

## Welcome to our exhibition



Welcome to the statutory consultation for the proposed Beacon Fen Energy Park, a solar and battery storage development being brought forward by Beacon Fen Energy Park Ltd, as the applicant and developer of the project and who are owned by Low Carbon Limited (Low Carbon).

**Please take your time looking at all the information available here today including the Preliminary Environmental Information Report and its Non Technical Summary.**

Here you will find our latest plans for the project, including the proposed outline of the energy park, the proposed cable route area and bespoke access road. We encourage you to give written feedback on the proposals, which will help us refine our plans before submitting our application and ensure they are considerate of the local community.

**If you need any help the project team are more than happy to speak with you throughout the event.**

### Low Carbon – who we are

Low Carbon creates large-scale renewable energy to fight climate change. We're building a net zero energy company that will power tomorrow and protect the planet for future generations. Low Carbon was established with one goal in mind: to make the biggest contribution we can in the fight against climate change.

**Our commitment to the climate mission means we do not cut corners.**

We manage every asset with care. We treat our communities as real partners. We hold ourselves to account. And we invest for the long-term benefit of people and the planet.

Low Carbon was founded in 2011 to create renewable power capacity. With our strong foundation in place, we have increased our ambitions exponentially. By the end of this decade, we want to have created 20GW of new renewable energy capacity – enough to power the equivalent of 7.8 million homes\*. All of us at Low Carbon know that trust is a vital component of the climate fight.

We are a long-standing certified B-Corporation, a reflection of our fundamental ethos to balance the needs of the environment and society with our bottom line. And we always report on our goals and our business with transparency – this is core to who we are. We can work together to build a completely renewable energy system that will be a profound legacy for the generations that follow us.

**Low Carbon is on a mission. Together, we will power tomorrow.**

\* Low Carbon internal calculations using Ofgem Typical Domestic Consumption Values and BESS Carbon Conversion Factors



## The Project



**Developer Low Carbon is consulting on proposals to build a new solar and battery storage park on land to the east of Sleaford, Lincolnshire. Beacon Fen Energy Park's approximately 517-hectare solar array area is proposed approximately 2.5km north of the village of Heckington, and a cable route corridor 13km in length is proposed from the south-east of the solar array to Bicker Fen substation.**

### About the project

- Expected to generate approximately 400 megawatts (MW) of electricity
  - providing enough clean energy to power over 130,000 UK homes
  - avoiding up to 72,000 tonnes of CO<sub>2</sub> emissions annually.
- A Battery Energy Storage System (BESS) capacity of up to 600MWh.
- Building infrastructure to export the electricity generated by the energy park into the National Grid via nearby Bicker Fen substation.

The project's cable route corridor is currently undergoing environmental surveys to determine the best route. This area has been relocated and refined since our early (non-statutory) consultation and will be refined further depending on the output of additional survey assessment work and feedback from this consultation. Since early (non-statutory) consultation, we have also introduced a new proposed bespoke access road to the solar array area.

As Beacon Fen Energy Park would produce over 50MW of electricity, it is classed as a Nationally Significant Infrastructure Project (NSIP) and, therefore, we must apply for a Development Consent Order (DCO) before the project can be built.

Following the anticipated submission of the DCO application in 2024 and subject to a DCO consent then being granted in 2025;

- Construction is anticipated to begin in 2026/2027 and last approximately 24 to 36 months.
- Beacon Fen Energy Park's operational life is anticipated to be approximately 40 years.
- Decommissioning is expected to last a further 12 to 24 months, after which the solar array area would be returned to its former use as agricultural land.



## Principal components of the energy park

The main components of Beacon Fen Energy Park will be solar photovoltaic (PV) panels and equipment and the associated battery energy storage system (BESS). The proposed locations of this equipment seek to minimise any potential environmental impacts while maximising the benefits of this energy infrastructure.

### The principal components comprise:

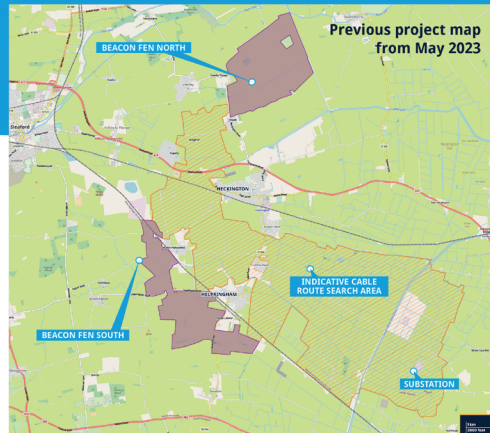
- Solar PV (photovoltaic) panels and modular ground-mounting structures. The height of the panels will be up to 4.5m, with individual panels anticipated to be up to 2.5m long and up to 1.5m wide. The proposal is for a fixed (i.e., static) panel orientation, facing due south.
- Supporting infrastructure – inverters, combiner boxes, transformers – converting the direct current to alternating current and stepping up the voltage so it can be exported to the National Grid.
- An up to 600MWh BESS adjacent to the onsite (solar array area) substation, so electricity generated or imported can be stored on-site and then released into the National Grid when it is needed most. The BESS containers and switch rooms are anticipated to be up to 12.5m long and 3m wide, with a height of up to 4.5m. It is proposed the BESS will be located in the middle of the solar array, reducing potential noise and views of the equipment.
- Onsite low voltage cabling connecting the solar PV modules and BESS to inverters, and inverters to the onsite transformers.
- Onsite cabling between PV modules and inverters anticipated to be above ground level, placed along row of racks fixed to mounting structure, placed underground, between racks and inverter. All other onsite cabling to be underground where possible.
- Higher voltage cables required between transformers and switchgear and from switchgear to the substations.
- A single onsite substation compound of up to 250m by 160m in size with a height of up to 13m within the solar PV panel area (solar array), to export electricity from the solar energy park to the National Grid.
- Fencing up to 3m tall built of post and wire, and a security fence to be up to 2.4m (+1m electrical), with security measures including pole mounted internal facing closed circuit television (CCTV) anticipated to be approximately 5m high around the solar array area. Acoustic fence (if required) up to 4m. Floodlights will not be used.
- Earthworks to form a suitable development platform for the substation and BESS.
- Water supply and drainage infrastructure including up to four freshwater storage tanks with a total capacity of 240 cubic metres.
- Landscaping and biodiversity enhancement areas around the solar array area perimeter and within the solar array area to provide visual amenity, reduce landscape impacts, and provide net gains for biodiversity.
- Areas of reinforced ground or hardstanding adjoining the BESS for occasional laydown activities or for emergency usage.

### In addition:

- During construction, temporary construction compounds will be required, as well as temporary roadways, to enable access to all the land within the energy park boundary.
- Access tracks 3.5m to 7m wide for construction access and routine maintenance when operational.
- Flood resilience measures.



## Project evolution



### Major changes since early (non-statutory) consultation;

- Removal of Beacon Fen South.
- Cable route corridor moved to east of Heckington.
- Overhead cabling ruled out of project entirely in favour of underground cabling.
- Changes to site boundary project design and introduction of proposed bespoke access road.

### At early (non-statutory) consultation, Low Carbon consulted on plans which showed Beacon Fen Energy Park spread across two sites.

- Beacon Fen North was north of the village of Heckington, while Beacon Fen South was south of Helpringham, close to the hamlet of Burton Pedwardine.
- The South site was proposed on land partially also earmarked for a new reservoir by Anglian Water.

Following talks with Anglian Water and the early (non-statutory) consultation, Beacon Fen South was removed from the project in July 2023. The decision was taken to avoid delaying the Beacon Fen project until the reservoir DCO is determined – and with it the delivery of this urgently needed renewable energy infrastructure during the climate emergency. The northern area (previously known as Beacon Fen North) remains.

The electricity generated by Beacon Fen Energy Park will be exported into National Grid's Bicker Fen substation. Following desk-based, environmental and land surveys along the proposed route, Beacon Fen Energy Park has identified a cable route corridor within which an electrical connection between the Energy Park and Bicker Fen substation will be routed. Since early (non-statutory) consultation, and the removal of Beacon Fen South from the project, the team identified broad search areas for the cable route and then reviewed the environmental constraints. This informed the selection of the preferred cable route corridor for the project on land south east of the solar array area.

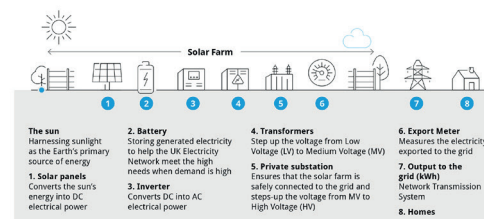


## How a solar energy park works

The UK Government has set an ambitious target of reaching net zero by 2050, and a net zero electricity system much earlier – 2035. As part of this there is an aim to increase the nation's solar capacity fivefold by 2035. Beacon Fen Energy Park would deliver a vital contribution towards these targets, delivering an estimated 400 megawatts (MW) of renewable electricity, providing enough clean energy to power over 130,000 UK homes and avoiding up to 72,000 tonnes of CO<sub>2</sub> emissions each year.

### But how exactly do solar energy parks work?

Read the handy infographic below to see how the sun is harnessed to power the planet.



Solar PV and energy storage technologies are rapidly evolving. Our project proposals for Beacon Fen Energy Park will incorporate the flexibility to allow us to use the latest technology available at the time of construction.



## Traffic and access routes

As part of our early (non-statutory) consultation, concerns were raised about the impacts of construction vehicle traffic on local roads and associated noise and safety considerations. We are now proposing a new bespoke access road.

Comprehensive environmental and related surveys have been undertaken over the past few months, including traffic counters in key locations, to determine the viability of the local roads around the Beacon Fen Energy Park site for accommodating construction traffic associated with the project. This included considering one-way and two-way routes, and the possibility of building a bespoke access road to the site.

### We have taken the community feedback and survey results on board, to propose;

- A bespoke access road for construction traffic to access Beacon Fen Energy Park's solar array area.
- The bespoke access road is proposed on land linking the A17 between Kirkby la Thorpe and Asgarby to Heckington Road, joining Heckington Road between Howell and Ewerby Thorpe.
- The project team has since been carrying out further environmental surveys to determine its viability.

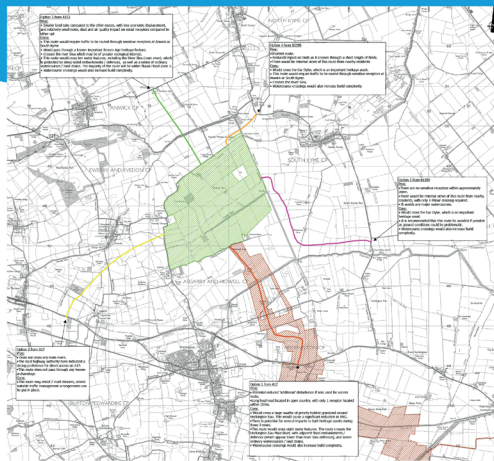
### As part of our application;

- A Construction Traffic Management Plan will be submitted which will be followed by all transportation associated with the site and ensure potential impacts to the community are minimised.
- Traffic generated by the development will be monitored and a travel plan will also be created to monitor staff movements and ensure the best methods of transport are being used throughout construction.





## Traffic and access routes



### Various options for the bespoke access road were considered by the project team. These included;

- **Option 1:** South from the Site to the A17, within the Cable Route Corridor (3.89km)
- **Option 2:** South-west from the Site to the A17 (3.38km)
- **Option 3:** East from the Site to the B1395, south of South Kyme (3.91km)
- **Option 4:** East from the Site to the B1395, north of South Kyme (1.16km)
- **Option 5:** North from the Site to the A153 (2.24km)

### Following a desk-based review of all above options;

- Option 2 was identified as the most suitable because of a reduced environmental impact.
- It does not cross a main river and it also provides access directly from the A17, minimising potential impacts on the existing local highway network.
- While Option 1 would utilise the cable route, therefore minimising the potential ground disturbance as a result of the proposed development, sensitive receptors along the route (such as residents, footpath and road users, heritage and archaeological assets, wildlife, soils and water resources) would potentially be doubly impacted by the installation of the cables and construction and usage of the access road.

Option 2 is our preferred route, although we will carefully consider comments and new information received during this consultation.



## Preliminary Environmental Information



### As part of the planning process, an Environmental Impact Assessment (EIA) is needed to assess any impacts the proposal may have on the environment.

A Preliminary Environmental Impact Report (PEIR) has been prepared as part of this statutory consultation, and looks at the potential impacts of the project and proposes mitigation methods to minimise any impacts.

- The PEIR and accompanying Non Technical Summary is available to be viewed in hard copy at this event and digitally via our website.
- Stakeholders and local communities now have the opportunity to give their feedback on the PEIR, which will later be finalised into an Environmental Statement (ES) and submitted as part of the plans.

Work is ongoing to assess any potential impacts on the environment of the proposed project, from visual impact and ecology to noise and traffic.

- The findings from these environmental assessments have been used to understand the potential impact the construction, operation and decommissioning of Beacon Fen Energy Park could have on local communities, the environment and landscape.

- This includes identifying mitigation measures to minimise potential identified impacts.

You can read more about what measures we are proposing to mitigate environmental impacts from the project on the next banner.



## Reducing effects

At this consultation we are sharing the initial findings from our ongoing work to assess the potential impacts of the construction, operation and decommissioning of Beacon Fen Energy Park.

Reducing or avoiding impacts is one of Low Carbon's top priorities. In developing our proposals, we have incorporated a range of measures to minimise its effect on a range of different factors. These include, but are not limited to:



### Landscape and views

We propose to incorporate mitigation planting of vegetation including trees and hedgerows along the perimeter of Beacon Fen Energy Park as well as replacement planting within the Cable Route Corridor to maintain the landscape character of the area.



### Ecology and nature

We have proposed a variety of measures in the Mitigation Layout to address potential impacts identified through our assessment work and your feedback on our early-stage proposals, including:

- Inclusion of undeveloped buffers and offsets from existing landscape features including ponds, hedgerows and woodlands.
- New grassland and floodplain grazing marsh mixes under the panels to enhance biodiversity.
- A designated wildflower meadow for wild pollinators.
- Additional planting and creation of open green space to encourage ground-nesting birds.
- Improvements to existing hedgerows to enhance green corridors through the landscape.





## Reducing effects



### Climate change

- The emissions savings from using solar for electricity generation instead of natural gas is approximately 9,070,400 tCO<sub>2</sub>e over the lifetime of the project.
- The carbon payback for the project is less than four years.
- We will source contractors and materials locally where possible.



### Heritage and archaeology

- The cable route corridor, bespoke access road and solar array site have been designed to minimise impacts on heritage assets.
- We are seeking to avoid known archaeological remains.
- During decommissioning it is proposed that the solar array site will be restored to its former use, preserving the existing historic landscape character.



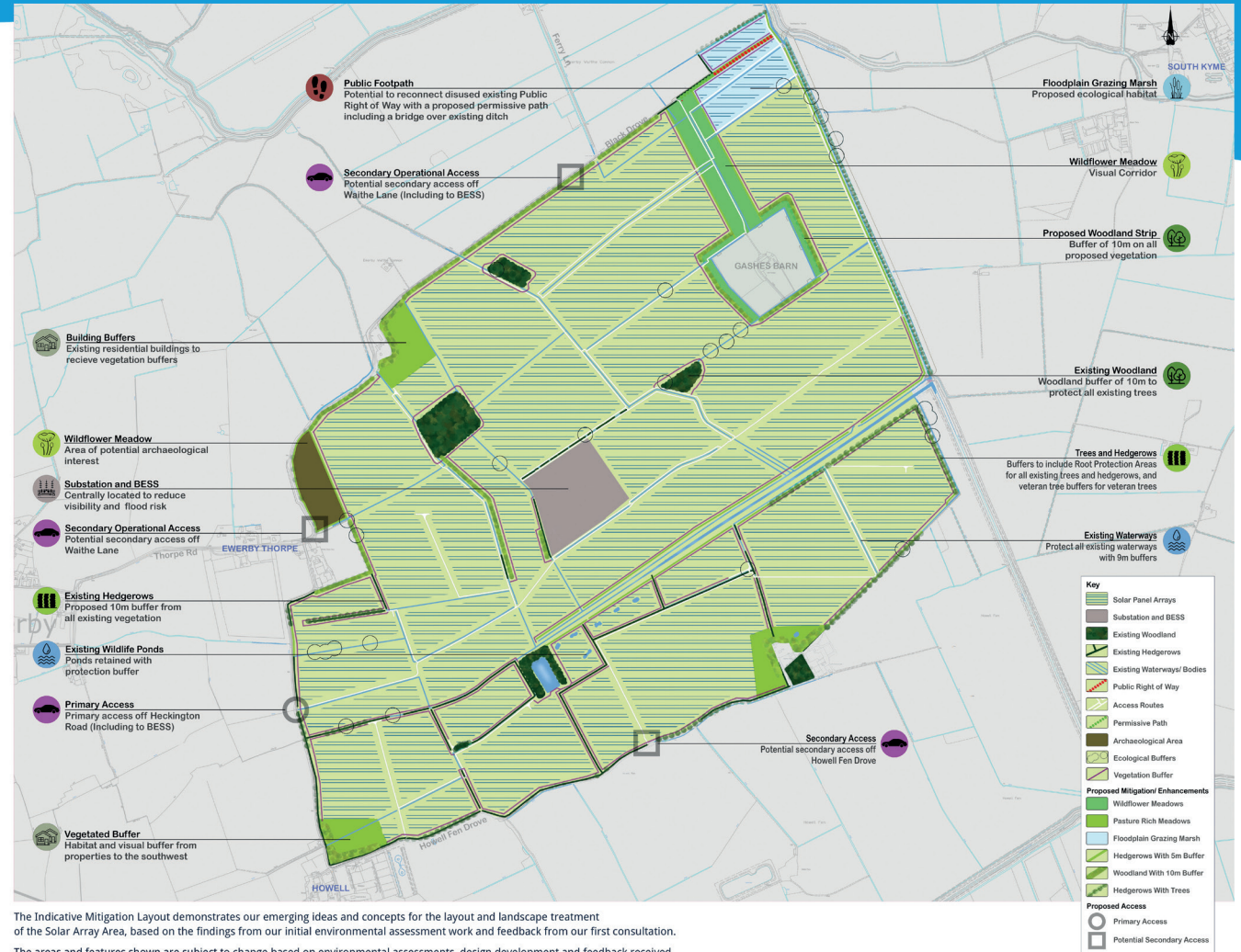
### Water and drainage

The solar PV panels will be offset from the existing drainage ditches within the site to ensure that these can be maintained during the lifetime of the project.

Flood modelling is currently being undertaken to inform the drainage design for the site which will ensure that there is no increase in flood risk either within the site or the surrounding land.



## Indicative Mitigation Layout



The Indicative Mitigation Layout demonstrates our emerging ideas and concepts for the layout and landscape treatment of the Solar Array Area, based on the findings from our initial environmental assessment work and feedback from our first consultation. The areas and features shown are subject to change based on environmental assessments, design development and feedback received.

This is an indicative landscape mitigation map for the purposes of early consultation. The areas and features shown are subject to change based on environmental assessment, design development and feedback received.





## Emerging ideas and cable route corridor

Both our indicative landscape mitigation masterplan and the information contained on this banner form part of emerging ideas for how Beacon Fen Energy Park could be refined further following this consultation. As such, they are not part of our Preliminary Environmental Information Report.



### Cable route corridor refinement

- Following a desk-study and review of further environmental constraints the cable route corridor has been reduced further.
- Specific opportunities to reduce the extent of the corridor included; removing areas with a known floor risk where possible; avoiding groups of trees within the boundary; and avoiding areas of known archaeological interest.
- Another key consideration included maximising the distance away from buildings where technically viable to do so.
- It is anticipated that this area will be refined further before our application is submitted after taking into consideration feedback from this consultation and findings from further environmental surveys.



## Biodiversity net gain

There is great potential for Beacon Fen Energy Park to deliver significant benefits for both the communities surrounding the project and for local biodiversity, including a net gain for biodiversity.

Delivering Beacon Fen Energy Park allows Low Carbon to look at creating new habitats and enhance existing habitats for wildlife in the area.

Reducing or avoiding ecological impacts is one of Low Carbon's top priorities. In developing our proposals, a range of design and operational measures have been considered to minimise ecological effects.

### These include, but are not limited to:

- The creation of buffer zones around areas of woodland, hedgerows, ditches and ecological features.
- Use of acoustic and visual barriers.
- Minimisation of lighting, with no floodlighting at night.
- Creation of new habitats.

We are also creating specific measures to protect species such as bats, along with birds, otter and water vole. This includes improving habitats to support birds found on site such as pink-footed geese and black-headed gull.

### Measures include:

- Temporarily replanting hedgerows elsewhere, where possible, and replanting after the construction activities are completed.
- Supplementing hedgerows with additional planting of native species of local provenance.
- Creating temporary 'crossings' for bats that will be placed in the gaps at night to maintain a commuting corridor.
- Maintaining grassland and herbs by keeping topsoil separate, to be spread over the subsoil once the construction activities are completed. Where the habitat is particularly important, it may be appropriate that turfs are cut and kept separate from the subsoils and topsoil.



## Community benefits

At Low Carbon, we believe in working with communities to ensure our renewable energy projects deliver benefits for the communities who will live alongside it and those who could be directly impacted by the project.

At early (non-statutory) consultation you told us what benefits you would most like to see, with the creation of new habitats, recreational access improvements and funding for community groups the most preferred. We would now like to hear directly from you which recreational improvements and community groups you would like to see benefit by filling in our feedback form, which you can find at this event.

Since our early (non-statutory) consultation, we have been delivering lessons in primary schools in the immediate community and inviting students to visit other Low Carbon energy parks to help them learn how these sites work and address the climate crisis. We have also welcomed local Lincolnshire residents to one of our existing solar parks to see for themselves what they look and sound like.

### Other ways the project will benefit the local community include;

- Payment of business rates helping support local services.
- Opportunities for local employment during the construction phase and operation.
- Opportunities to use local businesses for accommodation, and hospitality.
- Opportunities for local companies to provide goods and services as part of the supply chain.
- A community benefit fund.





## Landowner engagement

Throughout the development of Beacon Fen Energy Park, we have been keen to work with landowners and keep them updated of our proposals. Their support has enabled us to carry out vital environmental surveys to assess the land the site would be developed on, as well as assess archaeological and ecological potential.

If a Development Consent Order (DCO) is granted for Beacon Fen Energy Park, following our application, it will include relevant consents and powers required to construct and operate the energy park. This would include powers of compulsory acquisition, for the land and rights required for the construction and operation of the cable route and bespoke access road in particular. Low Carbon, through its appointed land agents, Ardent, will continue to engage with all landowners, and those with an interest in land, to pursue agreements and ensure that the use of compulsory acquisition powers is a last resort. Any landowners directly affected by the project proposals who have concerns or questions relating to the project can contact Ardent via the details below:

**Email:** [beaconfenenergypark@ardent-management.com](mailto:beaconfenenergypark@ardent-management.com)  
**Telephone:** 0330 0571943

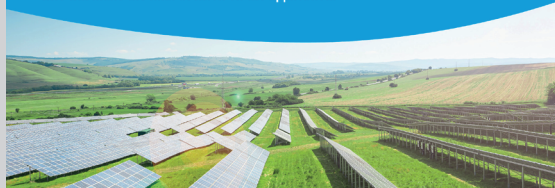
If you would like to request a meeting with the land team, please speak to one of the project team at today's event.



## The DCO process

As Beacon Fen Energy Park will generate more than 50 MW of power, it is classed as a Nationally Significant Infrastructure Project (NSIP) and must apply for a Development Consent Order (DCO) under the Planning Act 2008 before it can be built.

Applications for DCOs are examined independently and in public by the Planning Inspectorate (PINS), a government executive agency. Following examination of the project, PINS will make a recommendation to the relevant Secretary of State who will make the final decision on the application.



The six steps of the DCO process are:

### 1 Pre-application

Before our DCO application is submitted, we will have carried out two consultations; firstly an early (non-statutory), (in May-June 2023) followed by a statutory consultation (where we are now). Following this consultation and the completion of our Environmental Impact Assessment, we will aim to submit an application for a DCO in summer 2024.

### 2 Acceptance

After an application is submitted, PINS has 28 days to decide whether it meets the standards required to be accepted for Examination.

### 3 Pre-examination

During this stage, stakeholders can register with PINS as an Interested Party by making a Relevant Representation, which is a written summary of their views. An Examining Authority of one or more Examining Inspectors (from PINS) is selected, who will publish a preliminary timetable for Examination and other information.

### 4 Examination

PINS has up to six months in which to complete the Examination, beginning the day after the 'Preliminary Meeting', a meeting held in public to explain the examination procedure. Thereafter, the examination is mostly a written process, and those who have registered as Interested Parties will be invited to provide further information in writing. There will however be environmental, compulsory acquisition, and open floor hearings, which interested parties can participate in.

### 5 Decision

Once the Examination period has closed, PINS has three months to prepare a report, which includes a recommendation for the Secretary of State for Energy Security and Net Zero. The Secretary of State then has a further three months to issue a decision.

### 6 Post-decision

In the event of a positive decision by the Secretary of State, a DCO would be granted (or 'made' as it is a form of legislation). Beacon Fen Energy Park would take a final investment decision and then discharge requirements and comply with the powers and provisions of the DCO.

More information can be obtained directly from the Planning Inspectorate by telephoning 0303 444 5000 or by visiting <https://infrastructure.planninginspectorate.gov.uk/application-process/>



## What happens next

Thank you for engaging with this consultation.

Gathering feedback is essential and we want to hear your thoughts. Your written views will be analysed and shared with the project team for consideration.

You can share your views in a number of different ways. Fill out a feedback form at an event and either hand it to a member of the team, or post it using our Freepost address to reach the team by Sunday 3 March 2024. Alternatively, you can fill in a form online at the website below. If you have accessibility requirements, please do let us know.

There are many ways you can keep in touch with Beacon Fen Energy Park, including joining the digital mailing list via the Beacon Fen Energy Park website.

**Website** [www.beaconfenenergypark.co.uk](http://www.beaconfenenergypark.co.uk)  
**Email** [info@beaconfenenergypark.co.uk](mailto:info@beaconfenenergypark.co.uk)  
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