

# Welcome

Thank you for taking the time to learn more about our plans for One Earth Solar Farm.

One Earth is a proposed new solar farm with associated Battery Storage located at the border of Nottinghamshire and Lincolnshire. The project would connect into the existing National Grid substation at High Marnham, also in Nottinghamshire.

Because the project would generate more than 50MW of energy, it is considered a Nationally Significant Infrastructure Project (NSIP). This means that we will submit an application for a Development Consent Order (DCO) to the Secretary of State for a decision rather than the local authority.

We are at an early stage in developing our plans. We're holding this consultation now so that we can hear from you and develop a design that has been shaped by your feedback.

This is only the first phase of consultation. We'll hold a further consultation on our detailed design before we submit an application to the Secretary of State for Energy Security and Net Zero.

We value your feedback. We invite you to read and review the information presented in this event about the project, ask questions of the project team and provide your views by 8 November.





# The Project Partners

One Earth Solar Farm is being brought forward by One Earth Solar Farm Ltd. This is a joint venture between PS Renewables and Ørsted.

Both companies have a wealth of experience in delivering the new sources of clean and secure renewable energy that the UK needs. The partners also have a track record of working with communities to shape project design and to establish local benefits.

## PS Renewables

Established in 2012, PS Renewables has rapidly become one of the UK's largest renewable energy Development and Construction companies. Alongside an existing solar farm portfolio totalling over 300MW, PS Renewables is one of the UK's largest developers of solar Nationally Significant Infrastructure Projects (NSIPs) – including Longfield Solar Farm, which received consent earlier this year.

## Ørsted

Ørsted is taking tangible action to create a world that runs entirely on green energy. Within the UK, Ørsted is a leading offshore wind developer. It presently operates 12 offshore wind farms alongside onshore wind farms in Scotland and energy storage.

Ørsted is committed to ensuring that its presence contributes to sustainable growth and development, helping to support UK net zero targets and benefit the communities in which it operates.

## The project team

PS Renewables and Ørsted are being supported on the One Earth Solar Farm project by an experienced team of national infrastructure specialists covering design, planning, landscaping, ecology and consultation topics.

**£23** billion invested in infrastructure and assets in East Midlands and The Humber by **2030**



**4** solar NSIPs in planning or consented



More than **300MW** of solar farms in operation

The Ørsted logo, consisting of a blue circle with a white power symbol inside, followed by the word 'Orsted' in a bold, blue sans-serif font.The PS Renewables logo, featuring a stylized globe icon with orange, green, and blue segments, followed by the text 'PS Renewables' in a blue sans-serif font.



# Why do we need One Earth?

Over the next three decades, we need to undergo a clean energy transformation to combat climate change and enhance energy security.

We must change the way we power our homes and businesses, get around and manage our resources while boosting our supply of clean energy.

The UK has committed to reducing carbon emissions to net-zero by 2050 and fully decarbonising the power supply by 2035.

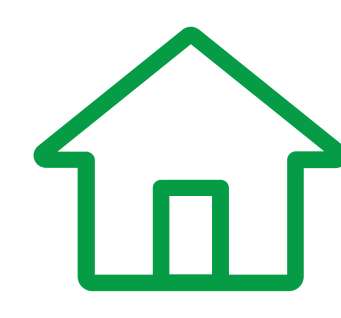
This means that older forms of power generation, such as the coal-fired power station at High Marnham, are being taken out of use and need to be replaced with renewable energy sources.

In addition to increasing production from other renewable sources, we must increase production of solar power by five-fold to achieve these goals.

At the same time, we will rely more and more on electricity in our daily lives. As petrol cars and gas boilers are being phased out, electricity will play a much bigger role in powering our vehicles, and heating our homes, schools, hospitals and businesses.

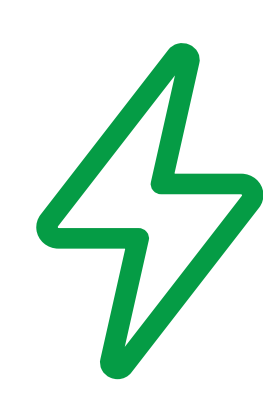
That means there is an urgent need for clean, affordable ways of generating energy. Solar farms like One Earth can play a major part in helping to meet that need. Solar farms can be built quickly and reliably to generate renewable electricity for the UK.

Including battery storage in the proposals allows us to make more efficient use of the energy from solar panels, so we can store energy at times of low demand and release it when it is needed.



## More than 200,000

The project could meet the energy needs of more than 200,000 homes annually



## 740MW

We have secured a 740MW grid connection agreement with the National Grid





# Elements of a solar farm

The solar farm will be made up of the following elements:

**(1) Solar Photovoltaic (PV) panels –**

Ground-mounted solar panels will collect energy from sunlight and turn it into electricity in the form of direct current (DC). For One Earth, we are expecting the maximum height of the top of the panels to be no more than 3.8 metres. The panels would be arranged in rows with gaps between them to allow access for maintenance and where possible, to allow sheep to graze and grass to grow underneath.

**(2) On-site cabling –** The project will include underground cabling to connect the solar PV panels to other parts of the solar farm.

**(3) Solar inverter stations –**

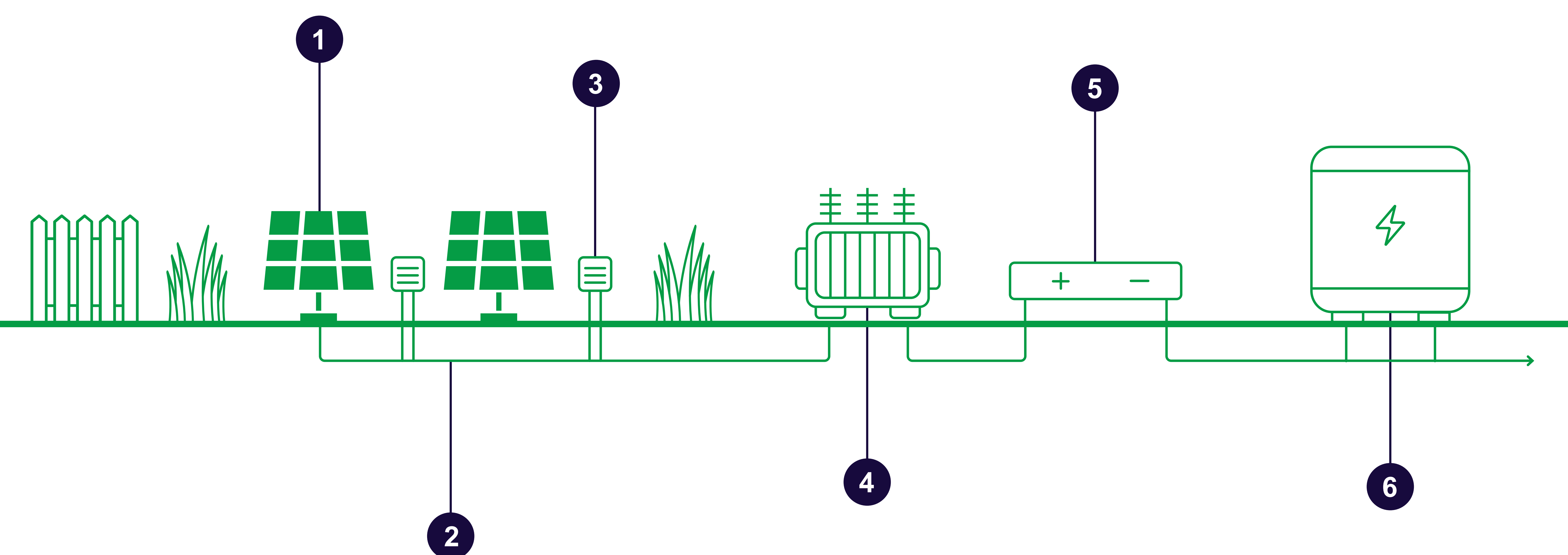
The purpose of these stations is to convert the direct current (DC) electricity generated by the panels to alternating current (AC) electricity that is suitable for the national electricity grid. We also need to make sure that the voltage of the energy is suitable for transfer to the national electricity grid. This is done through a process known as ‘stepping up’ the voltage. The stations are made up of several elements including an inverter (which converts the electricity), transformer (which steps the electricity up) and switchgear (which controls the electrical equipment).

**(4) On-site substation –** Once the electricity is in an appropriate condition to join the national electricity grid, it travels through an on-site substation to an underground cable.

**(5) Battery Energy Storage System (BESS) –**

The BESS will be housed in storage containers located close to the on-site substations. The BESS will improve the efficiency of the solar panels by storing the solar energy and releasing it to the grid when it is needed most. Additionally, the BESS will also be able to help balance the grid by storing energy during periods of low demand (when it could otherwise be wasted) and releasing it to the grid when homes and businesses most need it.

**(6) Grid connection –** This is the point where the electricity joins up with the national electricity system at the existing substation in High Marnham. From here it can power homes and businesses locally and nationwide.





# Why have we chosen this location?

The availability of the grid connection point at High Marnham is the starting point for identifying the location of One Earth Solar Farm. We also considered important factors such as the level of sunshine, topography, and distance from the grid connection to identify potential land parcels.

Based on our early assessments, we believe this site to be a good location for a solar farm. You can see the early masterplan that we've prepared on the following boards.

Our next step is to carry out a detailed Environmental Impact Assessment (EIA) and refine our design through further consultation, to make sure that it is appropriate and sustainable.

Now that we have identified a suitable grid connection, we are looking at land which is available and suitable for hosting a solar farm. The placement of solar components on the project site will be driven by several factors, including:

## Distance from the point of connection

Locating solar components closer to the point of connection minimises energy loss as it only needs to move a short distance to join the National Grid. It also reduces the cabling work and resources such as copper and aluminium that this requires.

## Suitable levels of sunshine

Land that receives enough sunlight to enable the solar power panels to generate a good amount of electricity is important.

## Land

We need land that is low lying or gently undulating to install the solar panels.

## Constraints

We seek to avoid locating solar farms where they may negatively impact the local environment, heritage or landscape.



## Agricultural land classification (ALC)

Planning guidance advises that solar development avoids land classified as 'best and most versatile' (BMV), where possible, this being land graded as 1, 2 or 3a. We will carry out an assessment of the agricultural land within the project site, which will influence which areas we propose for our solar panels and batteries.

## Access

We need to be able to access solar farms safely and efficiently. We need to ensure that the site is highly accessible for the type and number of vehicles we expect will need to get to the site.





# The Planning Process

One Earth Solar Farm will be classified as a Nationally Significant Infrastructure Project (NSIP) because it would generate more than 50MW of electricity.

The planning process for NSIPs requires that we apply for and obtain a Development Consent Order (DCO) to be allowed to build, operate and decommission the solar farm. This application needs to be made to the Secretary of State for Energy Security and Net Zero rather than to a local council.

The DCO application process is managed by the Planning Inspectorate on behalf of the Secretary of State. The stages that a DCO application must pass through involve extensive consultation and local involvement. We are currently at the non-statutory consultation stage. Following this, we will consider the feedback that we receive and further refine the project design.

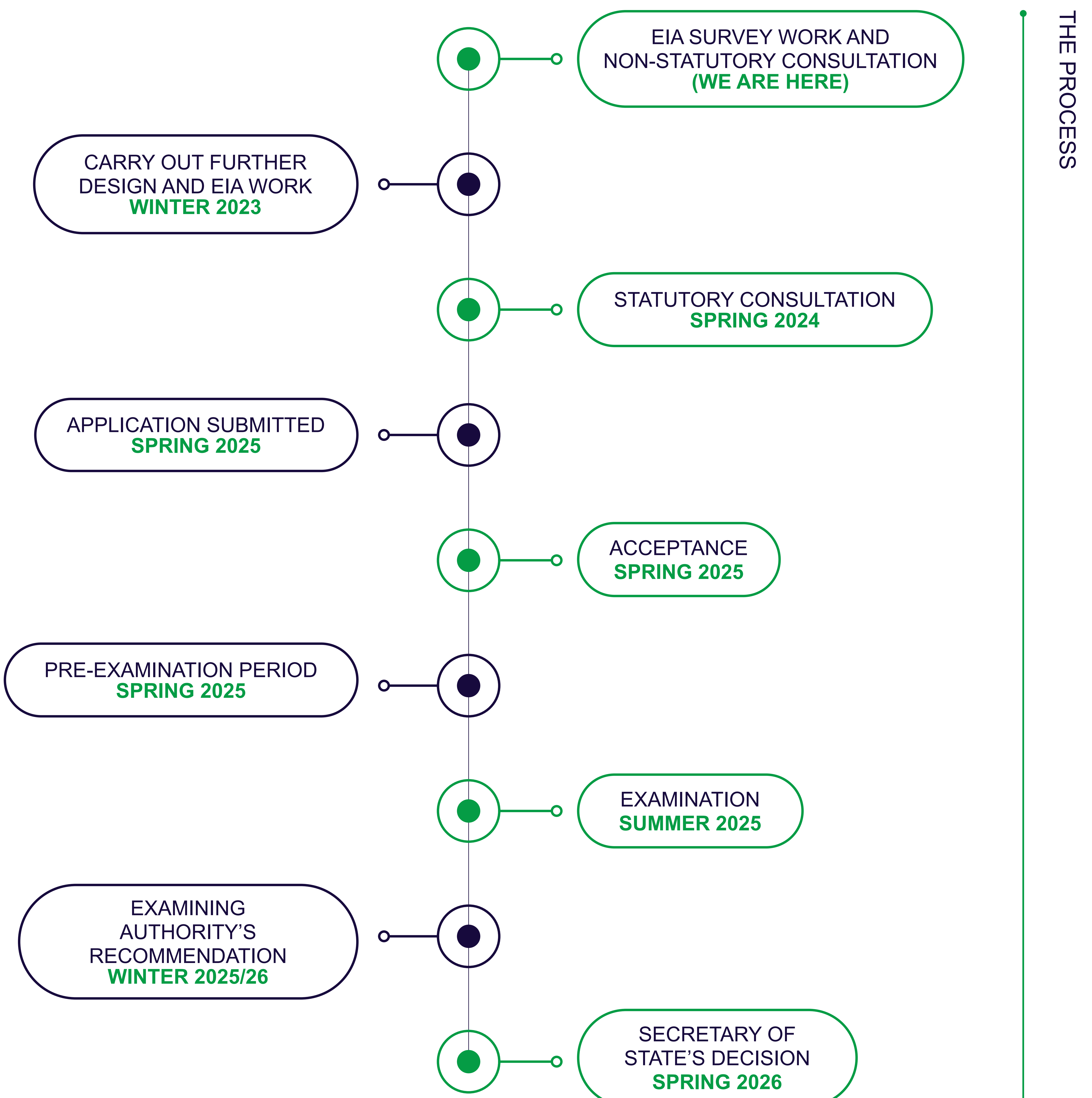
Once this non-statutory consultation has concluded, we will then carry out further environmental assessments and move to the statutory consultation stage.

At this point we will publish a more detailed design for you to review and comment on as well as the preliminary results of our EIA.

As soon as this is completed, we consider all the feedback that we receive and carry out further design work. We are aiming to then submit a DCO application around the end of 2024.

Once we have submitted the application, the Planning Inspectorate will review it and decide whether it can be accepted for Examination.

If the application is accepted for Examination, an independent examining authority will be appointed to examine the application and to make a recommendation to the Secretary of State. Once a recommendation has been made, the Secretary of State will then decide whether the application can proceed.





# Early Masterplan

Within the masterplan, you will see that we have already started to identify features that our design must respond to.

## Neighbouring villages and homes

We have included a minimum distance between the panels and villages including North Clifton, South Clifton, Ragnall, Fledborough, Dunham and Newton on Trent. We have also started to look at planting at the boundaries of neighbouring homes and businesses.

## Avoiding areas alongside the river

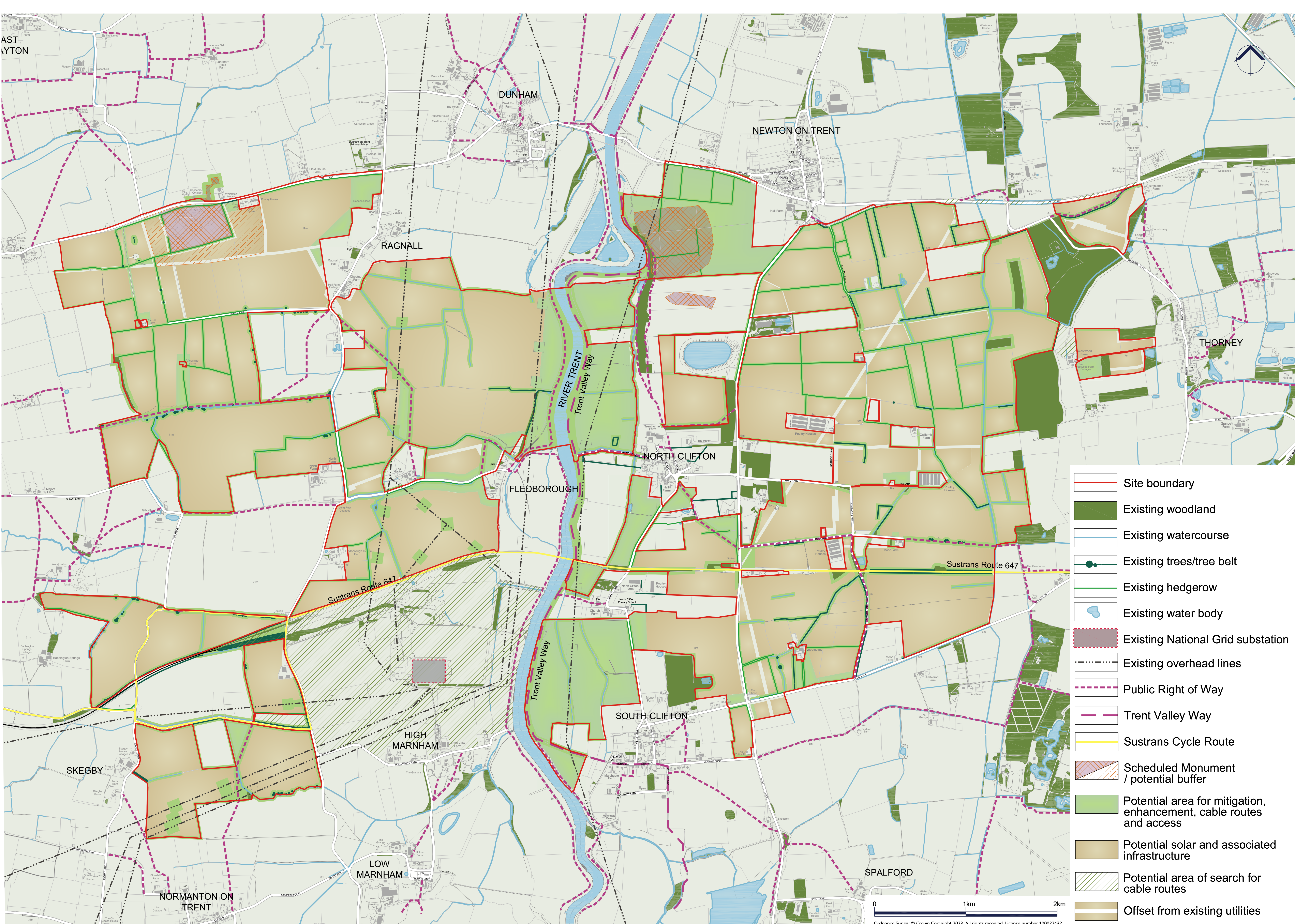
Our initial work looking into flood risk has identified several areas close to the river that are prone to flooding and that may be unsuitable for solar development.

## Offsets from conservation areas and Scheduled Monuments

We have identified a medieval village and Roman Fort within the site boundary. These are marked as Scheduled Monuments within the draft masterplan. We will avoid using these areas for solar generation and are looking at ways in which public access to them can be enhanced.

## BESS locations

At this stage of the project, the location of the BESS has not been identified as we are currently considering the most suitable locations. We will situate the BESS in areas to minimise any potential visual or noise impacts on the local population, and also avoid areas of high flood risk from the River Trent. The location of the BESS will also avoid and/or provide suitable separation distances to residential properties, public rights of way, sensitive habitats and archaeology (including the Scheduled Monuments). We will present updated design information at the next stage of consultation.





# Construction, Operations and Decommissioning

## Construction

At this time, we are proposing to access the site from the A57 and A1133 during construction. We will engage with Nottinghamshire County Council and Lincolnshire County Council to further develop our proposals and will amend them where necessary. A detailed Transport Assessment will be provided in support of the application. This will include information relating to construction vehicle movements, their potential impact on the surrounding road network and what measures to reduce impacts will be provided to assist local residents and businesses.

Once they have left the public road network and entered the site, vehicles would use existing farm gateways and access tracks where possible. During the initial construction phase, we would establish temporary construction compounds to take delivery of materials, store equipment and provide staff welfare facilities.

As our design evolves further, we will be able to provide more detail on our proposals for construction, included expected construction timelines and our proposed mitigation measures.

## Operations

When in full operation, One Earth will require a team of engineers and ground workers to maintain and ensure the solar farm is running optimally. Generally, solar farms are “quiet neighbours” that need little interaction, other than pro-active or reactive maintenance. Many of these jobs could be sourced locally, such as electricians, local farmer for the sheep, ground workers for landscaping and hedge maintenance.

## Decommissioning

At the end of the project’s operational lifetime, it will be dismantled and decommissioned. Where infrastructure is above ground (like solar PV panels and substations), we will remove and recycle as much of it as possible. Almost all the materials within a typical solar PV panel are recyclable using existing processes. Cabling below ground is typically left in place after decommissioning, unless a need to remove it has been identified.





# Assessing environmental effects

We will be carrying out an Environmental Impact Assessment (EIA) for One Earth Solar Farm.

The Environmental Impact Assessment (EIA) will look at the project's likely environmental effects. These will include benefits as well as negative impacts. The purpose of the EIA process is to make sure that where we have identified significant impacts, we adopt measures in our design to mitigate them.

EIA is broken down into many topics that we need to assess. These include:

- Ecology
- Economic effects
- Heritage
- Hydrology and flood risk
- Landscape and visual amenity
- Land use
- Transport and access
- Health
- Noise and Vibration
- Air Quality
- Climate Change

Within each of these topics, we will be assessing the impact during the whole project lifecycle: construction, operations and decommissioning. We have included further details of the process in the consultation booklet.





# A part of the community

The partners in One Earth have a proud history of investing in the communities where they work to make sure that the benefits of the clean energy transition are also felt locally.

## Creating Jobs

Building and operating One Earth will require a wide range of skills and expertise, including site surveying, ground preparation, constructing associated infrastructure, electrical engineering, solar panel installation, landscaping, security and ecology. Where possible, we want to work to ensure those skills are developed and retained within the community.

We will engage with local authorities, businesses and education providers to develop an employment and skills plan and present more information at the next round of consultation.

## Giving Back

We recognise that projects like this may affect people who live and work nearby. Therefore, One Earth Solar Farm will establish a sponsorship fund that will be open to applications from community projects or groups in the parishes that host the project.





# Next steps

We want to hear your feedback on our proposals. Please respond by 8 November through the methods below:

You can complete our consultation questionnaire which is available online - [www.oneearthsolarfarm.co.uk](http://www.oneearthsolarfarm.co.uk) or in hardcopy. Hard copies are available at the consultation events, deposit locations or by request to our contact details.

You can also submit your feedback through the following methods:

- By email to:  
[info@oneearthsolarfarm.co.uk](mailto:info@oneearthsolarfarm.co.uk)
- By post (no stamp required) to:  
**One Earth Solar Farm,  
Freepost SEC NEWGATE UK  
LOCAL**

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## Consultation Events

We will be holding public exhibitions where you will be able to view details of our proposals, speak to members of the project team and provide your views directly at the following dates and times:

<p><b>Thursday 5 October 2023</b> <b>5pm – 8:30pm</b> St Peter's Church Newton on Trent, Lincoln LN1 2JS</p>	<p><b>Saturday 7 October 2023</b> <b>12pm – 4pm</b> South Clifton Coronation Hall, Moor Ln, South Clifton, Newark NG23 7AN</p>	<p><b>Tuesday 10 October 2023</b> <b>3:30pm – 7:30pm</b> Dunham on Trent Village Hall, Low St, Dunham, Newark NG22 0FJ</p>
<p><b>We will also host a webinar on Wednesday 11 October 2023, 6pm – 7pm.</b></p> <p><i>To register for the webinar, please visit our website: <a href="http://www.oneearthsolarfarm.co.uk">www.oneearthsolarfarm.co.uk</a></i></p>		<p><b>Thursday 12 October 2023</b> <b>3:30pm – 7:30pm</b> Normanton-on-Trent Village Hall, South Street, Normanton-on-Trent, UK, NG23 6RQ</p>



# Next steps

## After the consultation

Following the close of the non-statutory consultation, we will review the feedback that we receive.

Along with the ongoing environmental assessments, this will help us refine our proposals ahead of further consultation with you early next year.

## Contact details

You can get in touch with us by using the contact details below.  
For the latest updates, please visit our website: [www.oneearthsolarfarm.co.uk](http://www.oneearthsolarfarm.co.uk)

Freephone: **0800 169 6507**  
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