

# Introduction

## Welcome to our public consultation on Cotes Heath Solar.

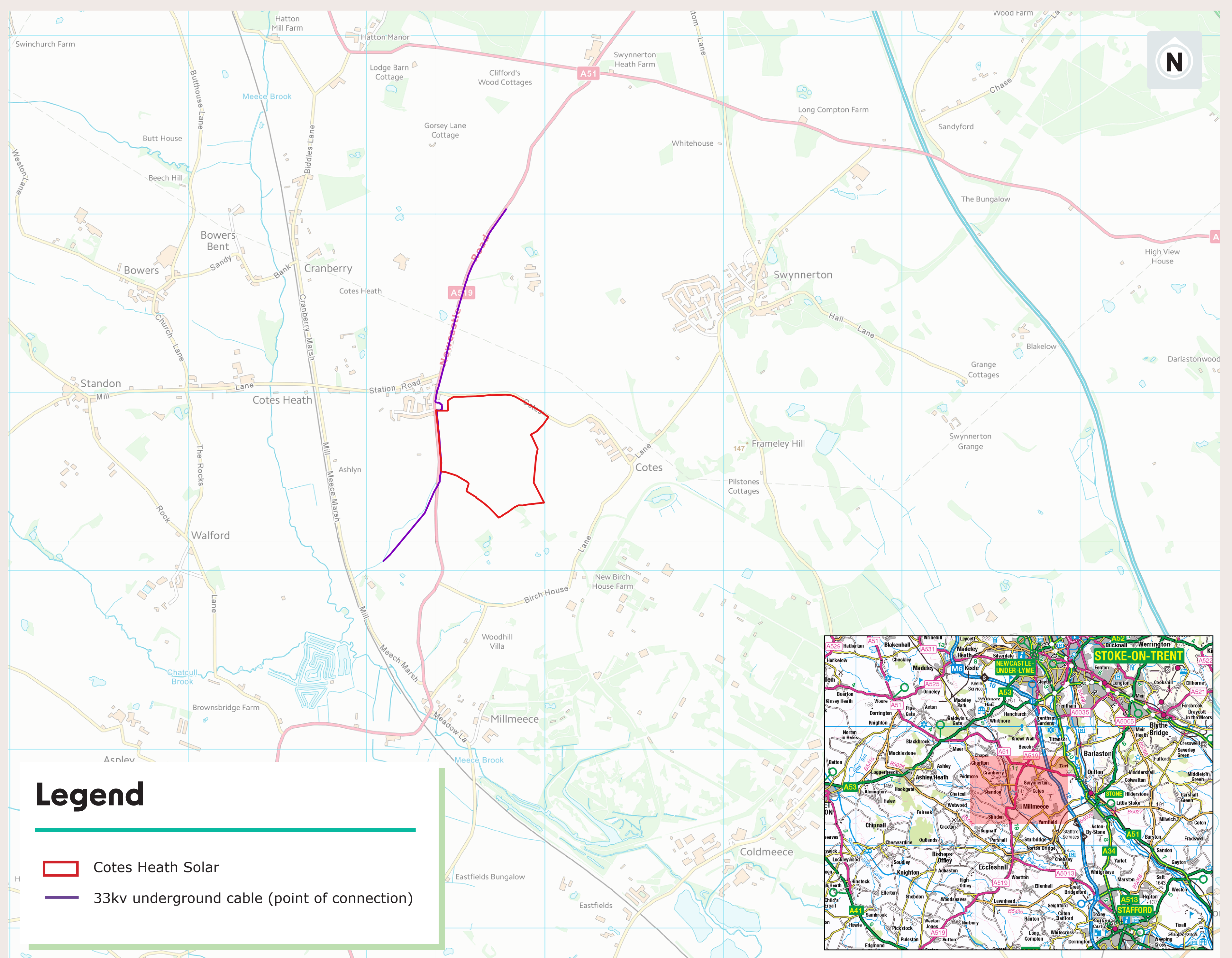
Ampyr Solar Europe (ASE) is developing a proposal for a solar development to the southeast of the village of Cotes Heath in Staffordshire. The proposed solar development will cover approximately **24 hectares (ha)** within the overall **30 hectare site**.

We anticipate the solar development being able to generate up to **15 megawatts (MW)** of renewable energy that would be exported to the local grid, supplying the equivalent electricity needs of approximately **7,400 homes a year**.

The clean energy generated will save on average **5,100 tonnes of CO<sub>2</sub> per year**, which adds up to over **250,000 tonnes of CO<sub>2</sub> over the next 50 years**.



Cotes Heath Solar Development site as it is currently, looking northwest



Potential Cotes Heath Solar development location (© Google Maps 2024)

## Why do we need the solar development?



The UK is transitioning to zero and low carbon sources of power. All coal-fired power stations 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, and on 23 July 2019 Stafford Borough Council declared a climate emergency.



By 2050 the UK is expected by National Grid to be using double the amount of electricity than we do today. For example, the growth in electric vehicle ownership has grown thirty-fold 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 has operational solar farms across the UK, Netherlands and Germany, with multiple projects in different stages of development throughout the UK.

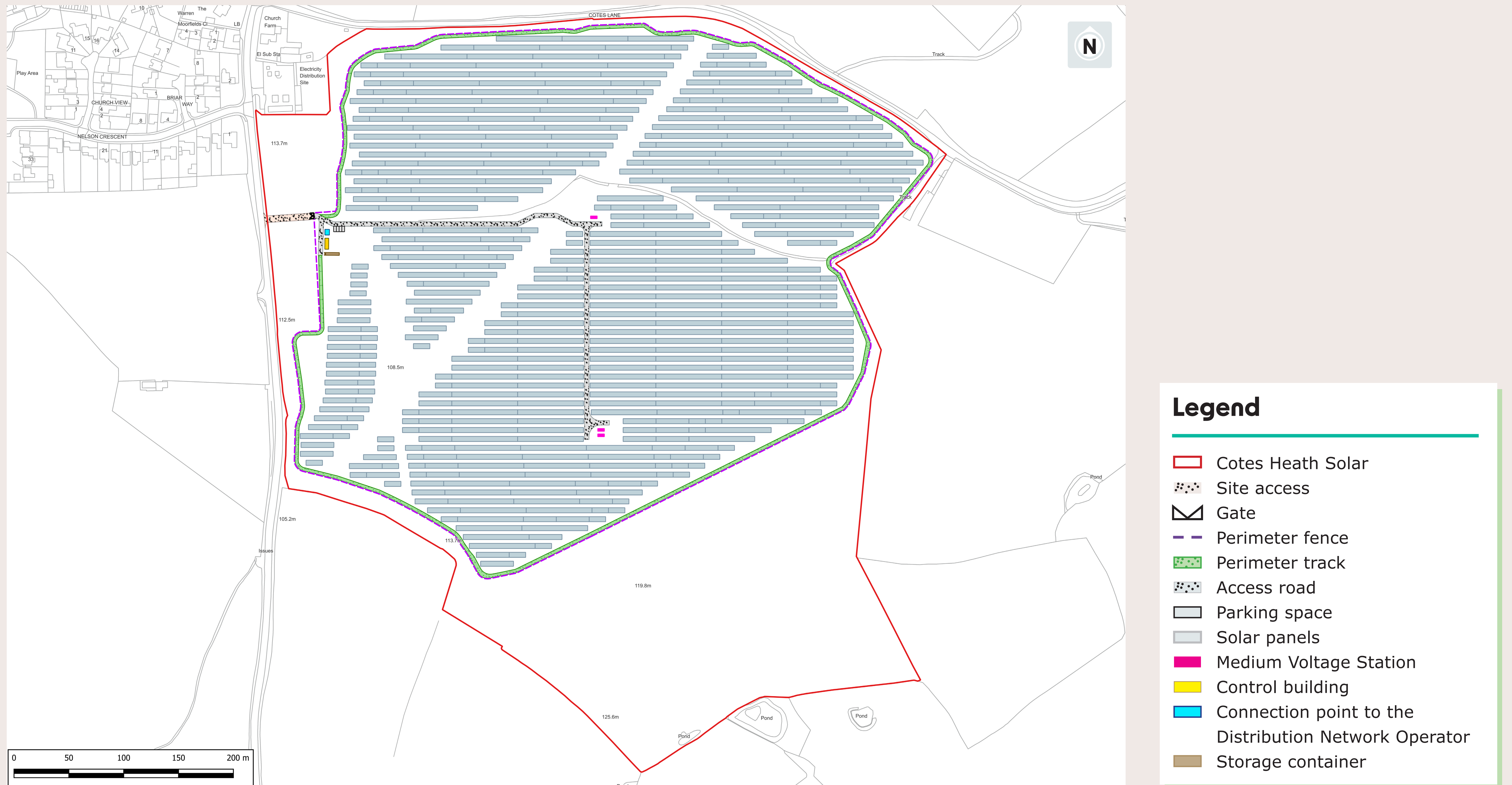


Example image of a fixed tilt solar development



# Our proposals

Our proposal is for a new solar development on land to the southeast of the village of Cotes Heath, with an expected export capacity of up to 15 megawatts (MW). The solar panels would cover 24 hectares within a 30 hectare site.



The layout of the site has been designed, where possible, to protect local views and 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 the site.

## The solar development

- Fixed-tilt solar photovoltaic panels. This means that they are fixed in position facing south and do not move during the day.
- 1,350 solar PV modules, with a power export capacity of up to 15 MW.
- Solar panels set on lightweight frames in rows spaced 2 to 6m apart depending on topography, 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 to be suitable for the UK national electricity network ("the grid") via on-site inverters and transformers.
- An on-site substation and site facility, which includes a control room and components storage.
- A boundary fence up to 2m high (e.g. post-and-wire deer fence), and CCTV cameras and a thermal imaging detection system located on 3m high poles, set at approximately 50 to 100m intervals on average around the site perimeter. No permanent lighting will be required.
- Internal access tracks as either aggregate or compressed earth (grassed over) through the field to enable operation and maintenance.
- Ecology mitigation and enhancement areas to protect the ecology and habitats of the site.
- The substation, inverters, and transformers will be located away from potential noise receptors such as residents or pedestrians and cyclists.
- Existing hedgerows will be maintained and enhanced to screen the site from external views, and also provide biodiversity benefits. Where there are existing gaps in the hedgerow, additional infill planting with native hedgerow species would be considered to improve screening and enhanced biodiversity benefit. Any further landscaping requirements would be proposed by a project landscape architect following completion of a landscape and visual appraisal.



Close up image of solar panel

## Site selection

We have carefully considered the best location for the solar development, 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 15MW connection agreement was secured with National Grid at the nearby Cotes Heath Substation. The point of connection is via a proposed 33kv underground cable.
- 2. Conducting a desktop assessment.** Desktop assessments have been carried out to find suitable areas for the solar panels. This considered national and local designations, ecology and heritage constraints, flood risk, agricultural land classification, neighbouring land use and committed planning developments, visual impacts, and proximity to homes.
- 3. Identifying 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. Carrying 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 environmental surveys.



# How will it look and how does it work?

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

We have been mindful of situating our proposals carefully to reduce their overall impact on both the environment and the community. This board explains how the solar development may look, as well as how the solar panels would work.

## How will it look?

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

**Height:** The solar development will range from 0.6m in height at the base of the panel, to no more than 3m above the ground. This means that the visual effects of the solar development will be limited for the communities surrounding the site. We will be situating the panels in the lower elevation parts of the site, to minimise visibility as much as possible.

**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 cover a 500m buffer from the site boundary and consideration of aviation receptors further afield.

**Screening:** Existing hedgerows and trees will be maintained, with the boundary hedgerows reinforced where needed, which will also provide wildlife benefits. We will be developing a landscaping plan informed by a Landscape and Visual Assessment, which will be submitted with our planning application.

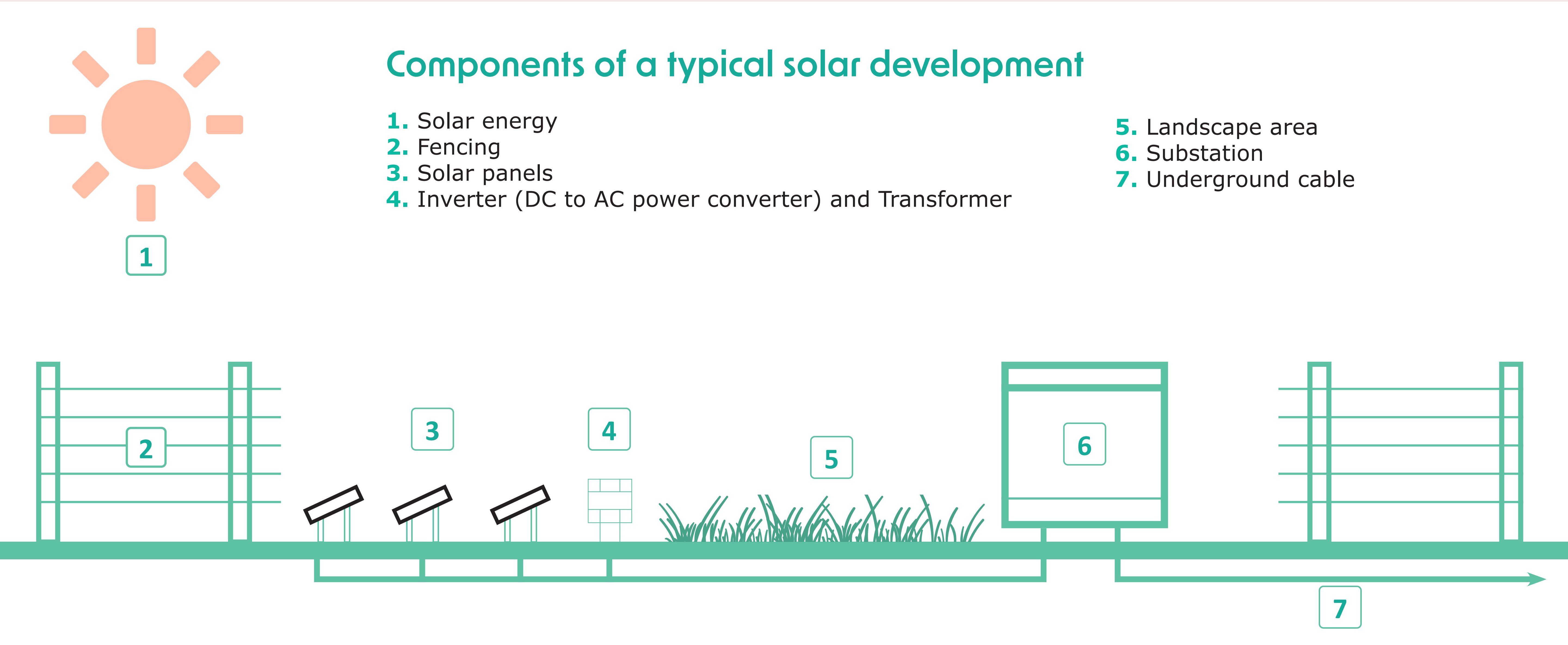
## How does it work?

**Solar panels:** Solar panels are made 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 local grid, or directly to large local power users. See the diagram below for an illustration of this process.

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



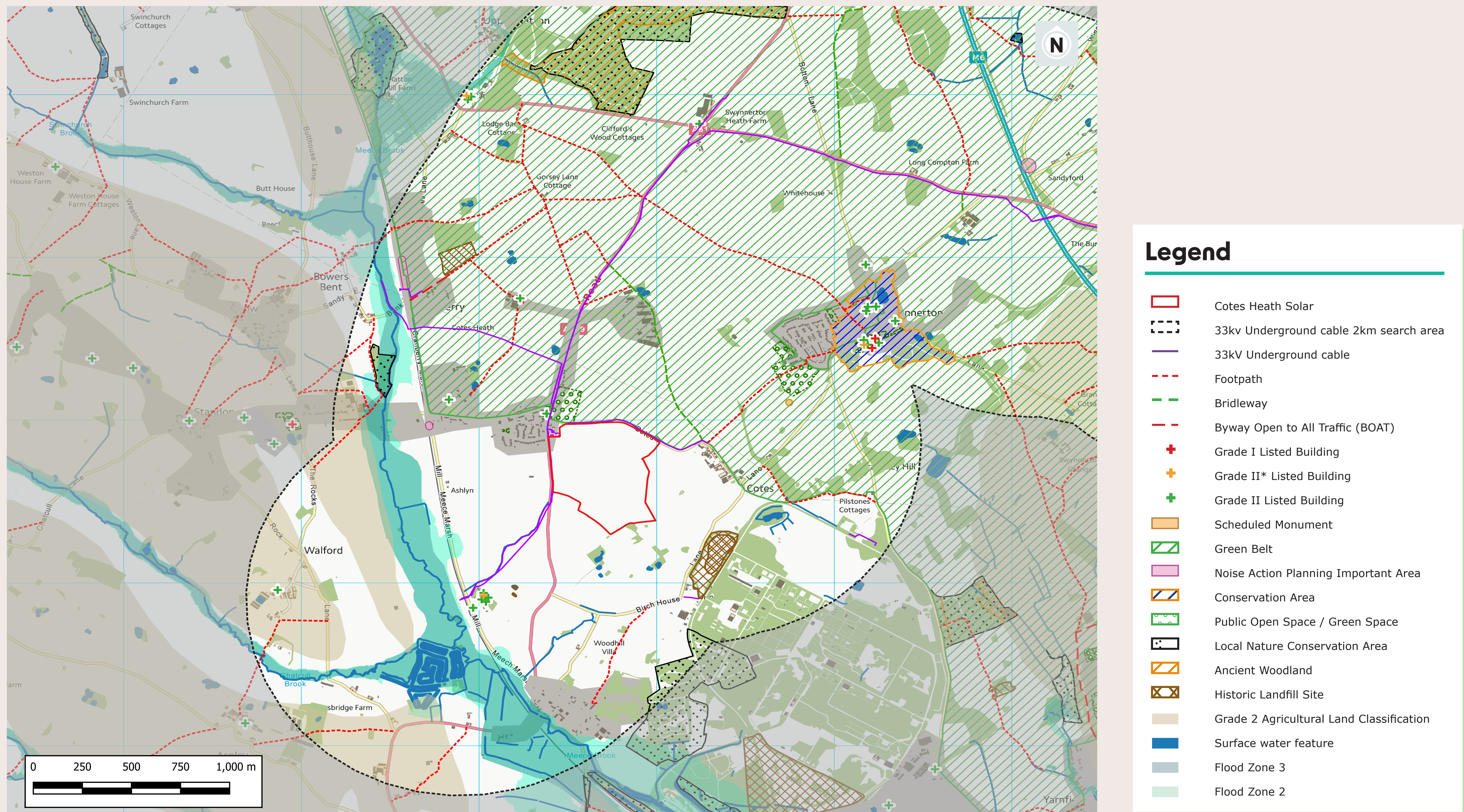
Components of the proposed solar development



# Environment

We are mindful of the existing environmental context of the site. We are undertaking essential surveys to make sure we understand any of the impacts the proposed solar development may have.

Some of the key environmental features and conditions within and around the site are shown on this board. Further to this, surveys are being carried out to assess Cotes Heath Solar'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.



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## 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 Cotes Heath Solar site has been assessed through an Agricultural Land Classification (ALC) grading. The land is Grade 2 and Grade 3b, which falls within the definition of Best and Most Versatile Agricultural Land, as set out in the National Planning Policy Framework. An explanation of why the temporary loss of this land to farming is justified will be submitted with the application.

We are working closely with the current landowner on our proposal. ASE will seek to enhance biodiversity through wildflower meadow grassland or tree or shrub planting and maintenance at the site. There is potential for sheep farming and grazing between and beneath the solar panels.

After 50 years, the solar development will be decommissioned, and the land returned to the land-owner ready for arable use. It is expected that the soil condition will be much improved following five decades of sensitive management.

## Flooding

The site is located in Flood Zone 1, and the majority of the site is located in an area of very low risk of surface water flooding, with a small section at low risk of flooding. Drains and water courses near the development will not be impacted by the solar development. Maintaining the grass below the site itself wherever possible will ensure that the land will remain permeable, meaning surface water can pass through easily.

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.





# Environment

## Ecology and biodiversity

Conserving and enhancing the biodiversity around Cotes Heath Solar 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. So far, these surveys have concluded that the solar development will not have a significant impact on the local ecology, wildlife or habitats of the area. The site also does not contain any protected, ancient or veteran trees.

The site will have a combination of solar panels and areas of ecological mitigation to protect the ecology of the site and its ecological value to the wider area.

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

- Ecological mitigation area; and
- Maintenance and planting of hedgerows

## Traffic

During construction, there is likely to be more traffic due to materials being delivered to the site but, when the solar development is operational, additional traffic would be limited to maintenance vehicles less than once a week on average.

During the construction phase, access to the site will be directly from the A519 (N), before approaching the A519 / A51 priority controlled roundabout junction. The site will be accessed by either using an existing field access or via a newly created access. We will aim to avoid the loss of any existing hedgerow should a new access be required.

Site traffic will consist of HGVs, light goods vehicles and cars. Movements during the construction phase are expected to have a minimal impact on the safety or operation of the local highway network, and a traffic management plan will be submitted as part of our application, as part of the Construction Traffic Management Plan and Transport Statement.

Traffic management measures may be implemented for cable installation works, however these will be short-term and are not likely to cause significant disruption. We will also consider any cumulative impacts from other nearby works.

## 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 development is operational, low levels of noise can be generated by the electrical system, such as from the transformers and inverters, which can sound like a quiet buzz or fan noise, which decreases rapidly with distance from this infrastructure. We propose to use Medium Voltage Stations (MVS), which combine the transformers and inverters into these units and minimise the number of inverters needed on-site. The MVS will be located away from nearby properties, at a distance confirmed by acoustic specialists and/or assessment as required, to minimise noise impacts. Detailed noise modelling will confirm any likely noise impacts on surrounding communities.

The construction of the solar development will take place quickly, 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.

## Heritage

Direct impacts on the heritage of the area are unlikely and there are no Conservation Areas, statutorily Listed Buildings, or Scheduled Monuments within the site. The planning application will include a Heritage Assessment that assesses any potential impacts on the setting and character of heritage sites, and the potential for undiscovered archaeological remains.





# Community benefits and next steps

## Community benefits

We are looking at ways to help ensure the local community benefits from the development of the solar development. 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

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

This consultation is your opportunity to fully understand our proposal, ask us questions, and share your feedback on our proposal for a solar development to the southeast of Cotes Heath. 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 11 February**. You can share your views on the project in one of the following ways.

- **Online:** using the online form at [www.cotesheathsolar.co.uk](http://www.cotesheathsolar.co.uk)
- **Email:** using the scheme email address, [cotesheathsolar@aecom.com](mailto:cotesheathsolar@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 scheme website: [www.cotesheathsolar.co.uk](http://www.cotesheathsolar.co.uk)

## Timeframes and next steps

We are currently doing surveys and assessments, which will inform our proposal alongside the outputs from this consultation. We will then submit a planning application to Stafford Borough Council later this year.

Once the planning application is submitted, Stafford Borough 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, the main construction period would likely be in around 2032. We anticipate that construction will then take around 20 to 30 weeks to complete.

## Decommissioning

The development will be temporary, with an initial operational period of 50 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, and with improved soil quality following five decades of sensitive soil management.

