

Introduction

Welcome to our public consultation on Flaxlands Solar Farm.

Ampyr Solar Europe (ASE) is developing a proposal for a solar farm and battery energy storage system to the north of Royal Wootton Bassett and west of the village of Hook in Wiltshire. The proposed solar farm will cover 87.5 hectares (216 acres).

We anticipate the solar farm being able to supply the electricity needs of approximately **21,000 homes a year**. This will supply an area nearly twice the size of Royal Wootton Bassett.

The clean energy generated will save on average **17,900 tonnes of CO₂** per year, which adds up to over **716,000 tonnes of CO₂** over the next 40 years.



Figure 1: Flaxlands as it is currently, looking south

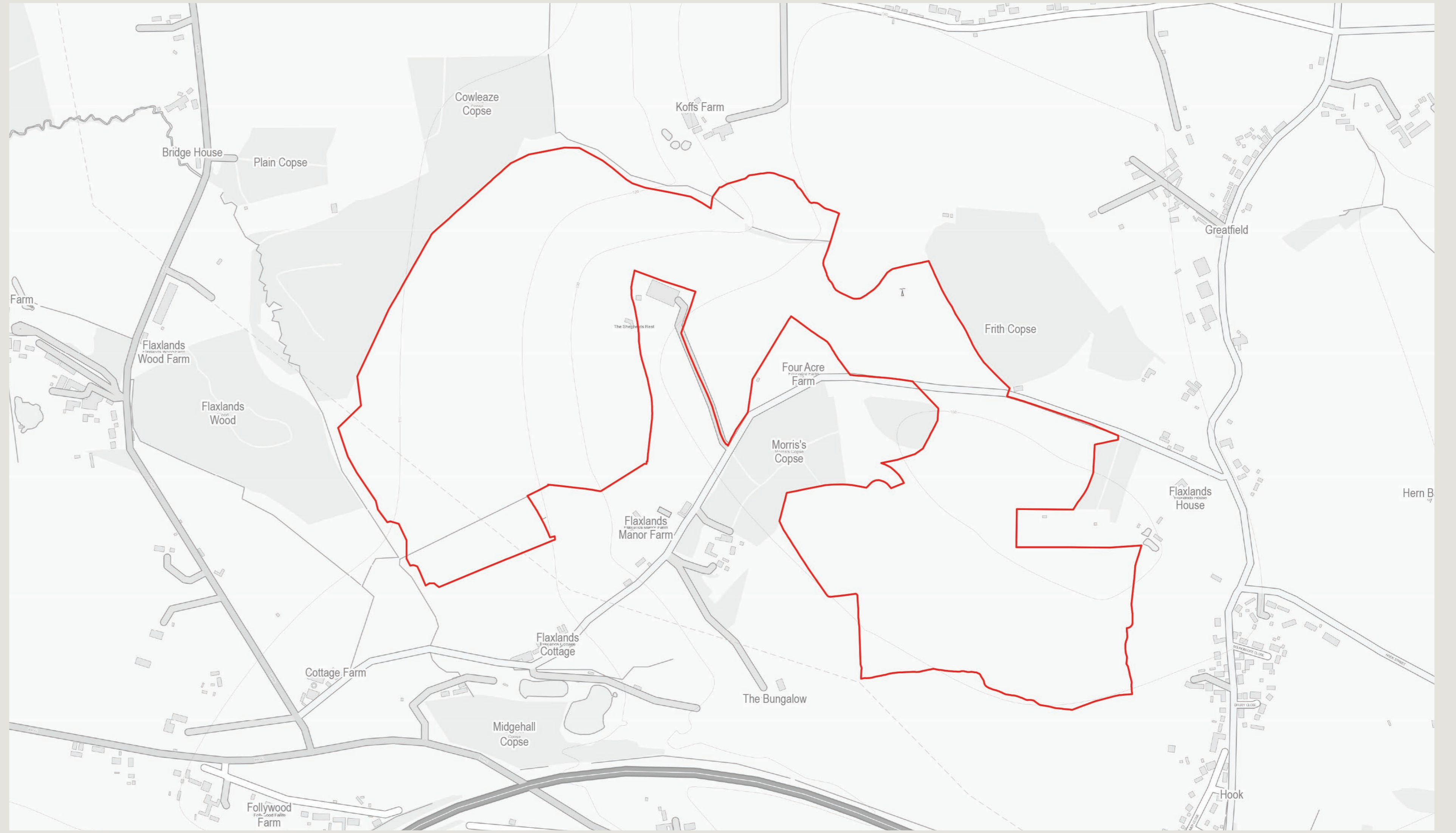


Figure 2: Flaxlands Solar Farm site location

Why do we need the solar farm?



The UK is transitioning to zero and low carbon sources of energy. All coal-fired power stations in the UK have now closed, meaning the amount of energy generated from renewable sources needs to increase. The UK's climate change ambitions are amongst the highest in Europe and the aim to achieve net-zero carbon emissions by 2050 is set in law.



By 2050 National Grid expect the UK to be using double the amount of electricity than we do today. For example, the growth in electric vehicle ownership has grown thirty-fold year-on-year since 2022 and is set to rise with the abolition of new diesel and petrol cars by 2035.



Currently the UK's electricity price is among the highest in Europe, meaning that we need to find ways of generating more affordable, renewable and clean electricity. Energy security for the country is also of paramount importance.

About us

Ampyr Solar Europe is the developer of this project and was created in 2021. Ampyr Solar Europe have operational solar farms across the UK, Netherlands and Germany, with multiple projects in different stages of development throughout the UK.



Our proposals

Our proposal is for a new solar farm and battery energy storage system at Flaxlands, to the north of Royal Wootton Bassett and west of the village of Hook, with an expected generating capacity of up to 49.9 megawatts (MW) and 49.9MW of battery energy storage systems (BESS). The application area will cover 87.5 hectares.

The layout of the site (see Plan 2) has been designed, where possible, to protect local views and allow the continued use of relocated public footpaths, and to avoid disruption to the local community. As part of this, we are developing a landscaping approach that includes enhancing and improving the network of hedgerows around and within the site.



Figure 3: Proposed site layout

The solar farm

The solar farm will consist of:

- Fixed-tilt solar photovoltaic panels. This means that they are fixed in position facing south and do not move during the day. Solar Panels will cover approximately 54ha (134 acres).
- Around 102,000 panels will be installed with a combined power generation capacity of up to 49.9 megawatts (MW) peak.
- Solar panels set on lightweight frames in rows spaced approximately 3m apart with a minimum ground clearance of 0.6m and a maximum panel height of up to 3m.
- Power will be converted from Direct Current to Alternating Current and the voltage stepped up suitable for the UK grid via onsite inverters and transformers.
- An on-site substation, Battery Energy Storage System (BESS), and site facility covering just less than 1ha (2.2 acres).
- A security fence up to 2.5m high, and CCTV cameras and a thermal imaging detection system located on 3m high poles.
- Internal access tracks throughout the site to enable operation and maintenance.
- Ecological mitigation and enhancement areas to protect the ecology and habitats within the site. The project will set aside approximately 4ha (10 acres) of land for Biodiversity Net Gain (BNG) purposes.
- The substation, batteries, and transformers have all been located away from potential noise receptors, including the Public Right of Way.

Site selection

We have carefully considered the best location for the solar farm, both operationally and in terms of minimising impacts on the community and environment. The steps we have followed are set out below.

- 1. Securing connection agreement.** A 49.9MW connection agreement was secured with National Grid at the Minety Substation via a connection point on the existing 132kV overhead power line approximately 1.8km (1.12miles) north of the Site. This will be the point of connection with the grid and a separate application will be made at a later date a buried cable route between the connection point and the Solar Farm site.
- 2. Conduct a desktop assessment.** Desktop assessments have been carried out to find suitable areas for the solar farms. These considered a number of factors including national and local designations, heritage, ecology, flood risk, agricultural land grading, neighbouring land uses, visual impacts, and proximity to homes and other committed developments.
- 3. Identify land options in the search area.** Based on the search area identified during the desktop assessment, we then engaged with landowners to find suitable sites.
- 4. Carry out a detailed assessment on suitability of the land.** Once we had identified a site in the right area, we conducted a detailed assessment of its suitability, including a number of environmental surveys.



Figure 4: Flaxlands as it is currently, looking south from Koffs Farm

Public Right of Way

It is proposed to divert Public Right of Way (PRoW) LTRE 28 and sections of PRoW LTRE 26 that currently run through an open field within the site. These diverted PRoWs would instead follow the existing field boundaries and run alongside a new 30m wide new species-rich grassland which would be planted between it and the solar farm. The PRoWs would be actively managed to ensure the routes are accessible and usable all year round and there is an opportunity to replace old styles with new gates that would be more accessible to all users of the PRoW network.

How will it look and how does it work?

We know that the overall look of Flaxlands Solar Farm is likely to be a key point of interest for the local community.

The site is not located within any landscape designation, but we have been mindful of situating it carefully to reduce the overall impact on both the environment and the community. This board explains how the solar farm may look, as well as how the solar panels would work.



How will it look?

We have carefully considered how Flaxlands Solar Farm will fit into the landscape in order to reduce any visual effects on the community and impacts on local wildlife.

Height: The solar panels will be no more than 3m above the ground. This means that the visual effects of the solar farm will be limited for the communities surrounding the site.

The BESS consists of 14 battery units set in two separate groups, separated by transformers and switchgear. Each battery storage unit will approximately measure 12m in length, no more than 3m in height and 3m wide. The inverter substations will measure no more than 7m in length, 3m above ground and 2.5m wide.

Glint and glare: Glint and glare are visual effects that can sometimes affect nearby motorists or homes. Solar panels are designed to maximise the absorbency of the sun's rays, and this means that glint and glare levels will be lower compared to surfaces such as window glass, water, or snow. We are also undertaking a Glint and Glare assessment that will look closely at any potential impacts for road users and homes near the site.

Screening: Existing hedgerows and trees will be retained as far as possible, we will also enhance existing hedgerows in to infill any gaps to screen the development from external views while also providing wildlife benefits. We will be developing a landscaping plan informed by a Landscape and Visual Assessment, which will be submitted with our planning application.

How does it work?

Solar panels are made out of photovoltaic cells (which is why generating electricity with solar panels is also called solar PV) that convert the sun's energy into electricity.

Photovoltaic cells are sandwiched between layers of semi-conducting materials such as silicone. Each layer has different electronic properties that energise when hit by photons from sunlight, creating an electric field. This is known as the photoelectric effect, and this creates the electrical current.

Solar panels generate a Direct Current of electricity. This is then passed through an inverter to convert it into an Alternating Current, which can then be fed into the National Grid, or directly to large local power users. See Figure 8 on this board for the typical components of a solar farm.

Solar panels need daylight and sunshine, not high temperatures, so solar panels can and do work well in England.

The site will also have a Battery Energy Storage System (BESS). The BESS will enable solar energy to be stored and then released into the National Grid when the power is needed most. The BESS at Flaxlands Solar Farm would facilitate the storage of solar energy and supply power even when the sun doesn't shine. The battery storage uses computerised control systems to release energy during times of peak demand, helping to keep electricity flowing.

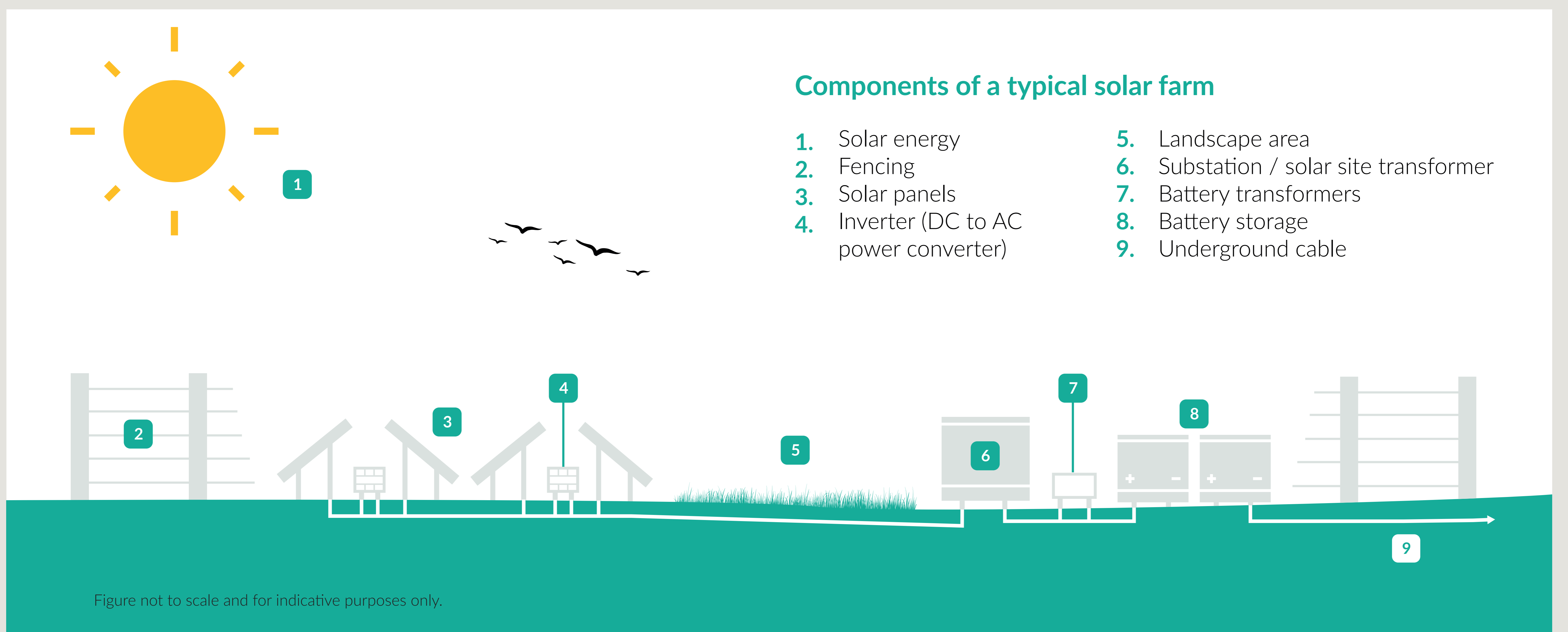


Figure 5: Example diagram of the typical components of a solar farm

Environment

We are mindful of the existing environmental context of the site. We are undertaking a number of surveys to ensure we understand the potential impacts the proposed solar farm may have.



Surveys are being carried out to assess Flaxlands Solar Farm's likely effects on the environment, landscape, heritage and local community. We are also looking at ways to enhance local ecology and biodiversity through the project.

Ecology and biodiversity

Conserving and enhancing the biodiversity around Flaxlands Solar Farm is important to us. We are undertaking surveys to understand if there are any protected wildlife and habitats at the site, as well as to identify any mitigation required to minimise impacts on them. Our surveys are still ongoing, but we are confident that with appropriate mitigation we do not expect Flaxlands Solar Farm to have significant impact on the local ecology, wildlife or habitats of the area.

Within the site, we will have a combination of solar panels and areas allocated and maintained specifically for ecological enhancement to protect the ecology of the site.

We will also be working to enhance the natural environment through our work at Flaxlands Solar Farm. Some options we are considering include:

- Site boundaries will be reinforced with native hedgerow species and trees - maintaining space between the solar farm and BESS from natural features within and outside the site.
- A 5m hedgerow buffer will be applied to the majority of the site and where we need to remove hedgerows, replanting will occur elsewhere on site.
- A 10m buffer will be applied between to watercourses, and a 15m buffer will be applied to ponds.
- Where possible we will support, maintain and enhance connectivity between habitats on the site and the wider landscape.

We commit to delivering at least a 10% biodiversity net gain through habitat enhancement onsite, and it is currently expected that this can be substantially bettered through hedge and tree planting, bird mitigation and enhancement areas, and the planting of species rich grassland under the solar PV areas.



Agriculture

We know that food security is important. The next big challenge to our food supply is expected to be caused by climate change, so addressing this by using solar energy, will improve our food security.

The land proposed for the Flaxlands Solar Farm site is predominantly greenfield agricultural land, with the majority classified as Grade 3b "moderate" with areas of Grade 3a "good to moderate" land.

It is possible for the site to retain its agricultural use for the life of the solar farm, using the land between and underneath the panels. We are happy to work with willing sheep farmers to deliver sheep grazing in the operational solar farm.

After 40 years, the solar farm will be decommissioned and the land returned to the landowner ready for arable use. It is expected that the soil condition will be much improved following four decades of sensitive management.



Noise

Solar panels themselves do not make any noise and there are no known health issues associated with being near solar developments. When the solar farm is operational, low levels of noise can be generated by the electrical system, such as from the inverters, which can sound like a quiet buzz or fan noise, which decreases rapidly with distance from the infrastructure. The inverters will be located at least 250m away from the Public Right of Way (PRoW) and nearby properties to minimise noise impacts. The Battery Energy Storage Site (BESS) will be located around 10m away from the PRoW network to minimise noise impacts to those using the PRoW. We're also undertaking detailed noise modelling to understand any likely noise impacts on surrounding communities.

The construction of the solar farm will take approximately 6 months, as minimal digging is required. The potential effects of noise and vibration during construction will be limited to specific locations within the site and only for short periods. We will make the community aware when works are likely to take place and details of our limited working hours will be set out in our planning application.

Environment

Traffic

During construction, there is likely to be more traffic due to materials being delivered to the site. We estimate an average of five HGV arrivals and departures per day. This is considered very low volumes of traffic; however, we will ensure appropriate and proportionate management measures are implemented via a Construction Traffic Management Plan (CTMP) (or similar) which we will include as part of our planning application.

When the solar farm is operational, additional traffic would be limited to maintenance vehicles visiting the site monthly.

During the construction phase, access will be via the M4 J16, then following the A3102, before heading north on Greatfield Lane past the village of Hook, before turning left on Flaxlands Lane.

Flooding

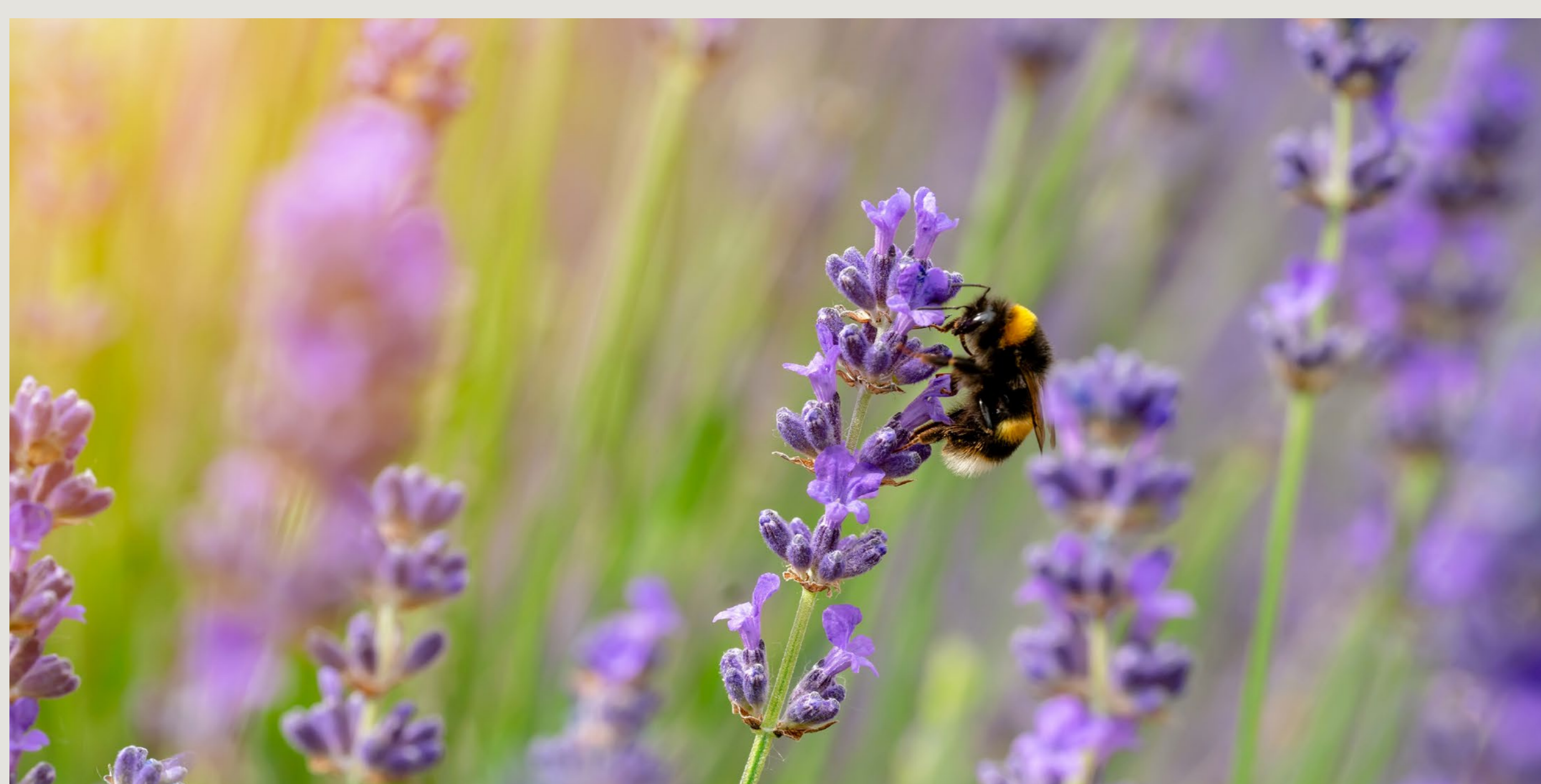
Rivers and water courses near the development will not be impacted by the solar farm's development. Maintaining and managing the grass below the solar panels will ensure that the land will remain permeable, meaning surface water can pass through the land easily and prevent surface water flooding.

The site is located within Flood Zone 1 (land assessed as having a less than 1 in 1,000 annual probability of river or sea flooding) and has been identified to be at a very low risk to surface water flooding.

As part of our planning application, we will submit a Flood Risk Assessment and Drainage Strategy, which will demonstrate that the site will not be affected by flood risk, nor affect flood risk elsewhere. It will also demonstrate how any residual risk of flooding will be managed.



Figure 6: Solar panel maintenance being undertaken



Heritage

Heritage assets are divided into two categories: designated assets (these have national protection due to their significance) or non-designated assets (these are identified by the local planning authority as having local interest).

While there are no World Heritage Sites, Scheduled Monuments, Registered Battlefields or Conservation Areas within 1km of the site. We have identified:

- Eight Grade II Listed Buildings within 1km; and,
- One Registered Park and Garden, Lydiard Park, 960m east of the site.

We have also identified a few heritage assets located within 2km of the site, including:

- Ringsbury Camp hillfort Scheduled Monument located 1.2km northeast of the site;
- Rabbit warren east of Woodlane Farm located 1.6km west from the site; and,
- Lydiard Green and Wootton Bassett Conservation Areas are within 2km.

Alongside these, we have identified five non-designated assets:

- Infilled Post-Medieval Quarry in the northernmost part of the site;
- Ridge and Furrow Ploughing in the southeast of the eastern part of the site;
- Former Post-Medieval Field Boundary to the southeast; and,
- Two WWII Anti-Tank Ditch continuations – one south of Flaxlands Lane and one west of Morris Copse.

In our planning application we will include a Heritage Assessment that assesses any potential impacts on the setting and character of heritage sites. We will be undertaking geophysical surveys on the land to help identify the potential for undiscovered archaeological remains. We will then conduct any further archaeological evaluation and/or a mitigation strategy as required by Wiltshire Council's archaeologist.

Community benefits and next steps

This consultation is your opportunity to shape our proposal before we submit a planning application next year.

Community benefits

We are looking at ways to ensure the local community benefits from the development of the solar farm. This could include:

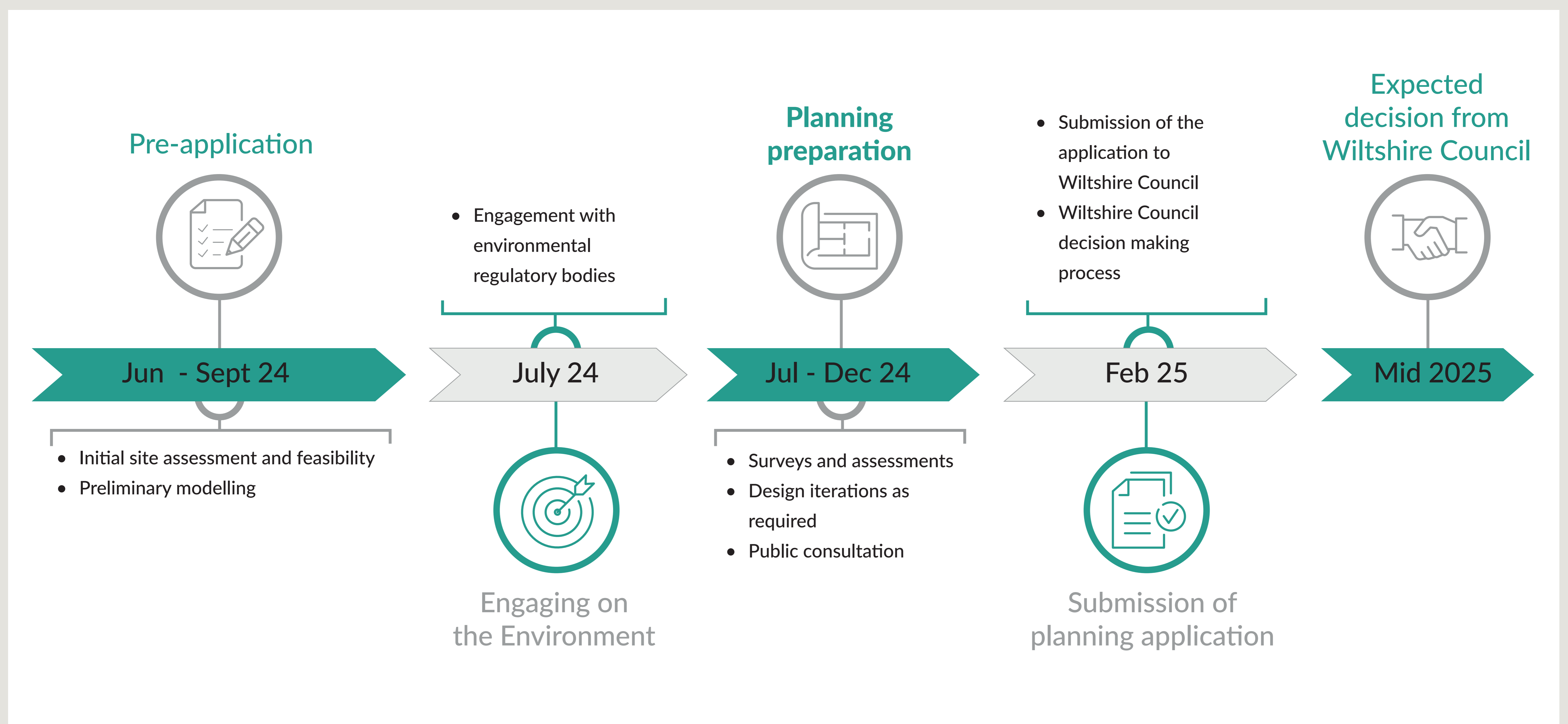
- A Community Benefit Fund to support local projects, initiatives, or community cooperative electricity
- Creating opportunities for local businesses in the supply chain

Timeframes and next steps

We are currently undertaking surveys and assessments, which will inform our proposal alongside the outputs from this consultation. We will then submit a planning application to Wiltshire Council early next year.

Once the planning application is submitted, Wiltshire Council will host a statutory consultation, where you will be able to comment further, directly to the council. At this point, we will also share an update with the local community on how feedback has influenced our proposal.

Should planning permission be granted, we anticipate construction will take 24 weeks to complete.



This consultation is your opportunity to fully understand our proposal, ask us questions, and share your feedback on our proposal for Flaxlands Solar Farm. We will consider all feedback received and use it to inform our proposal. We would also like to hear suggestions on how we can deliver community benefits through the scheme.

This consultation is running until **23:59 on 3 December 2024**. You can share your views on the project using any of the following methods.

- **Online:** using the online form at www.flaxlandssolar.co.uk
- **Email:** using the scheme email address, flaxlands-solar@aecom.com
- **Post:** using the scheme Freepost address, **Freepost ASE**
- **At this event:** by filling in a hard copy form and submitting it to a member of the project team

We will stay in touch through the development of the scheme, including through our website: www.flaxlandssolar.co.uk

Decommissioning

The development will be temporary, with an initial operational period of 40 years. At the end of the development's lifespan, the site will be decommissioned with the land returned to the landowner in a state ready for arable use.