting, they will be allowed to grow to about 6m high.
- This means they will provide more wildlife habitat and better screening to hide the panels from view.

SSE has partnered with expert ecologists Buglife to develop a best-in-class biodiversity project that will be regularly monitored through the life of the project.

The solar facility will make a real positive difference to local biodiversity.

- Independent evidence shows that solar facilities typically improve biodiversity within a range of 20% to over 100%.

There is a significant opportunity to increase knowledge and awareness of renewable energy

- exploring ways to involve and inform local people through links with the University and local schools.

In line with SSE practice, a community fund will be provided, aimed at supporting the community

- SSE aims to conduct its business in a way that contributes positively, giving back to the local communities in which it operates.

Key dates

Summer 2022 - submit planning application

November 2022 – estimated planning decision

August 2023 – construction starts if granted approval
|
July 2024 – solar facility begins to generate energy.

We have a website which contains all the project's information and an email to submit comments/questions

University of Surrey Energy Partnership (sseenergysolutions.co.uk)