

## About Ridge Clean Energy

Working in partnership with land owners and local communities, **Ridge Clean Energy's** team identifies and develops new projects to supply clean energy to homes, businesses, and other power consumers. The RCE team have a wealth of experience with community engagement support and have created a range of local initiatives in small towns and villages that focus on improving community value.

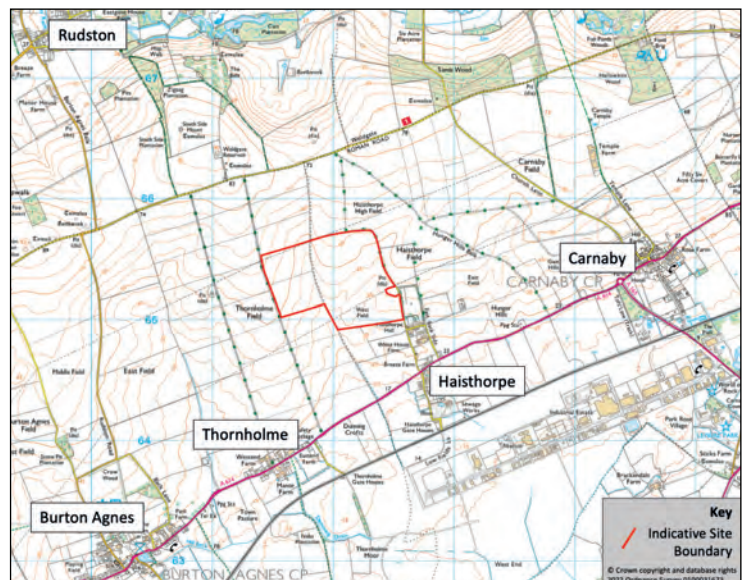
### Key Facts

- The scheme would generate as much electricity as is used by **8,900 homes** annually.
- Site area of approximately **65 ha/161 acres**.
- Solar capacity of up to **39 MW**.
- Battery storage capacity of up to **78 MWh**.
- **40 year** operational period.
- Approximately **6-9 month** construction period.
- Fully decommissioned after operational period.
- Funding will be made available **to nearby households to reduce electricity bills** and to the local community to help support local community projects and ideas.
- Renewable electricity generation from the proposed development would support the UK's legally binding net zero commitment.



## About the Project

Ridge Clean Energy is proposing the **Three Oaks Renewable Energy Park**, which is located between Thornholme and Haisthorpe in the East Riding of Yorkshire. The project includes an array of ground-mounted solar and ancillary infrastructure. In addition, a Battery Energy Storage System (BESS) would be included within the project.



Three Oaks Renewable Energy Park Site Map

The project could deliver up to 39 MW of renewable electricity, which would generate as much electricity each year as is used by approximately 8,900 homes (based on average domestic consumption per household of 3,900kWh – DBEIS, 2020). The environmental survey work has commenced and will be ongoing through the first part of this year.

The project would deliver a net gain in biodiversity, for example, by including a species-rich seed mix in between the rows of solar panels to encourage invertebrates and birds.

As an industry-leading developer, we engage with local communities and councils at an early stage. Specifically, we are keen to identify local initiatives for which our expertise and seed capital may be useful. We want to support existing community projects and help new, local ideas become a reality.

## You are invited to our Public Exhibition

Newsletter February 2022



### **Public Exhibition: Three Oaks Renewable Energy Park**

You are invited to our Public Exhibition to learn more about the proposed Three Oaks Renewable Energy Park. Join us to review our ideas for a solar array and battery storage on land to the north of the A614 between Thornholme and Haisthorpe.

The first exhibition will be held Tuesday, 15<sup>th</sup> February, 2pm until 8pm:

- Ferns Farm Hotel, 29 Main Street, Carnaby

The second exhibition will be held Wednesday, 16<sup>th</sup> February, 10am until 6pm:

- Burton Agnes Sports Club, Rudston Road, Burton Agnes



Refreshments are provided.



#### **Learn more about the project:**

<https://ridgecleanenergy.com/threeoaks>

#### **Contact us:**

[threeoaks@theridgegroup.com](mailto:threeoaks@theridgegroup.com)

01608 819253







# RIDGE CLEAN ENERGY

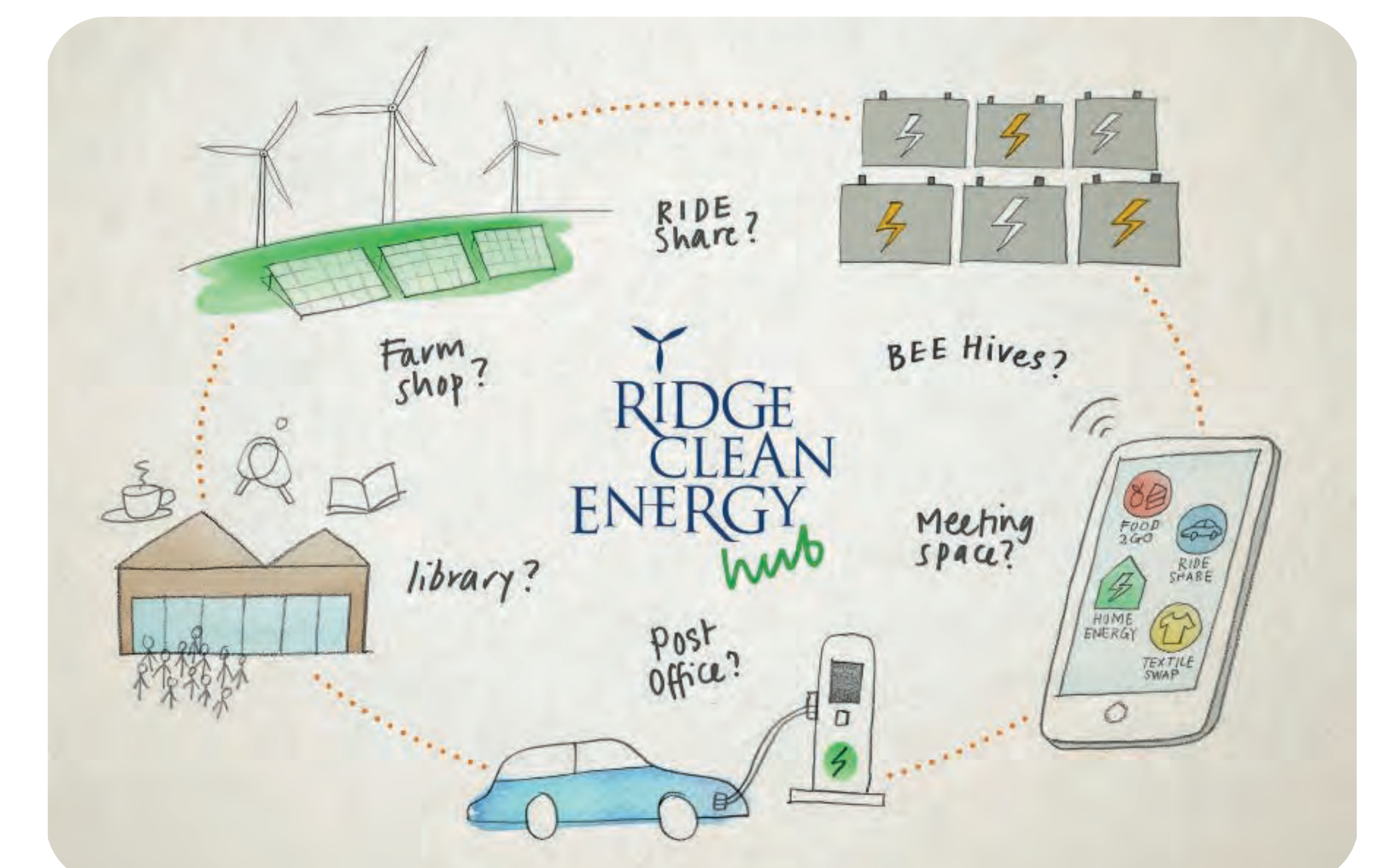
web: [www.ridgecleanenergy.com](http://www.ridgecleanenergy.com)  
email: [energy@ridgecleanenergy.com](mailto:energy@ridgecleanenergy.com)

- Ridge Clean Energy is a UK-based clean energy company with an established and successful history of working with landowners and local communities to research, develop, plan, finance, construct and operate renewable assets in the UK.
- Since 2003, we have combined a proven track record of developing high quality UK renewable energy projects with working alongside local communities to create enduring and sustainable local benefits.
- We are committed to developing renewable energy projects and supplying clean energy to homes, businesses and potential community projects. Whilst developing projects, we fully engage with local communities and councils. We are keen to assist with, identify funds for and invest in local communities.



We develop each project with the scope to do much more than generate power. Our work supports businesses and communities across the UK in their mission to become net zero by 2050, combining our renewable energy projects with a community hub and integrated app.

Our team is unique in our ability to work with local groups to determine how our projects can support local activities. We look at all opportunities to add value in a local context. Examples of this work could be providing an electric vehicle for a school, developing EV charging for a community, or funding a modern, accessible library or exercise studio.

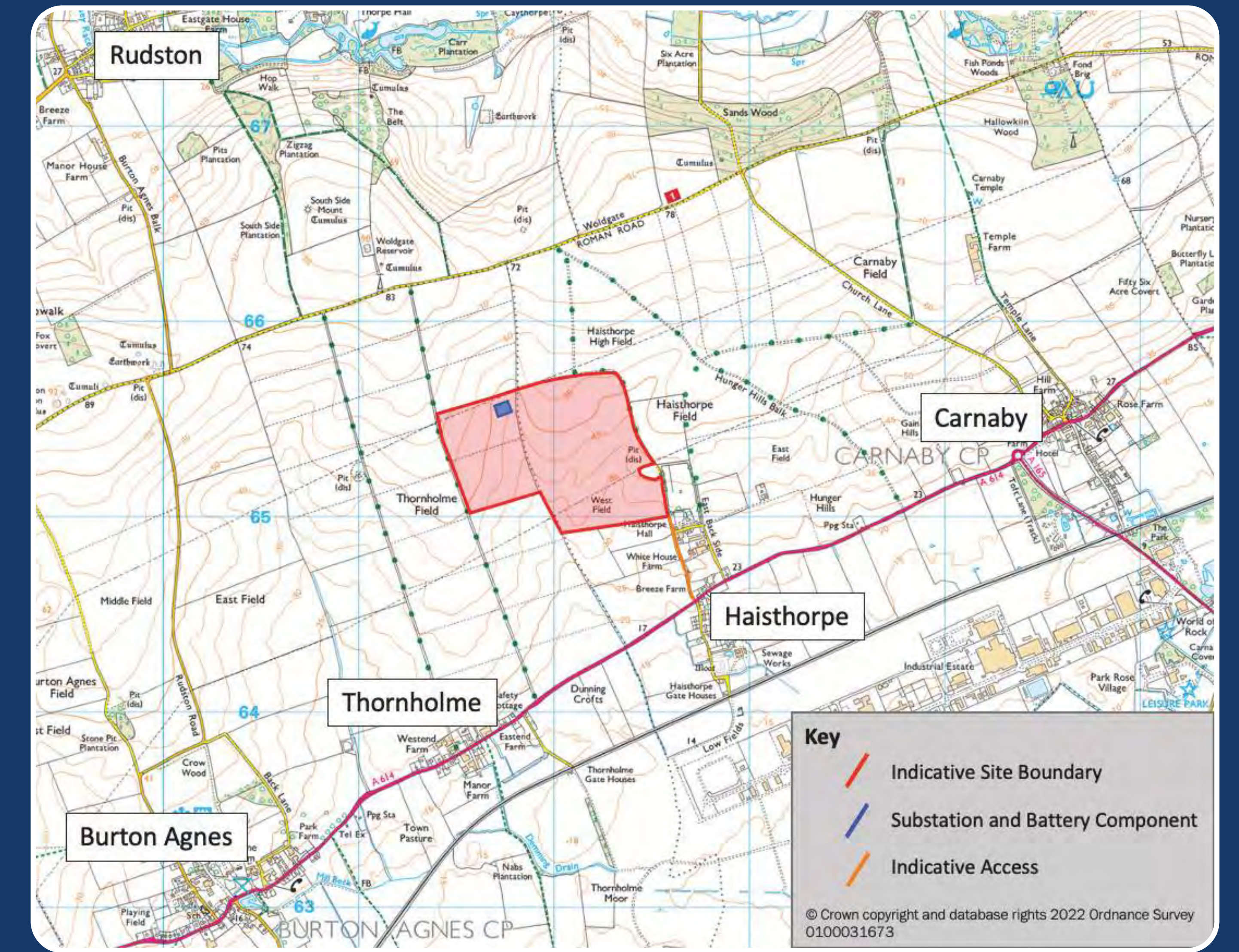




# Three Oaks Renewable Energy Park

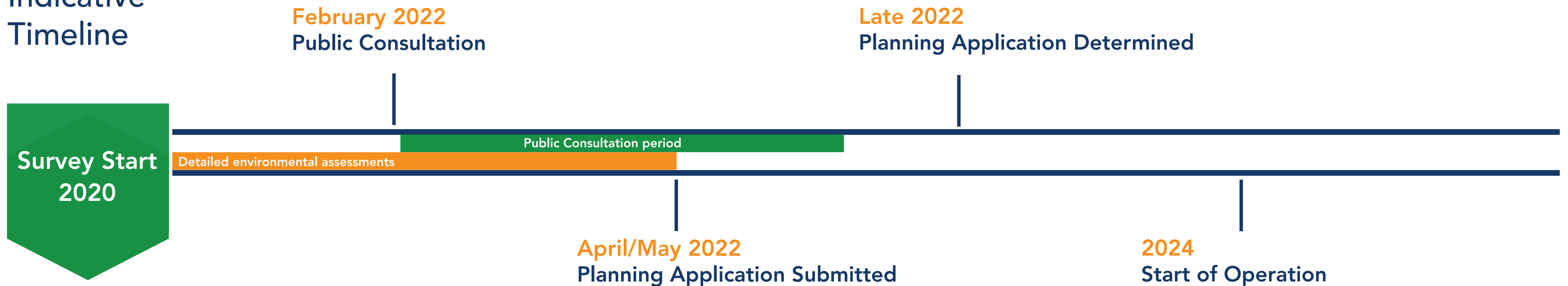
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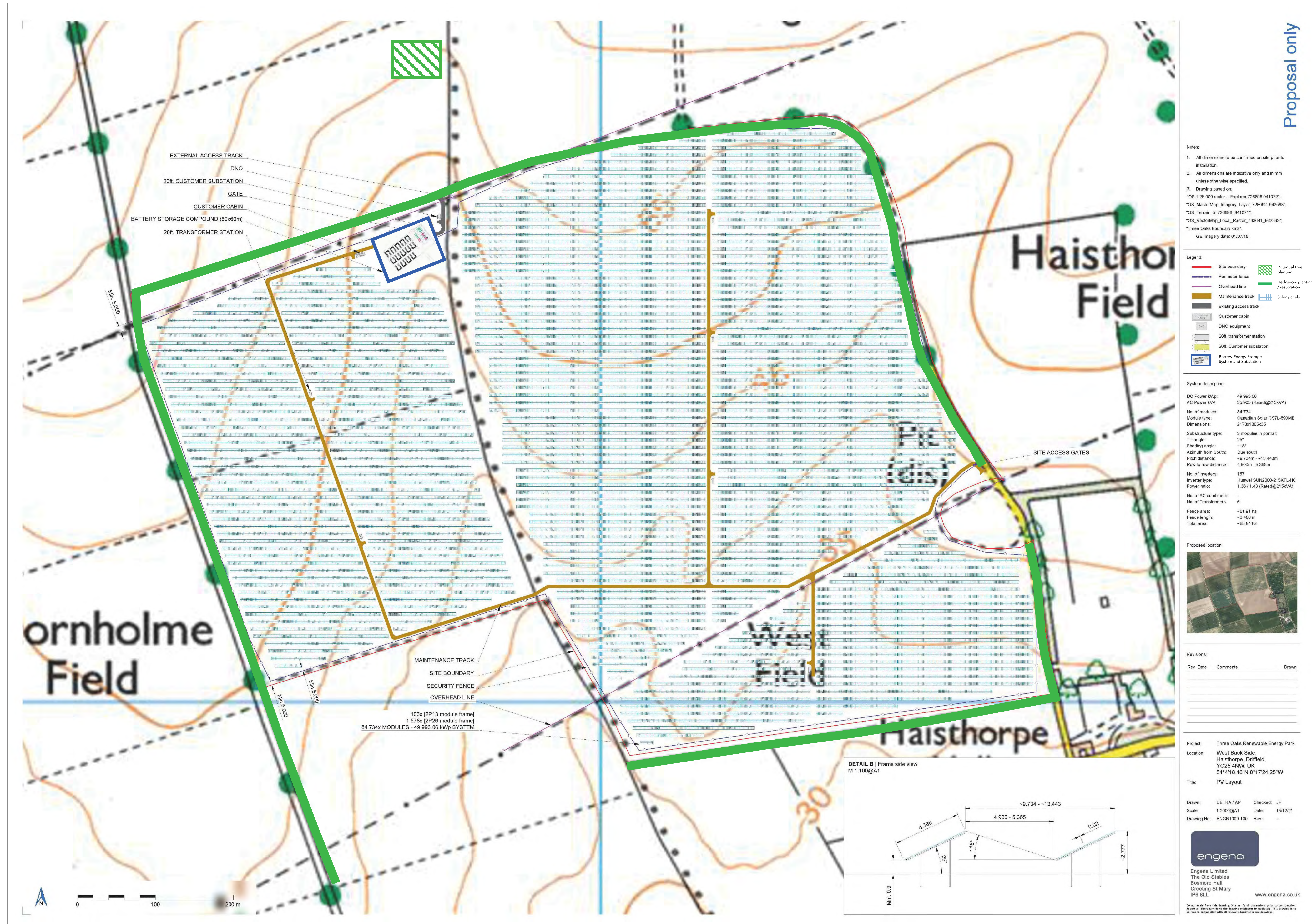
Three Oaks Renewable Energy Park Site Location

## Indicative Timeline





# Three Oaks Renewable Energy Park Site Design



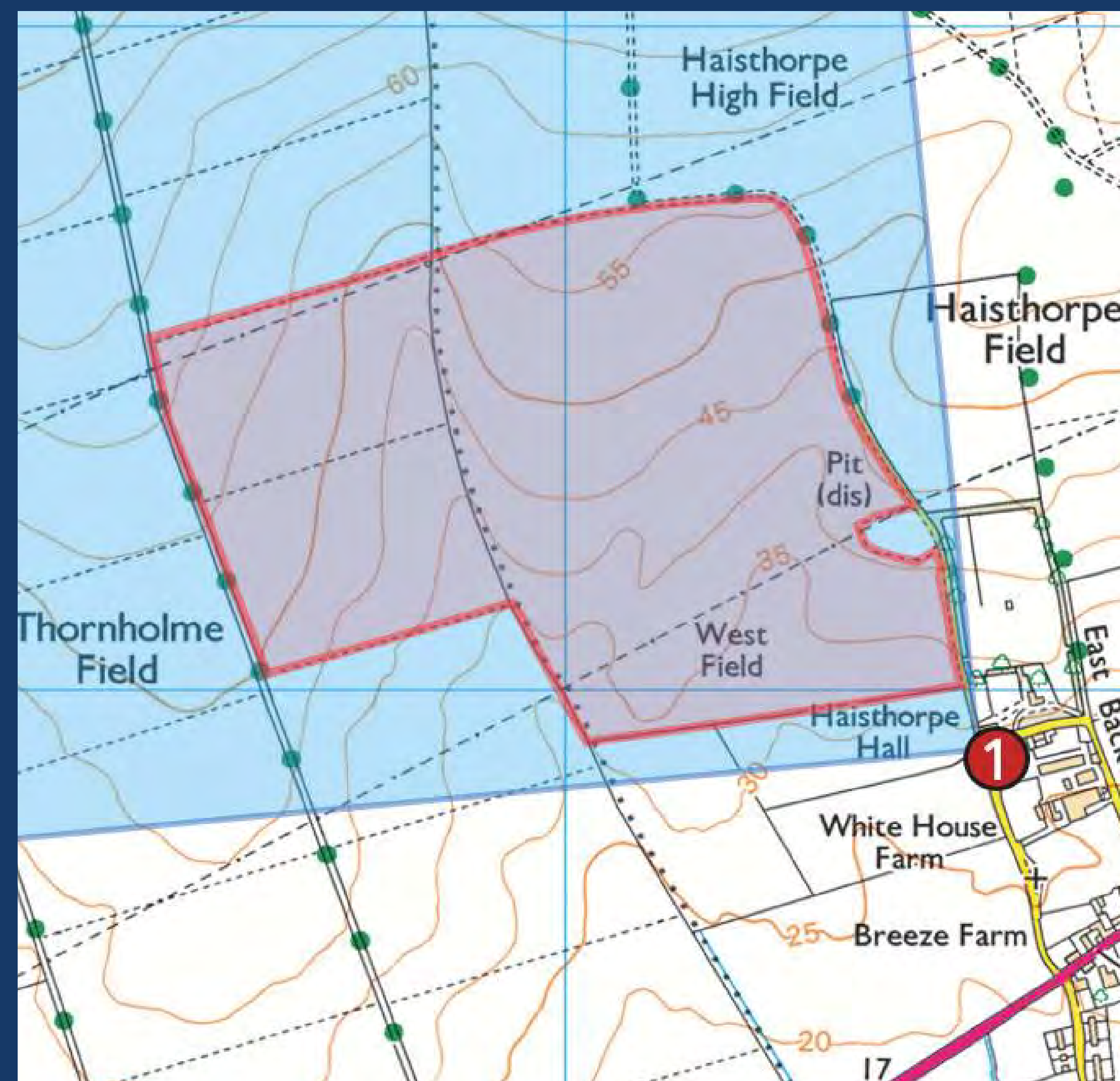


# Viewpoint 1

Looking northwest from West Back Side

The photomontage has been created using Lidar 2m data to superimpose the proposed solar farm on the existing view to illustrate the appearance from this location. The viewpoint locations have been agreed with the Local Planning Authority.

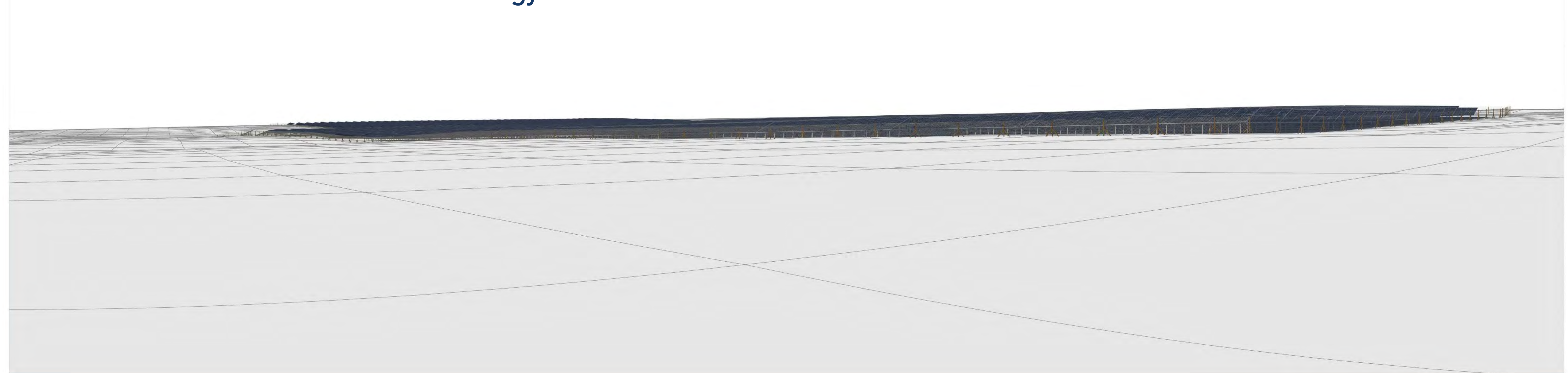
The photomontages, alongside onsite analysis, are used in the landscape and visual impact assessment to assess the potential impacts of the proposal to views.



Existing view from West Back Side, Haisthorpe



3D Model of Three Oaks Renewable Energy Park



Predicted view from West Back Side, Haisthorpe



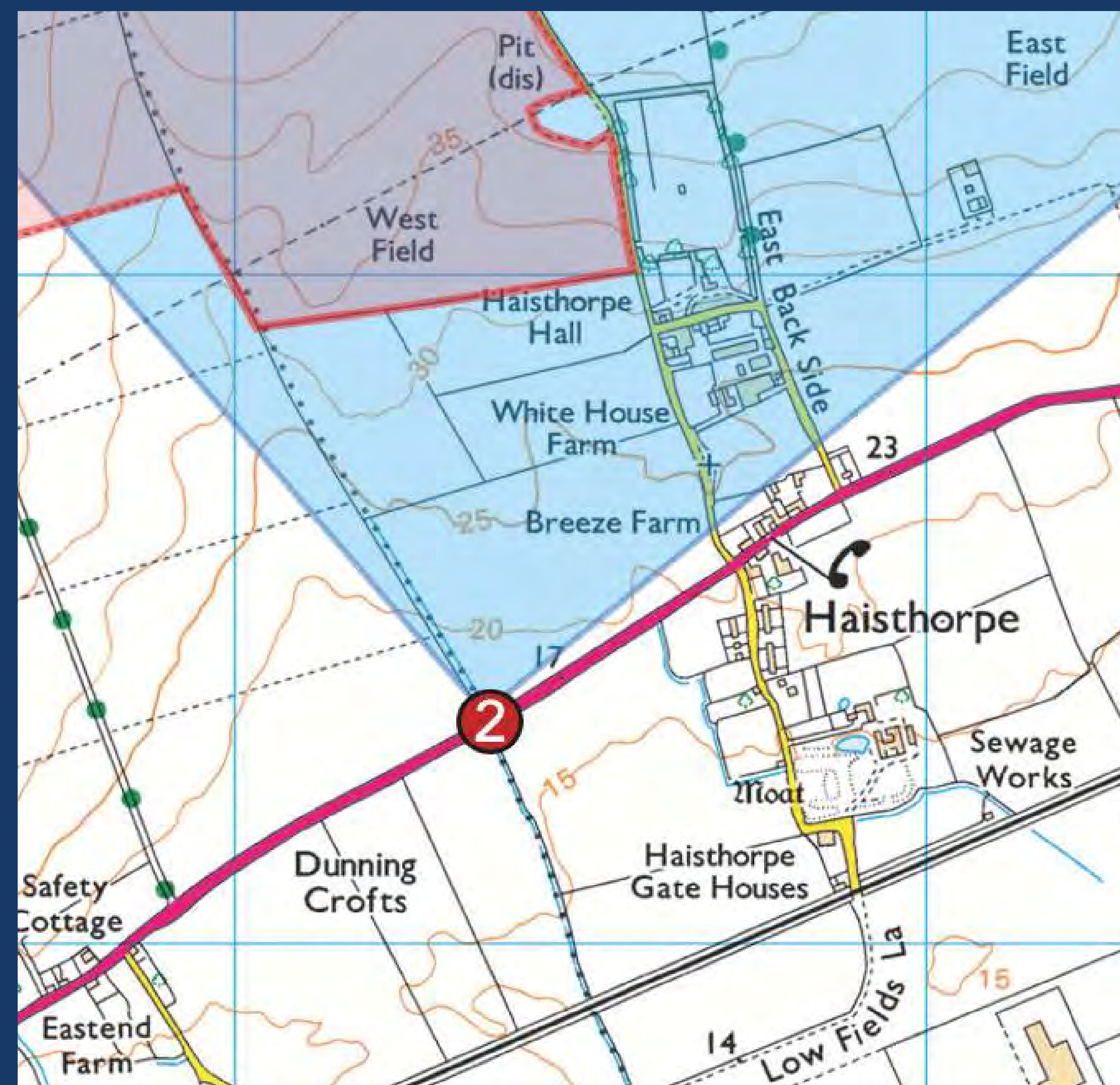


# Viewpoint 2

Looking north from A614

The photomontage has been created using Lidar 2m data to superimpose the proposed solar farm on the existing view to illustrate the appearance from this location. The viewpoint locations have been agreed with the Local Planning Authority.

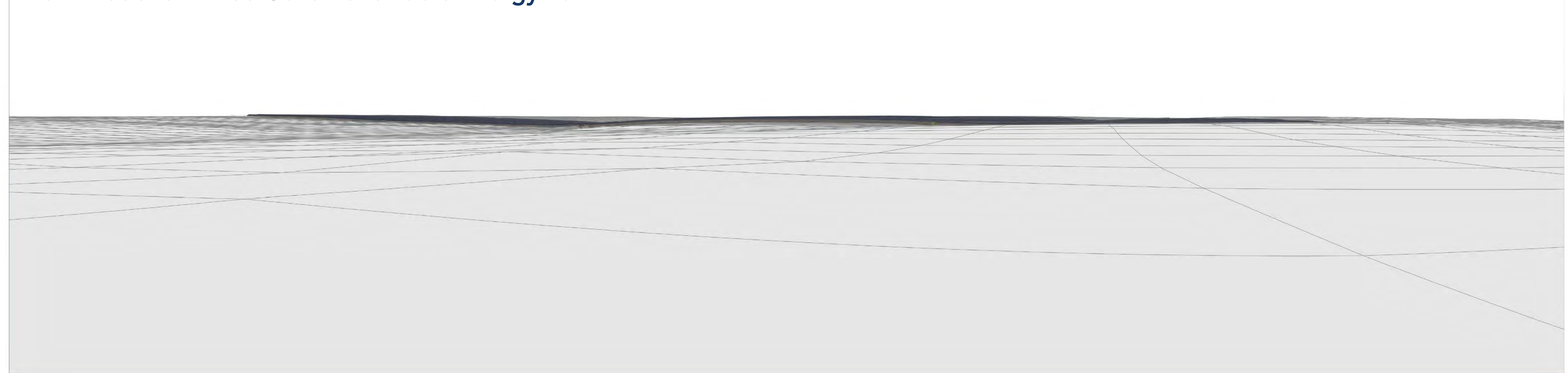
The photomontages, alongside onsite analysis, are used in the landscape and visual impact assessment to assess the potential impacts of the proposal to views.



Existing view from A614



3D Model of Three Oaks Renewable Energy Park



Predicted view from A614



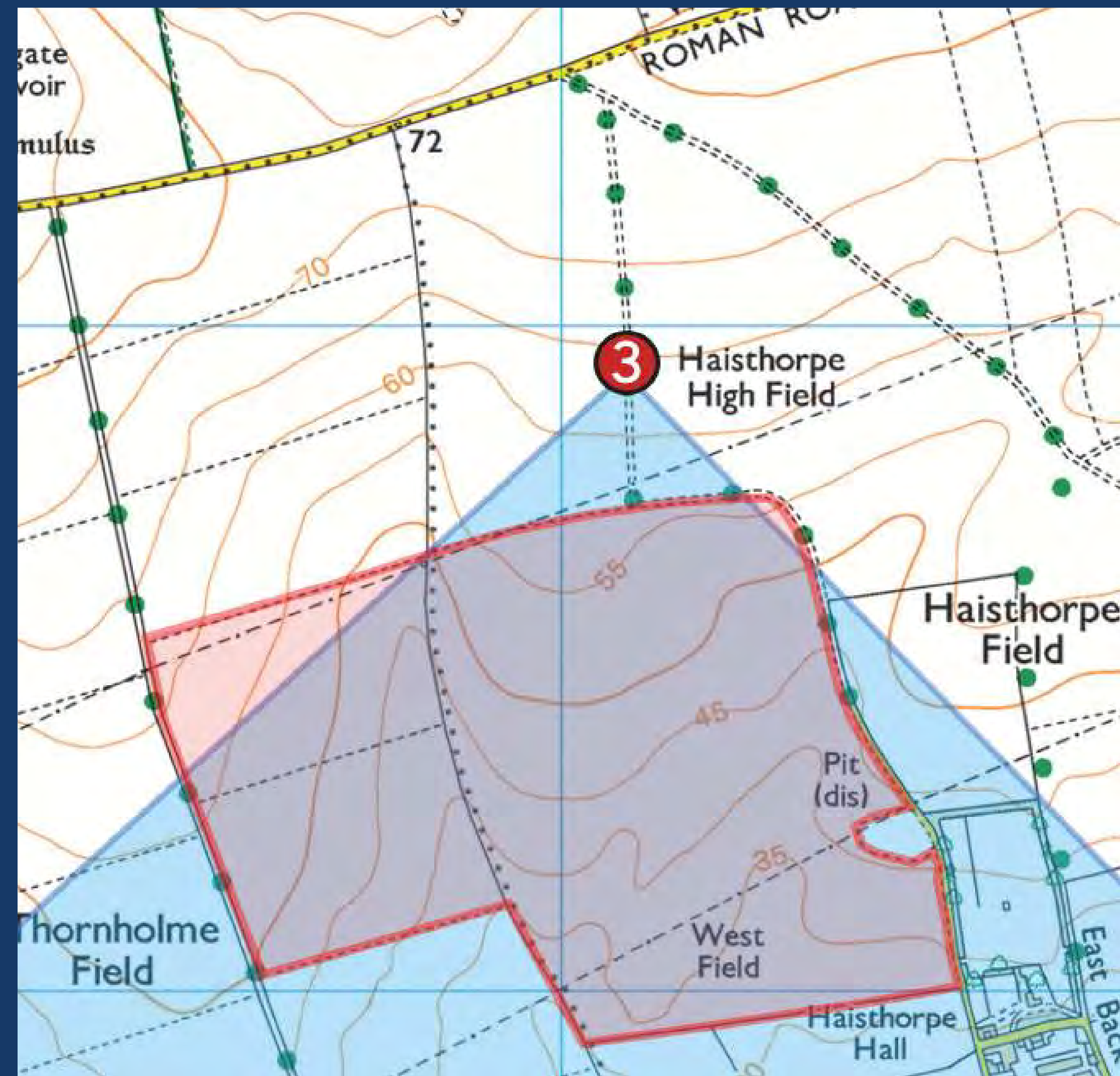


# Viewpoint 3

Looking south from Public Rights of Way off Woldgate

The photomontage has been created using Lidar 2m data to superimpose the proposed solar farm on the existing view to illustrate the appearance from this location. The viewpoint locations have been agreed with the Local Planning Authority.

The photomontages, alongside onsite analysis, are used in the landscape and visual impact assessment to assess the potential impacts of the proposal to views.



Existing view from Public Rights of Way off Woldgate



3D Model of Three Oaks Renewable Energy Park



Predicted view from Public Rights of Way off Woldgate





# Viewpoint 4

Looking northeast from Back Lane,  
Burton Agnes

The photomontage has been created using Lidar 2m data to superimpose the proposed solar farm on the existing view to illustrate the appearance from this location. The viewpoint locations have been agreed with the Local Planning Authority.

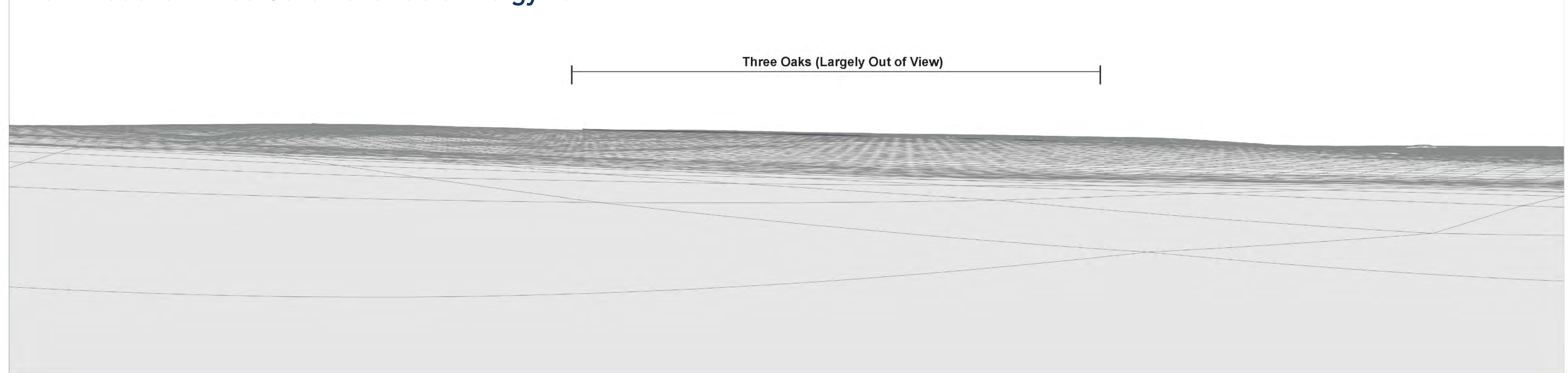
The photomontages, alongside onsite analysis, are used in the landscape and visual impact assessment to assess the potential impacts of the proposal to views.



Existing view from Back Lane, Burton Agnes



3D Model of Three Oaks Renewable Energy Park



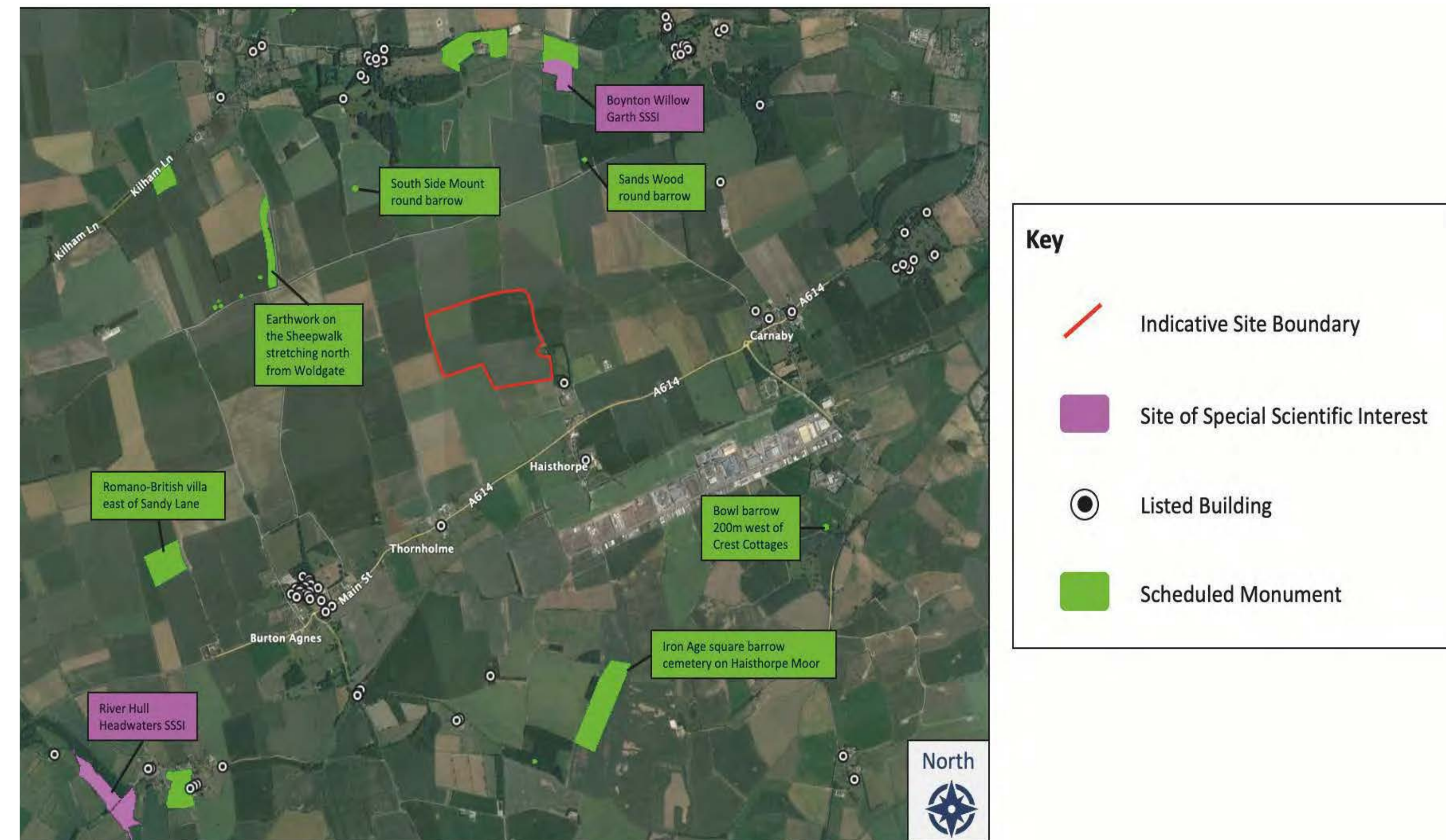
Predicted view from Back Lane, Burton Agnes





# Three Oaks Renewable Energy Park

## Site Design, Biodiversity and Land Use



### Site Design

The site was initially identified due to its proximity to the 66kV electricity line that crosses the north of the site. A review of environmental and historic designations indicated that the site is outside of these designated areas, as shown on the figure to the left.

There are no public rights of way (PROW) that cross the site, although a right of way is adjacent to the east of the site. Given the adjacent PROW and with consideration given to the opportunities for hedgerow planting and restoration, the site has been designed to include solar panels no greater than 3 metres in height, thereby limiting visual impacts.

### Biodiversity

A suite of ecological surveys have been conducted at the site, including: wintering bird surveys, breeding bird surveys, an extended phase 1 habitat survey, bat surveys, badger survey, and a hedgerow survey.

The species identified are typical of farmland in this area. Environmental enhancement measures such as hedgerow planting and restoration, and incorporation of species rich grass mix between the solar panels will encourage wildlife to the site and result in a biodiversity net gain.



### Land Use and Soils

The site consists of arable land and a detailed soil survey was carried out in March 2021. The majority (~70%) of the site was found to be Grade 3b, which is not classified as best and most versatile land. Two pockets of Grade 2 land (~10%) were identified to the west of the site, with bands of Grade 3a land (~20%) in the northern and southern parts of the site.

The renewable energy park is a temporary development; therefore, the agricultural land would be maintained. The extended fallow period would allow a return to a higher equilibrium of soil organic matter.





# Achieving Net Zero by 2050



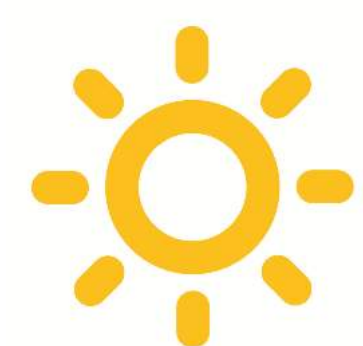
## Government plan of action

Climate change is arguably the most serious threat to our world and an issue that defies boundaries – the actions of one country can impact upon many others. By the middle of this century, the world needs to reduce emissions as close to net zero emissions as possible to avoid the increasing impact our changing climate has on us, such as heatwaves, floods, droughts, and fires.

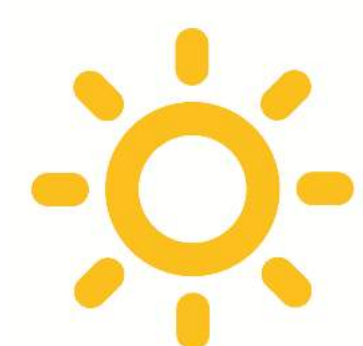
**What is net zero?** The term “net zero” refers to achieving a balance between the amount of greenhouse gas emissions produced and the amount removed or avoided from the atmosphere.

To achieve net zero, the government is driving efforts to reduce our emissions by increasing production of renewable energy as well as offsetting current emissions through natural carbon sinks, such as trees and restored peatland.

The UK is leading the way in the path to net zero, becoming the first major economy in the world to legislate a binding target to reach net zero emissions by 2050. The UK has made a number of pledges to achieve this target, two of which include:



At the core of the government strategy to net zero is the ambition to create a **fully decarbonised power sector** by 2035.



**Supporting green industry.** The government aims to support 54,000 jobs in 2030 in industry alongside future-proofing businesses and transforming industrial heartlands.

## Climate matters

**Ridge Clean Energy wants to change the way the UK harnesses locally produced clean energy.** We develop each project with the scope to do much more than generate power.

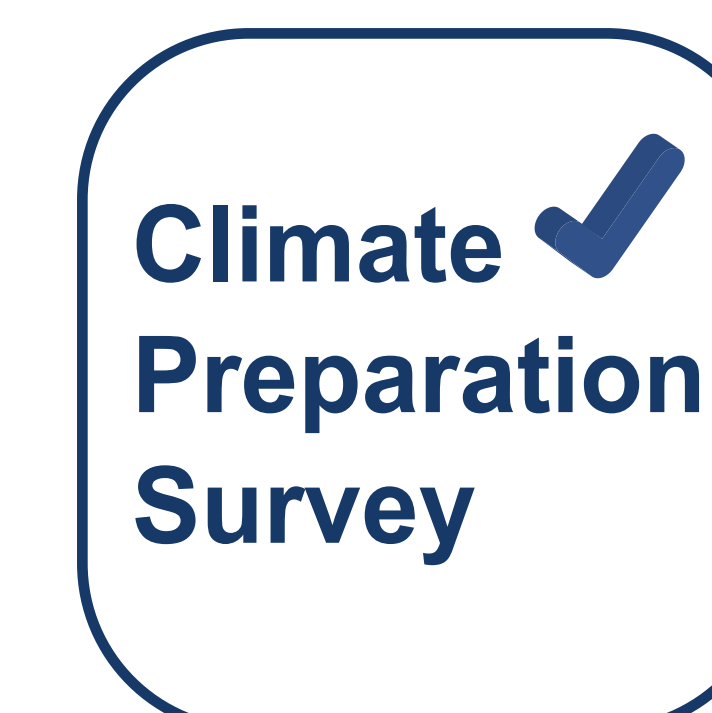
Our work supports businesses and communities across the UK in their mission to become net zero by 2050, combining our renewable energy projects with local community initiatives, which could include a community hub and integrated app.

### Our Initiatives



Net Zero Community is a mobile application available on the **Apple App Store** encouraging local people to act and think more environmentally in their day-to-day lives, especially adapted to your community.

The App is a simple and effective way to enable the adoption and track the progress of local projects reducing carbon footprints and supporting climate repair.



We have created a survey designed to assess a household's and business's level of preparedness for all types of climate risk and their experience dealing with previous extreme weather events.

Ask us how we can help set up an initiative in your community.



# Ridge Clean Energy Community Support



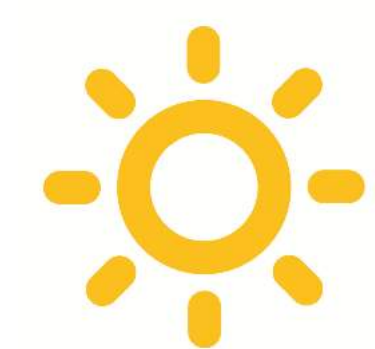
## Our ethos

**Ridge Clean Energy's ethos is centred around community engagement and support throughout the life of our projects.** From an early stage we identify key stakeholders and work in tandem with them. We use our development experience and seed capital to maximise the benefit a local community would receive from our projects.

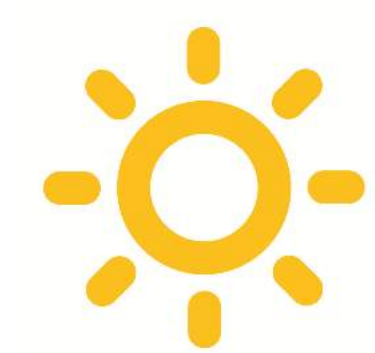
## Community matters

“Working together to provide wider prosperity and improve quality of life for our communities now and into the future.”

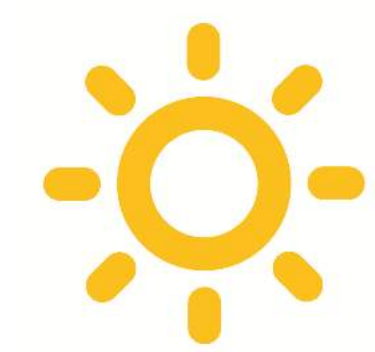
Ridge Clean Energy is keen to work with and support local people:



to help provide facilities that are needed to enable a strong community to thrive.



to address local needs at a local level.

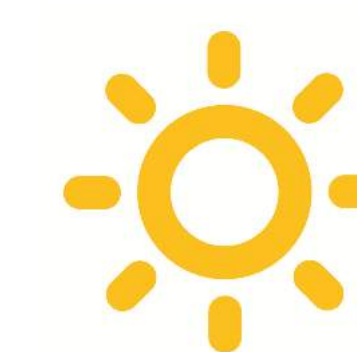


to support communities to achieve net zero.

Ridge Clean Energy realises that a strong community can:

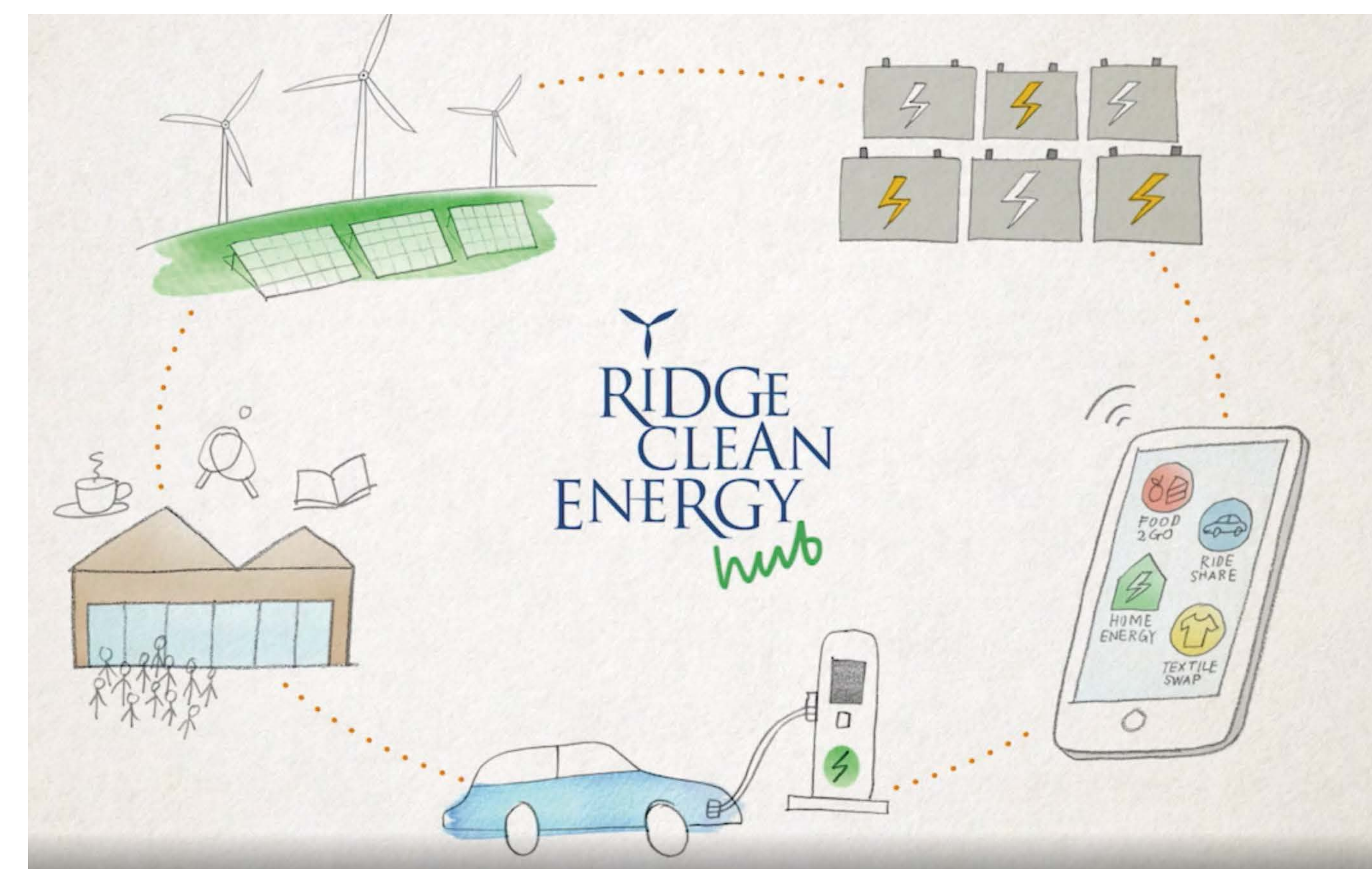


provide support, friendship and help to those who need it.



be the leader in taking action on local and global issues such as climate repair, protecting the environment and creating safer neighbourhoods.

## Learn more



Watch our video at [www.ridgecleanenergy.com](http://www.ridgecleanenergy.com)



# Three Oaks Renewable Energy Park Community Engagement



## Community benefits

Three Oaks Renewable Energy Park will generate a community fund over the lifetime of the project.

The community fund will be available to directly support the needs of local people and could be used for creating a community hub, improving local transport, providing EV charging facilities or any other community priority.

Along with your suggestions and thoughts, we will continue to engage with Parish Councils to identify the main areas of need and then focus on growing a positive asset for all living in the vicinity of the project.

Ridge Clean Energy is fully aware of the impact the current energy crisis is having on people. On completion of the project, funding will be made available to nearby households to contribute to energy bills.

## Supply chain opportunities

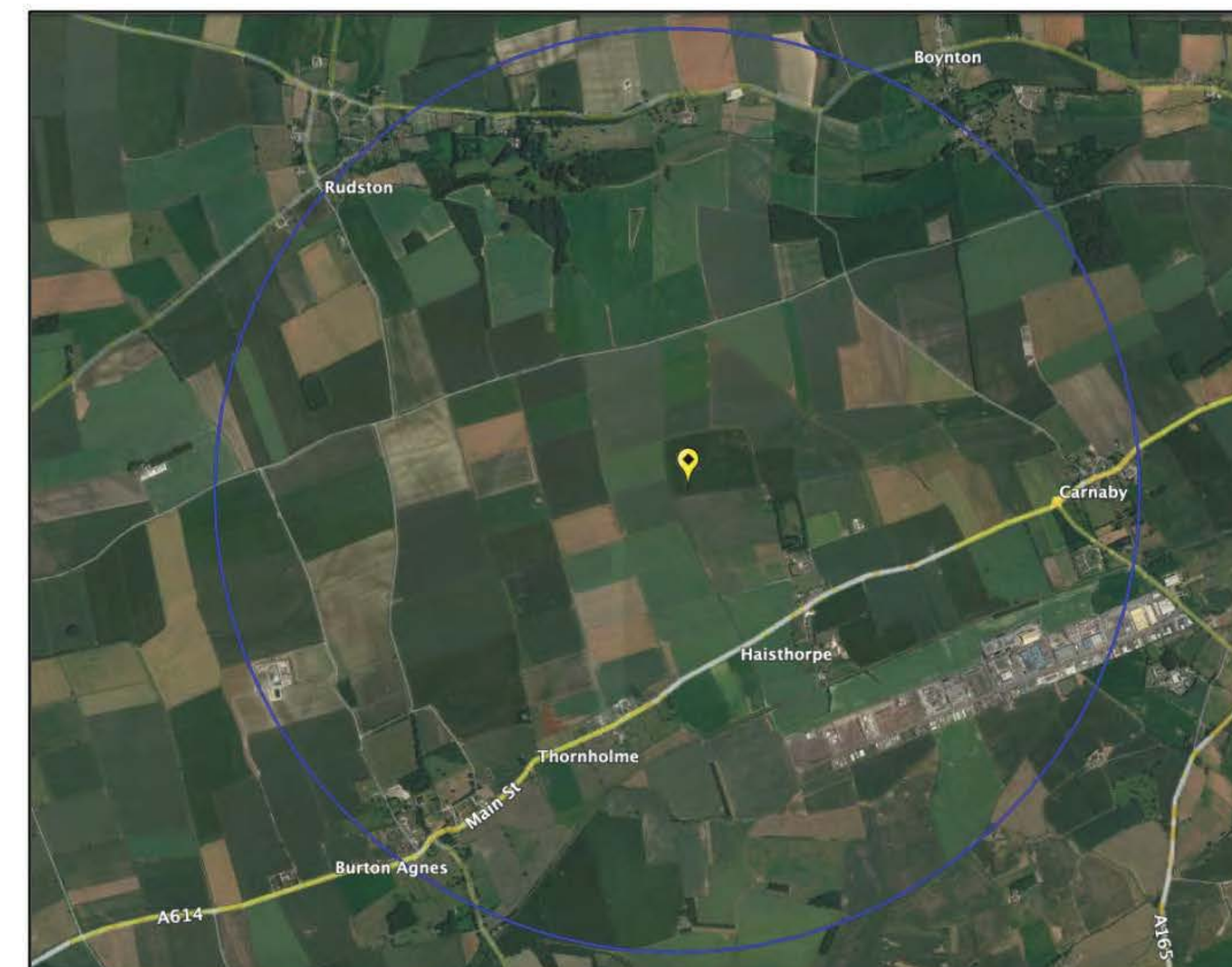
If the proposal is successful, Ridge Clean Energy would encourage local suppliers and contractors to get in touch to outline what services could be provided by local businesses in order to help support the local economy.

## Feedback, comments & questions



Thank you for your interest in our public exhibition for the proposed Three Oaks Renewable Energy Park.

Please take the time to fill out a feedback form provided by the project team. We would be very grateful to receive your feedback, comments and any questions.

## Indicative residential area to be eligible for funding to contribute to energy bills



**Key**

-  Site centre point
-  3km radius

On completion of the project we will be making an annual contribution towards energy bills to residential properties within a 3km radius of the centre of the site.

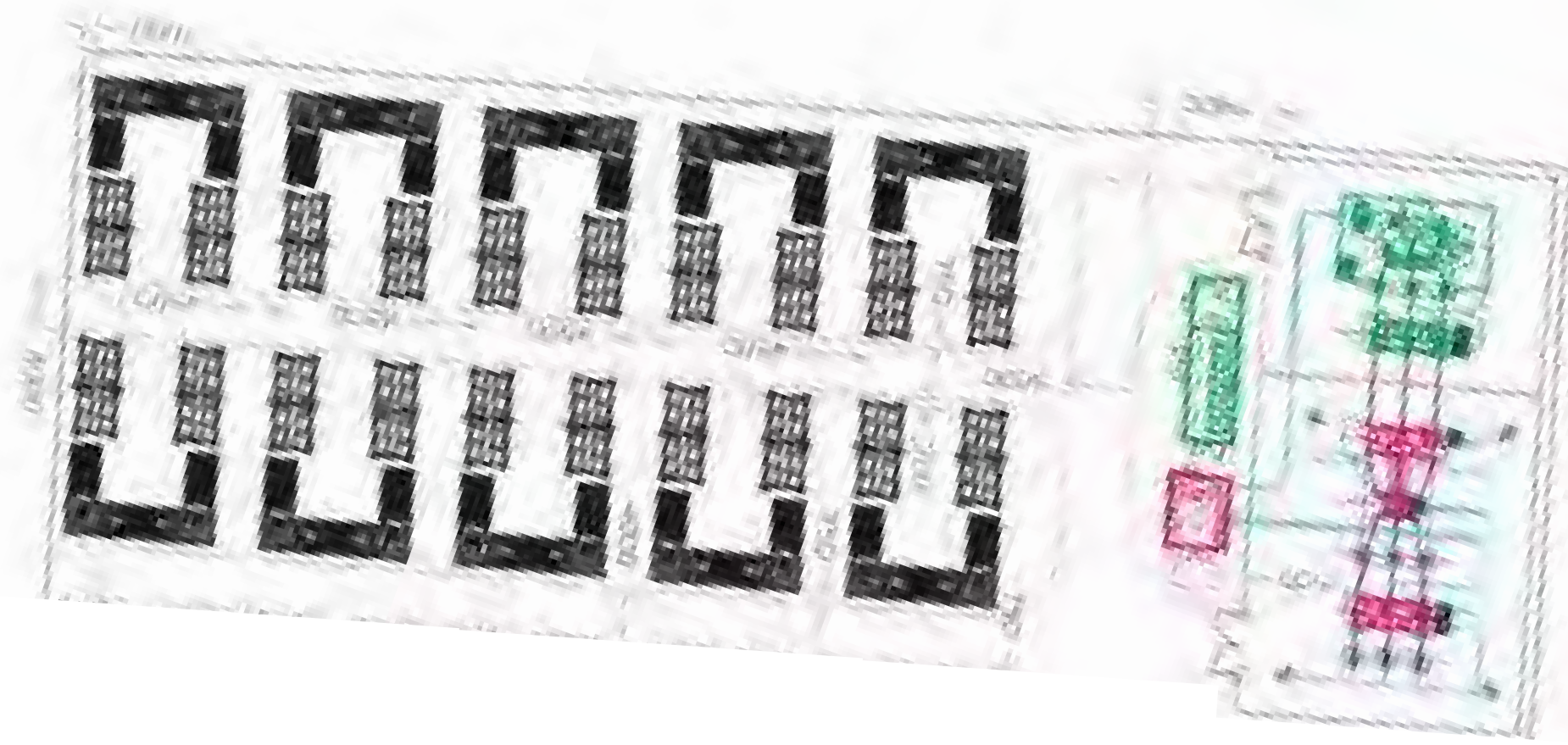
## Contact us

**Email:** [threeoaks@theridgegroup.com](mailto:threeoaks@theridgegroup.com)

**Post:** Ridge Clean Energy, Noah's Ark, Market Street, Charlbury, OX7 3PL

**Website:** <https://ridgecleanenergy.com/threeoaks-contact-us/>





The battery energy storage system (BESS), transformer and substation are located in the north of the site, where the renewable energy park would connect to the local distribution network 66kV poles. The BESS would be arranged in a U-shape, with each U-shape consisting of two sets of batteries and a power control system. Each U-shape could store 3.7MW. The compound would be surrounded by a climb proof fence and house infrared cameras for security.



Representation of battery storage and solar panels

### 1. Access Track

New, upgraded or widened access track (grassed over in time) would be 4 metres wide and laid over a stone sub-surface constructed upon a geotextile membrane.



### 2. Frame

Frames to support the solar panels would be driven into the ground or supported on concrete plinths if sensitive areas are identified.



### 3. Inverters

Inverters can be situated beneath the solar panels. These are used to convert the direct current (DC) generated by the solar PV to alternating current (AC) for distribution to the grid.



### 4. Transformer

Underground cables connect to a transformer that steps up the voltage to 33kV. From here, underground cables take the electricity to the substation compound where a transformer steps up the voltage to 66kV, the connection voltage on the distribution network.



### 5. Solar Power Station

The inverter and transformer can be housed in solar power stations that would be distributed at regular intervals amongst the solar panels. Each solar power station would be no more than 3 metres in height.



### 6. Batteries

The batteries can store electricity generated from the solar farm or the grid when there is excess generation, for use when the electricity is required.



### 7. Deer Fencing

Deer fencing would surround the site. Small gaps at the base can allow small animals to cross the site.





# Three Oaks Renewable Energy Park

## Noise, Heritage and Construction



### Noise

Noise during the construction phase could result from the Heavy Goods Vehicle (HGV) construction traffic. This would be managed by restricting working hours – for example from 7am to 7pm during the week and 7am to 1pm on Saturdays. In addition, standard noise reduction techniques such as silencers on plant/machinery and not allowing idling of engines could be implemented.

During the operational phase, both the heating ventilation and air conditioning (HVAC) for the batteries and the cooling fans for the power conversion system (PCS) would generate sound from the grid compound in the north of the site. Within the solar farm itself, inverters used to convert the direct current (DC) to alternating current (AC) would also generate sound.

Noise is not expected to impact residential properties. A full noise assessment will accompany the planning application to assess any potential impacts at sensitive receptors.

### Heritage

A desk based heritage assessment is currently underway. Once this is complete, the potential for heritage assets within the site will be assessed. A geophysical assessment may be required, which would consist of an array of magnetometers used to collect data across the site. Once processed, this data can be used to identify the presence of heritage assets beneath the site. Disturbance of any assets could be avoided by the use of concrete plinths to support the solar frames and panels.



### Construction, Operation and Decommissioning

The proposed Three Oaks Renewable Energy Park would take approximately 6 - 9 months to construct. Initial works would consist of the site tracks and compounds, followed by installation of the frames, electrical equipment and solar PV panels. It is expected that the frames would be driven into the ground to provide a secure foundation. Finally, the battery energy storage system and transformer equipment would be brought on to site, for connection to the local electricity distribution network.

HGV's, including flatbed trailers for the solar frames and panels, would be used to transport material and equipment to site. The indicative route would have HGV's leave the A614 onto West Backside and it is likely that additional works (e.g. passing places) would be required on West Backside. Approximately 1,200 deliveries (2,400 vehicle movements) would be required, and, assuming a 6 month construction period, would result in an average of 50 deliveries (100 vehicle movements) per week.

During the operational phase, there would be regular site visits to clean the panels and inspect the equipment. In addition, there would be an environmental management plan in place, which describes the environmental enhancements and their ongoing maintenance. The performance of the renewable energy park would be monitored remotely.

At the end of the 40-year operational lifetime, the site would be decommissioned and returned to agricultural use. All material would be recycled where possible.



Cleaning the panels



# Three Oaks Renewable Energy Park Environmental Benefits



## How can the project contribute to a net gain in biodiversity?

Three Oaks Renewable Energy Park would result in a net gain for biodiversity through new ecological and enhanced planting measures, including beehives.

The Renewable Energy Park would contribute to the improvement of soils as the ground is left fallow for the lifetime of the project, capturing carbon rather than releasing it through common agricultural methods of continuous cultivation.



### Beehive



Bees are pollinators that support plant reproduction. They can gather nectar and pollen from miles around, spreading diversity and enhancing the sustainability of local flora. A beehive would be provided to house bees.

### Tree Planting



Tree planting of native deciduous trees would occur to assist with screening of infrastructure over time.

### Hedgerow Restoration



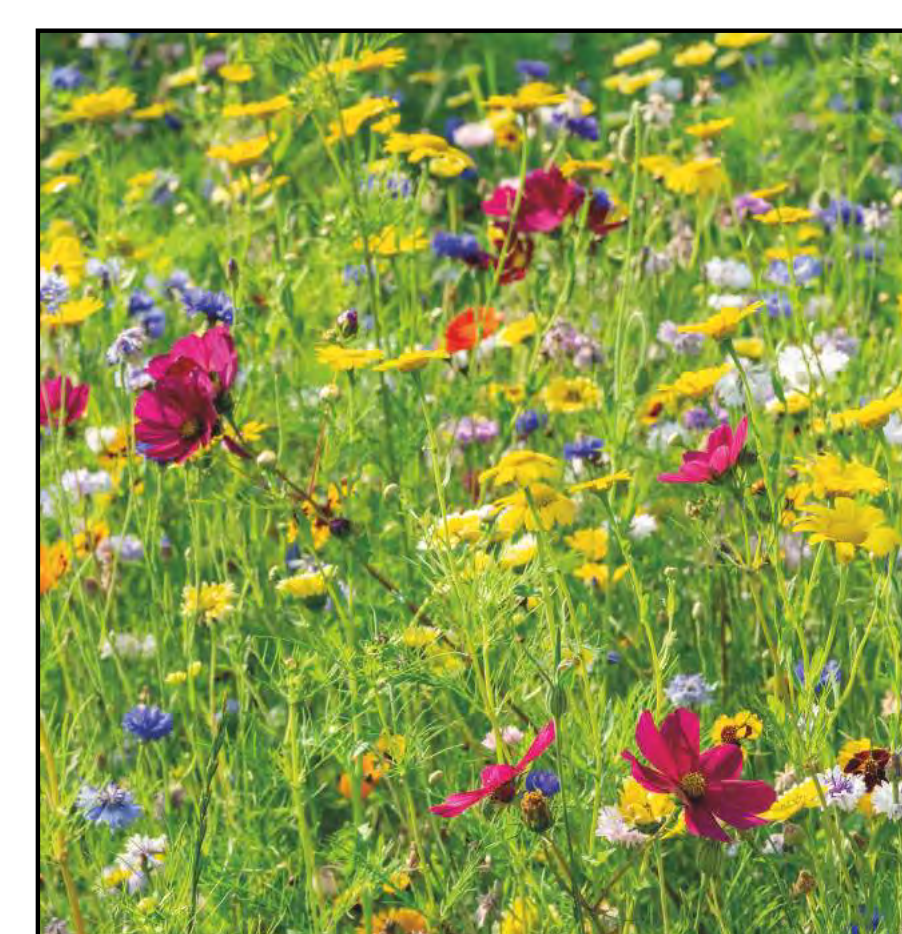
Hedgerow planting or restoration with native species would occur to increase visual screening and encourage wildlife in the area.

### Wildlife Boxes



Wildlife boxes would be provided to offer additional locations for birds to nest or for bats to roost in.

### Wildflowers



Species rich grass mix with wildflowers would be provided in between the rows of solar panels to encourage birds and butterflies into the area.

### Educational Board



Located adjacent to the rights of way, an educational board would be provided on how much renewable electricity is generated and on biodiversity net gain at the renewable energy park.