FENWICK SOLAR FARM

Fenwick Solar Farm
EN010152

Consultation Report

Appendix B3: Boards used at non-statutory consultation events

Document Reference: EN010152/APP/5.2

Regulation 5(2)(a)

Infrastructure Planning (Applications: Prescribed Forms and Procedure) Regulations 2009

October 2024
Revision Number: 00

BOOM POWER

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Revision History

Revision Number	Date	Details
00	October 2024	DCO application

Prepared for:
Fenwick Solar Project Limited

Prepared by:
AECOM Limited

OUR PROPOSAL.

Fenwick Solar Project Limited (a Boom Power company) is proposing a new solar farm with energy storage facilities at Fenwick.

The proposed solar farm at Fenwick will cover an area of 326 hectares and will generate approximately 237.5 megawatts (MW) of low carbon electricity. Solar Photovoltaic (PV) modules will generate the electricity and a Battery Energy Storage System(s) will be installed to enable electricity to be stored and released into the National Grid when it is most needed.

Work is ongoing to assess how the site will connect to the existing National Grid Thorpe Marsh Substation, whether via underground cables or by connecting directly to an overhead line that passes close to the site.

Our proposals to generate more renewable power in the UK will make a significant contribution towards the UK meeting its net zero targets and will deliver against Doncaster City Council's priorities around tackling climate change and generating more electricity from renewable sources.

WHY ARE WE CONSULTING?

Meaningful engagement with the local community is what we at Boom power strive to achieve and we want to hear your thoughts and ideas. Consultation is an opportunity for both the developer and the community to share information and feedback on a proposed development.

At this stage of the process, we are commencing our engagement with local authorities and other agencies, as well as presenting our initial proposals and seeking the views of the local community and stakeholders. Communities have a vital role to play in this process, and we want to hear your views.

Your feedback will help us to develop our designs ahead of a statutory consultation period planned to take place later this year. Your input is important to us, and all responses received during the consultation period will be considered.

The consultation will run from Tuesday 27 June 2023 to 23:59 on Monday 24 July 2023.
Respond before the consultation closes to share your thoughts on the Fenwick Solar Project.

326
HECTARES OF LAND

ADDITIONAL TREES & HEDGEROWS PLANTED

CREATION OF WILDLIFE HABITATS

PUBLIC RIGHTS OF WAY PRESERVED

PROPOSED SITE MAP.

LOCATION.

There are many factors which make this site ideal for a solar farm:

SUNLIGHT AND SITE TOPOGRAPHY

The Doncaster and Yorkshire area climate provides an optimal area for solar development. It provides good levels of sunshine along with days that are cool and clear, maximising the efficiency of the solar modules.

The land at Fenwick is flat - ideal conditions for the installation of solar PV modules.

PROXIMITY OF A SITE TO DWELLINGS

The Fenwick site is situated in a rural area. Our design will work to place the PV modules and Battery systems where they are less visible from nearby homes and use hedgerows and other natural barriers to provide screening.

We are committed to designing the scheme sensitively to limit the impact to local residents.

AGRICULTURE LAND CLASSIFICATION AND LAND TYPE

Available data indicates that the land at Fenwick is lower grade agricultural land, enabling the Scheme to avoid impacting 'best and most versatile' agricultural land.

ACCESSIBILITY

The Fenwick site is sufficiently served by road to enable the components of the solar farm to be delivered to the Site.

GRID CONNECTION

The site is in sufficient proximity to the existing National Grid Thorpe Marsh Substation, approximately 6 km south, which is where the electricity generated by the Site will feed into the National Electricity Transmission System (NETS)

DESIGN.

The proposed development will use traditional solar PV modules or bifacial modules. Bifacial solar modules offer many advantages over traditional modules. Power can be produced from both sides of a bifacial module, increasing total energy generation. The general misconception is that the UK is not sunny enough to optimise solar and full, direct sunshine is necessary. However, these efficient modules have excellent weak light performance meaning more electricity output is seen in weak light conditions such as cloud, dawn and sunset. Therefore, solar can work exceptionally well in the UK, producing power all year round.

Solar PV modules can be arranged, or mounted, in different directions to gain sunlight. We are evaluating three mounting options.

FIXED SOUTH FACING

All the PV modules in a south facing orientation. This would require the rows of modules to be oriented East to West.

FIXED EAST-WEST

The modules are mounted in back-to-back rows with one side facing to the east and one to the west. These double, 'hut shaped' rows would run from North to South.

TRACKING

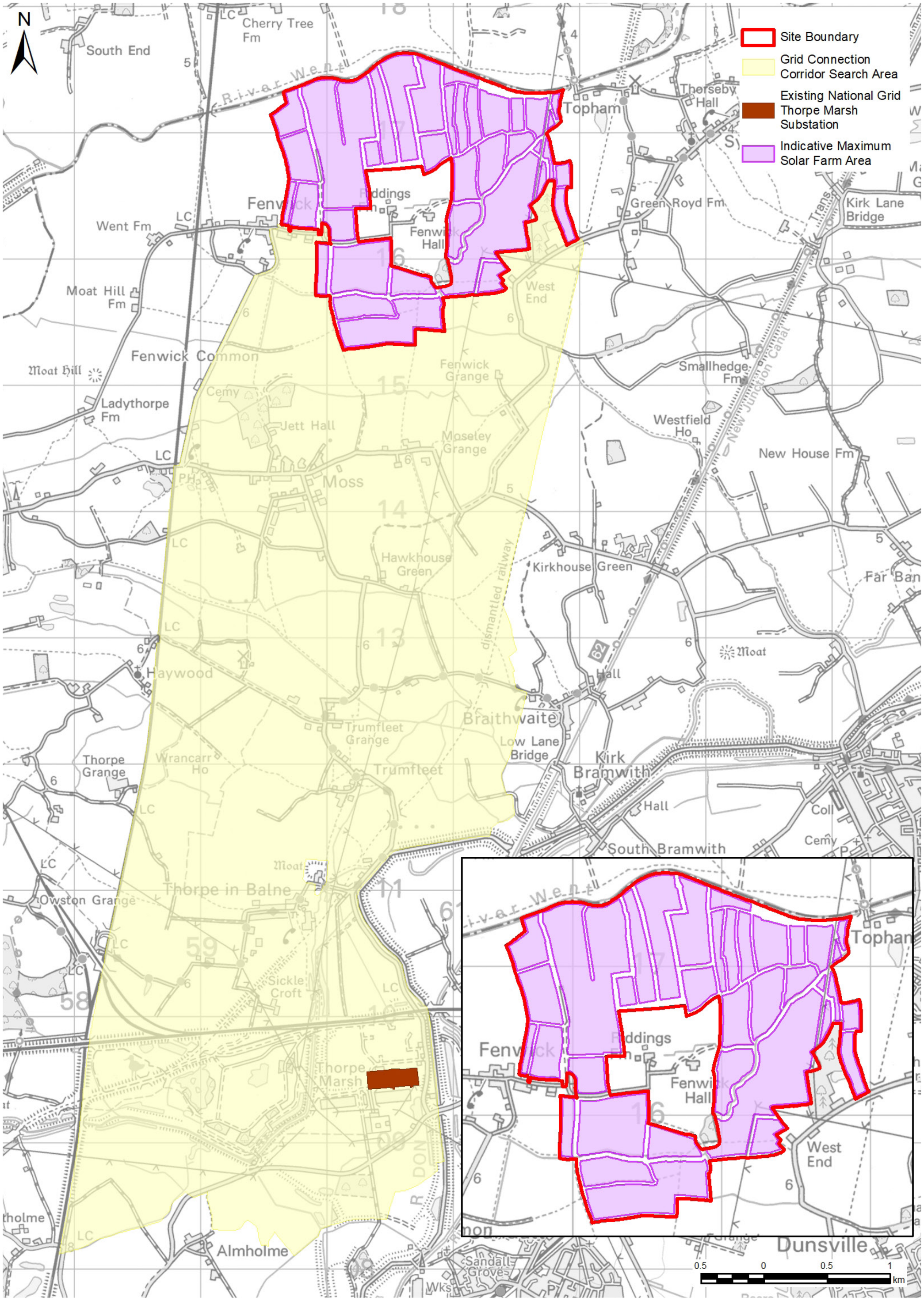
The modules would be mounted to tilt to follow the direction the sun is coming from. This maximises the electricity production possible from the same number of modules.

At this early stage, the layout of the solar modules and the location of the associated technology on the site has not yet been determined.

Recent technology advances have significantly reduced the carbon costs of producing solar modules. As with all manufactured products, some carbon is emitted in the manufacturing process, yet the claim that solar modules produce more carbon than they save is false. The overall greenhouse gas emissions involved in solar power generation is considerably lower than coal or natural gas and research has shown that the carbon payback period for solar modules is only one to four years. This means that over the total lifespan of the project (an average of 40 years) each individual module will generate zero carbon and zero pollution electricity for decades even after the carbon emitted in its production has been paid back.

We will design the solar farm sensitively to minimise visual impacts on local people. Buffer zones and screening will be used in areas where the solar farm is close to residential or commercial properties. A landscape and visual impact assessment will be undertaken to assess the impacts of the scheme, however due to the flat nature of the land at Fenwick we are confident at this stage that the solar PV modules can be largely obscured from public view.

SITE & CABLE CORRIDOR PLAN.



WHAT COMPONENTS ARE USED IN A SOLAR FARM?

SOLAR PHOTOVOLTAIC (PV) MODULES

Solar PV modules are made up of multiple PV cells which convert the sunlight into direct current (DC) electricity.

ENERGY STORAGE

Energy storage is essential as it allows electricity generated during times of low demand to be stored and then released to the National Electricity Transmission System when required such as peak electricity usage periods. An on-site battery system is proposed to be used for energy storage.

INVERTERS

Inverters convert the DC electricity generated by the solar PV modules into alternating current (AC), the type of electricity we use in our homes, so it can be exported to the national Grid for use.

SWITCHGEAR

The switchgear allows the site to connect to or be isolated from the grid during routine maintenance.

TRANSFORMERS

Transformers change the voltage of the electricity generated which makes it more efficient to move over longer distances. The transformers ensure that the voltage of the energy generated is matched to the voltage of the national grid for transmission and distribution around the UK.

SUBSTATIONS

Substations are used to safely collect and manage the energy exported from the site to the national grid. On-site substations will be used to manage the energy leaving the site via the grid connection cable route to the National Grid Thorpe Marsh Substation.

SECURITY

Security fencing will enclose all the site equipment. This will be unobtrusive mesh fencing, and, where necessary and feasible, screened from view by planting. The site will also have security cameras to monitor the equipment.
Cameras would have inward-facing viewsheds and will be aligned to capture only the fence and the area inside the fence.

WHY DO SOLAR FARMS NEED TO BE SO BIG?

Solar farms take up very little space, currently occupying less than 0.1% of the UK's land. In order to achieve the UK's target to reach net zero by 2050, and a decarbonised electricity system by 2035, power generation from larger scale solar farms will be required.

CLIMATE CHANGE & ECOLOGY.

Solar power is affordable, reliable, and low impact. In 2021 solar farms supplied more than 4% of the UK's entire electricity demand. The government has set a target for 70 gigawatts of our power to be generated from solar by 2035, a five-fold increase on existing targets. According to the UN, climate change is the 'defining crisis of our time and it is happening even more quickly than we feared' – we need to create more renewable power.

We recognise the importance of environmental protection and betterment as part of our commitment to operating sustainably and responsibly. We procure independent qualified ecologist advice to measure the biodiversity value of each project and to design enhancements to deliver net biodiversity gain. At our solar farms, this generally results in improvements to natural habitats for a range of invertebrates, small mammals, reptiles and birds. Currently the majority of the land at Fenwick is used for arable and pasture purposes which gives opportunities to boost biodiversity through the function of the solar farm.

ENVIRONMENTAL IMPACTS & MITIGATION.

DURING CONSTRUCTION.

Topic	Potential Impact	Management
Traffic	There will be an increase in vehicles accessing the site bringing materials to and from the site during construction.	We will consult with the local authorities to ensure the site accesses are appropriately located for the area. Any needs for local upgrades will be determined as the scheme designs develop.
Noise	There is likely to be an increase in noise during construction.	We will monitor the noise from site and if it reaches a predetermined level action will be taken to reduce it.
Air Pollution	The construction and traffic to and from the site may increase dust in the air.	There could be up to a total of 20-25 heavy goods vehicle movements a day across the project area. This is a reasonable worst case based on the most rapid build out scenario. Trucks will keep to the existing roads and the access tracks made for this purpose. We will monitor dust and leaving trucks will have their wheels washed when appropriate.
Visual	There will be minimal visual impact from construction activities. All activities will be at ground level.	Fields will be fenced off during construction work, and existing trees and hedgerows around the fields will not be disturbed so that construction is not readily visible.
Land	There will be temporary disturbance to soils and agricultural land during the installation of underground cables/ grid connection.	Implementation of good practice soil management measures via a Soil Management Plan so that land is restored to original condition.

OPERATION.

Topic	Potential Impact	Management
Overhead Cables	Overhead cables can have a visual and landscape impact and in some circumstances introduce an obstacle for birds and bats.	The preferred method is to have the grid connection cables buried below ground and consequently they will not be visible.
Buildings	Some structures will be required on the site.	To minimise the need for new structures we are looking at ways to re-purpose and reuse the existing buildings on-site.
Module Height	Modules will be mounted approximately 1m above ground at an angle yet to be determined. The mounted solar PV modules will be up to 3.5m above ground level.	The Scheme will involve field boundary enhancement and planting of seed mixes within the solar module area. Planting will also be used where necessary to provide screening and reduce the visibility of modules and other equipment.
Land	The land use within the solar farm will change as the land will not be available for its current arable agricultural uses.	The land will still be available agriculture through grazing, providing an opportunity to diversify the farming practices in this area.
Glint & Glare	Whilst solar modules are made to absorb the light, they can be deemed to have reflective qualities.	Planting around the perimeter fences will reduce any potential glint and glare impacts. The modules will also be positioned so as to reduce any reflection that could impact the roads, train lines or public footpaths.
Traffic	Increases in traffic during the operation of the solar farm.	The site is estimated to only require 1-3 permanent staff, so once operational, traffic to and from the solar farm will be minimal.

BENEFITS.

ENERGY SECURITY

In the aftermath of the global pandemic and the conflict in Ukraine, European gas prices soared by more than 200% in 2021-2022. This record rise in global energy prices has led to an unavoidable increase in the cost of living in the UK, as we use gas both to generate electricity, and to heat the majority of our 28 million homes. Accelerating the transition away from oil and gas depends critically on how quickly we can roll out new renewables, creating around 480,000 clean jobs by the end of the decade and building a British power system that is much more self-sufficient.

LOW CARBON, RENEWABLE ELECTRICITY

Power generation in the UK is undergoing a major change. The Government has committed to achieving net zero carbon emissions by 2050 and to decarbonising the electricity system by 2035. This will require large amounts of home-grown, renewable electricity generation infrastructure to be delivered, including 70 GW solar generation capacity by 2035 – the equivalent to a five-fold increase on existing solar generation.

Boom Power has secured a connection agreement to export 237.5 MW of electricity into the National Grid at the Thorpe Marsh substation. The project will therefore make a significant contribution to providing the renewable electricity generation capacity that the country urgently needs to develop.

ENVIRONMENTAL

Solar power produces less carbon dioxide than producing electricity with fossil fuels. The solar farm supports the UK's target of cutting emissions towards net zero.

Compared to arable farming, solar farms can support a biodiversity net gain by providing an overall increase in natural habitat and ecological features. Whilst there is an initial change to the countryside, the operational solar farm has the potential to become a haven for wildlife.

LOCAL COMMUNITY

There will be local employment opportunities through the construction phase of the solar farm, and we are committed to using local businesses where practicable.

The land will become eligible for business rates thus providing a greater income to the council to spend in the area.

COMMUNITY BENEFIT FUND

We are open to the idea of funding community projects which will add value to the local community in Fenwick. Please could you give us your ideas in the feedback form at the back of this brochure.

TEMPORARY DEVELOPMENT

This is a temporary development, and the Development Consent Order (DCO) would require the Scheme to be decommissioned at the end of its operational life. After this, the land will be returned to the landowner in a condition that will enable its existing uses to be resumed.

Arable farming will no longer be possible once the solar farm is in operation, however, sheep farming will be encouraged. We will seek opportunities with local farmers to deliver sheep grazing on the Solar PV Site.

237.5 MW
LOW-CARBON ELECTRICITY

326 (HA)
HECTARES OF LAND

CREATION OF WILDLIFE HABITATS

2050
NET ZERO TARGET

WHAT IS A DEVELOPMENT CONSENT ORDER (DCO)?

As the Fenwick solar farm will have the ability to generate more than 50 MW of renewable electricity, it is classified as a Nationally Significant Infrastructure Project (NSIP). Under the Planning Act 2008, NSIPs are developments which require Development Consent to be granted by the Secretary of State for the Department of Energy Security and Net Zero. We are working closely with the Local Authority, Doncaster City Council, as a key consultee.

Unlike applications for planning permission, which are submitted to and determined by local planning authorities, DCO applications are submitted to the Planning Inspectorate (PINS). The inspectors administer the application process on behalf of the Secretary of State for Department of Energy Security and Net Zero.

The process of preparing an application for a DCO requires a rigorous set of conditions to be met including consulting with the public. As the project is in its early stage, this consultation is a non-statutory consultation. This means some of the information we are presenting is still in development and details may change as the project progresses.

We will use the feedback from this consultation to refine and develop our design. An updated proposal will be presented during our statutory consultation as required by the Planning Act 2008, where you will be able to share your views and feedback on our revised proposals. Our statutory consultation dates will be advertised nearer the time.

We will be carrying out environmental impact assessments and preparing our environmental statement in preparation for submitting it to the Planning Inspectorate.

November 2022

PROJECT DEVELOPMENT BEGAN

This project has been carefully selected as part of a detailed feasibility process.

June 2023

NON-STATUTORY PUBLIC CONSULTATION

A chance to engage with the local community about the proposed development.

PROJECT DEVELOPMENT AND ENVIRONMENTAL IMPACT ASSESSMENT

The feedback from the non-statutory public consultation will be used to further development the project.

December 2023

STATUTORY PUBLIC CONSULTATION

Another chance to engage with the local community about the progress with our proposal.

DEVELOPMENT CONSENT ORDER APPLICATION PREPARATION

Development Consent Orders are required for designated Nationally Significant Infrastructure Projects.

Mid 2024

DEVELOPMENT CONSENT ORDER SUBMISSION

Development Consent Order will be submitted to the Secretary of State for the Department for Energy Security and Net Zero.

SHARE YOUR VIEWS.

Feedback from the public and our key stakeholders is crucial to us developing the best solar farm for this area. We want to make sure that everyone has a chance to get involved and share their opinion on the project. To share your feedback and ideas, scan the QR code below to fill out our online survey. Alternatively, pick up a hard copy of our consultation brochure at today's event and send your completed form back to us via Freepost. The consultation closes at 23:59 on Monday 24th July 2023, so please submit feedback before this date. All feedback is important to us. Where possible, we will still consider comments submitted after this date within reason.

WHO ARE BOOM POWER?

WE SHAPE THE FUTURE BY SUSTAINABLY HARVESTING ENERGY IN BALANCE WITH NATURE.

BUILD.

Our team of experts have led to our successful construction legacy by actively seeking and adopting the latest technologies to deliver pioneering, first-of-a-kind projects on a global scale.

OWN.

Specialising in non-subsidised renewable infrastructure projects we hold strong partnerships with local communities, clients and investors to jointly reduce our global carbon footprint.

OPERATE.

Our operational projects produce clean energy which contributes towards a sustainable economy and aids in the repair of our planet through our biodiversity net gain approach.

MAINTAIN.

Our dedicated team monitor all components post-operation to ensure our projects continuously reach their optimum level of performance to provide the grid with greater stability.

+700

MEGAWATTS CONSTRUCTED

+850

MEGAWATTS DEVELOPED

+45

MILLION TREES OFFSET PER YEAR

450,000

AVERAGE HOMES POWERED PER YEAR

950,000

TONNES OF CO_2e PREVENTED PER YEAR

300,000

CARS OFFSET FROM THE ROAD PER YEAR

Note: All statistics are based upon legacy projects within both the UK & Australia.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