

Maggie's Solar Farm

Community information



Find out more

If you have queries in relation to this project, please contact the project team by emailing maggiessolarfarm@pegasusgroup.co.uk quoting "Maggie's Solar Farm" in the subject header.



About the project

Low Carbon is proposing to develop a new solar farm to be known as Maggie's Solar Farm.

- The site is located approximately 6.4km to the south west of Aylesbury, 2.2km to the south east of Haddenham, and 4.1km to the north west of Princes Risborough
- The solar farm will have a capacity of up to 49.9 megawatts (MW) of clean renewable energy
- The proposed solar farm is up to 88 hectares (217 acres) in size
- The development is proposed for a period of 40 years, after which the modules would be decommissioned and removed from the site and as many items will be recycled or re-purposed as possible
- The land classification within the redline is mainly Grade 4 (Poor Quality Agricultural Land), with a smaller area of Grade 3 (Good to Moderate Quality Agricultural Land) to the north of the site near Ford village

This site was carefully selected through our development process ensuring it met with Low Carbon's criteria including a viable grid connection nearby with capability of accepting the power generated; being a site which compares favourably in terms of planning designations and a willing landowner.

The transition to a low carbon energy system is necessary to avoid the catastrophic effects of climate change. The UK's legal climate change commitment requires achieving net-zero greenhouse gas emissions by 2050 and more renewable energy generation is needed to meet these targets. Solar offers a low cost, safe and low carbon way of delivering clean power to meet this target as well as reducing the levels of carbon dioxide that are being emitted into the atmosphere by replacing electricity generation from fossil fuels.

49.9

MW solar farm capacity



16,581

Homes powered each year



11,210

Tonnes of CO2 saved each year



About Low Carbon

Low Carbon, the developer of this project is a British-owned investment and asset management company whose business model is based on the financing, development, construction and operational responsibility of renewable energy projects at scale. Low Carbon is committed to making a positive and significant impact on the causes of climate change with the goal of a low carbon future with environmental stewardship and collaboration with local communities at the heart of this approach.

Community engagement

We want to ensure the community around this proposal is informed and fully understands the plans for the project. We encourage feedback and suggestions to help influence the design. Our project website provides a simple and transparent way for the community to provide feedback, where comments can be pinned to an interactive map of the project area.

Certified



Corporation

Low Carbon is a certified B Corporation®.

B Corps™ are businesses that meet the highest standards of social and environmental performance, transparency and accountability.

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CONSTRUCTION INFORMATION

Solar Farms can be built relatively quickly compared with many other forms of energy development. Any disruption is minimal and well controlled by various restrictions mentioned below.

Construction information

A typical construction period for a solar farm of this scale is around 18-20 weeks. During the construction period, it is estimated that there will be an average of 4-6 HGV trips per day.

Whilst this figure is an average, there will often be a higher volume earlier in the construction period and less towards the end. It is proposed that construction working hours would be as follows:

- 08:00 - 18:00 Monday to Friday; and
- 08:00 - 13:00 Saturday

Access Information

We are currently assessing options for access on the site and have requested the Local Highways Authority for their input. However, the current proposal is for a new access to be created from Owlswick Road into the north east of the site. An existing field access from Owlswick Road into the north of the site would also be used for construction access.

Part of any subsequent planning permission would require a detailed Construction and Traffic Management Plan (CTMP) to be agreed in conjunction with the Local Highways Authority.

How will the site be accessed after construction?

If planning was achieved, we would use the same site access that is being suggested for construction, additionally gates would be installed at the site access point for maintenance.

It is expected that under normal circumstances around 3-4 cars/vans would visit the site each week (generally averaging less than 1 a day).

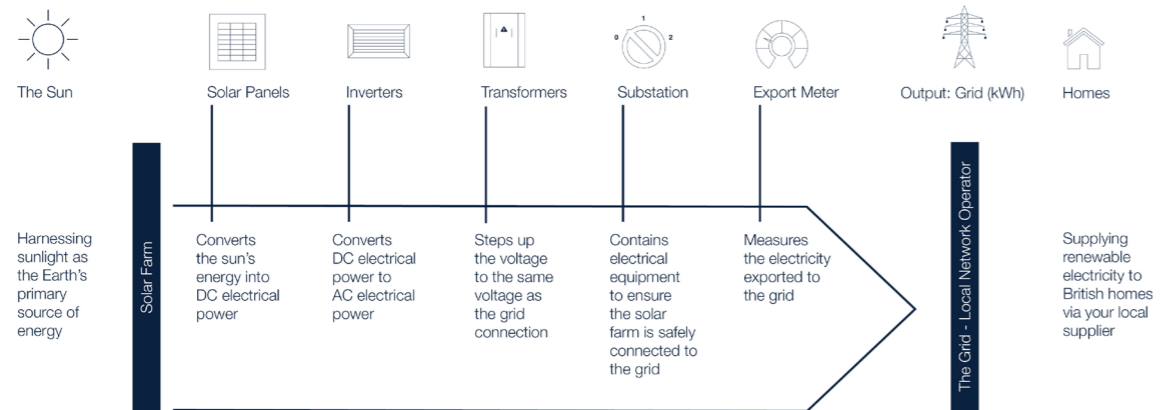
Cable Route Information

The project is proposed to connect to the local network 132/33kV substation, operated by UK Power Networks, via underground cables. The substation is approximately 200m from the south east corner of the site.

The cabling route is still to be finalised, however it is currently planned to run along Thame Road to the substation.

We do not install new overhead lines; all new cables will be underground.

How a solar farm works



Indicative Site Layout

The design of the site will evolve in response to consultation feedback, plus technical studies which help to shape where the solar panels are located.



A larger map is available on request or you can download this map via the consultation website.

How have we arrived at this indicative layout?

Our specialist consultants have been busy looking at the most appropriate areas for development, those being the least visually prominent, those free of restrictive planning designations and areas that can be most appropriately assimilated and screened within the local landscape.

- The development will consist of static rows of photovoltaic (PV) solar panels fixed into metal framework supported by either single or double mounted posts
- The panels will be set to a maximum height of 3m with the bottom of the panels approximately 0.9m from the ground
- The metal poles will be pile-driven into the ground to a depth of around 1.5m
- The panels will be laid out in straight arrays set at an angle of between 10 and 35 degrees from east to west across the field enclosures
- The final number of panels depends on a variety of factors such as the capacity of each panel and the design of the arrays. It is too early in the process to confirm this yet

All of our solar farms include minimum separation distances between solar panels of 3 metres, where biodiversity enhancements such as pasture-mix grassland planting can be implemented. Between the arrays and the site perimeter or, in other areas of unused space, we will tend to plant wildflowers.

The Development Process

The planning process

Low Carbon hopes to submit a full planning application for Maggie's Solar Farm. Buckinghamshire Council is the planning authority for the proposal.

The Environmental Impact Assessment (EIA) process

Low Carbon recently requested a Screening Opinion from the Council to determine whether the site is considered to require an Environmental Impact Assessment (EIA).

If the Council confirms that an EIA is required, we will begin preparing the required documentation to duly assess the impacts of the proposal. This will include consideration of: Landscape and Visual Impacts; Biodiversity; Cultural Heritage; Transport and Access; Hydrology and Flood Risk. Below explains how this is dealt with in practice.

Landscape and Visual Impact

As part of the planning process, a Landscape and Visual Impact Assessment (LVIA) will be undertaken in accordance with a methodology compliant with The Landscape Institute and Institute of Environmental Management and Assessment Guidelines.

Ecology

Low Carbon will carry out a comprehensive investigation of the ecological features of the site and the surrounding areas. The design of the project will include measures to protect local biodiversity as well as delivering a biodiversity net gain.

Cultural Heritage

A desk-top Heritage Assessment will be undertaken to highlight areas where there could be potential impacts (both above and below ground) as well as the need for any further work.

Transport and Access

A Transport Report will assess the specific access points for construction plus the ability of the road network to accommodate construction-related traffic. Once operational, traffic amounts to no more than a car or van on average 3 – 4 times per week.

Hydrology and Flood Risk

A comprehensive Flood Risk Assessment will be undertaken. We are proposing to use only the lowest risk flood zones and we shall propose mitigation measures, if necessary.

Indicative timeline



Other key topics

Why don't we use rooftops or brownfield sites for our developments?

Roofs of buildings are a natural place for solar panels to be sited and it is something that we gladly welcome more of. However, there are constraints that slow, or prevent in some cases, the rolling out of rooftop solar at scale.

We categorise these constraints into three separate areas: physical; legal and scalability. Because of the complexities of each of these points it is not possible to give a succinct summary here, however, we are happy to talk any interested parties through these points.

In addition to these constraints, the cost of solar for rooftop is higher compared to that of ground-mounted and, the cost of the energy, therefore, sold on the market translates into higher bills for consumers, ultimately.

Brownfield sites are considered as alternatives but the locations where grid connections are available do not always coincide with such sites. Brownfield sites are also often being held for higher land value uses such as housing or commercial development and are therefore often not able to be made available to the energy industry.

We are facing a climate emergency and that means deploying renewable energy at scale is a necessity. This cannot simply be achieved by development on rooftops or brownfield sites alone. To make a meaningful impact, we believe solar farms must form the backbone of this approach.

What happens at the end of the scheme's operational life?

It is a common misconception that once the life cycle of a solar farm comes to an end, that the land becomes 'brownfield'. If planning permission is granted, it is temporary, usually between 25 and 40 years. Once this time has lapsed, the land reverts to its original use, in this case agricultural. The land will not be classed as previously developed. Leaving the land fallow for the lifetime of the solar farm also allows it time to rest and regenerate whilst encouraging nature to flourish.

Glint and glare?

Solar panels are designed to absorb light and not to reflect it. They pose little risk of glint or glare. Testament to this fact is the installation of solar panels at Gatwick Airport, alongside major roads and beside sports car raceways such as the 'Top Gear' test track.

Can solar farms cause flooding?

The vast majority of a solar farm is made up of rows of solar panels. We always retain grassland/meadow between and underneath rows of panels, meaning that the vast majority of the site is permeable, and water can drain away as it did previously. It should also be noted that all site access tracks are rolled stone (or similar) and are permeable as a result.

For heavier infrastructure, such as inverters, there is a need for impermeable foundations; however, recent project experience has shown that these only generally account for around 0.2% of the site and, nevertheless, we always instruct an engineer to design a bespoke solution to ensure that water drains away effectively. This all means that the existing greenfield runoff rate is more or less retained and there is no increased flood risk. Notwithstanding this, we always submit a Flood Risk Assessment with our planning applications.

Can solar farms be harmful to wildlife?

Solar farms actually help to reduce the intensity of the land's use. Human activity within the site is negligible once operational. Our solar farms attract a variety of wildlife which thrives in the diverse habitat. With each planning application we submit, a raft of ecological studies is conducted, and reports produced to ensure that we not only protect existing habitats, but we also enhance the offering. Common species found within our solar farms include nesting birds, reptiles, Great Crested Newts, butterflies and bees.



Biodiversity

It's important to Low Carbon that the area is improved for nature and, as part of the planning process, we are required to demonstrate that there will be biodiversity gain on the site.

Across all its sites, Low Carbon works to protect and promote sustainable land use and halt biodiversity loss yet seeking to increase biodiversity through the provision of new habitats, such as hedgerow, trees and wildflower meadows to support pollinators such as bees. It does this by understanding the characteristics of each site location and planting species that are native to that area.

Whilst our focus is on using existing woodland, trees and hedgerows to help to screen projects we also typically plant several hundred meters of new hedgerows and/or trees, leading to a net gain in both landscape and habitat.

Planning conditions tend to require both a Construction Environmental Management Plan (CEMP) and a Landscape and Biodiversity Management Plan (LBMP) to be submitted for approval. The former deals with the construction process measures whilst the latter deals with post-construction measures and those throughout the operation of the project.

Sheep grazing

At our solar sites, Low Carbon is committed to working in partnership with local landowners to provide where possible a unique and innovative space for them to graze their sheep amongst the solar panels.

Grazing sheep at our sites has proved to be hugely popular amongst our landlords for several reasons, notably because the sites are secure which means the sheep are safe and the solar modules provide shelter from the winds and shade from the sun and rain.

Beehives

Low Carbon's solar farms are also home to more than 2 million bees in managed hives, a key action to prevent the extinction of a vital species. The UK has seen a decline in the number of bees in the last few years, however, Low Carbon's solar sites provide secure environments with readily available food sources. Each of our hives house approximately 60,000 bees and they are tended regularly by trained beekeepers. With the help of our beekeepers, each year we bottle and distribute more than 600 jars of Low Carbon honey to promote the climate change message. We also believe that keeping bees on our sites is setting a positive example within the renewable energy industry.

Public Rights of Way

As standard practice for Low Carbon, the Public Rights of Way (PRoW) which run through the site will be kept open throughout construction and operation of the solar farm. In some cases, we may need to have a managed crossing on a footpath during construction for safety reasons, such as a temporarily controlled crossing and/or a banksman.

To screen views on footpaths, we will incorporate buffers of meadow planting either side of the footpath and two-metre-thick hedgerow planting. The objective is to obtain a width of approximately 5-10 metres in total, unless there are specific space restrictions on a particular Public Right of Way, thereby maintaining a feeling of openness.

