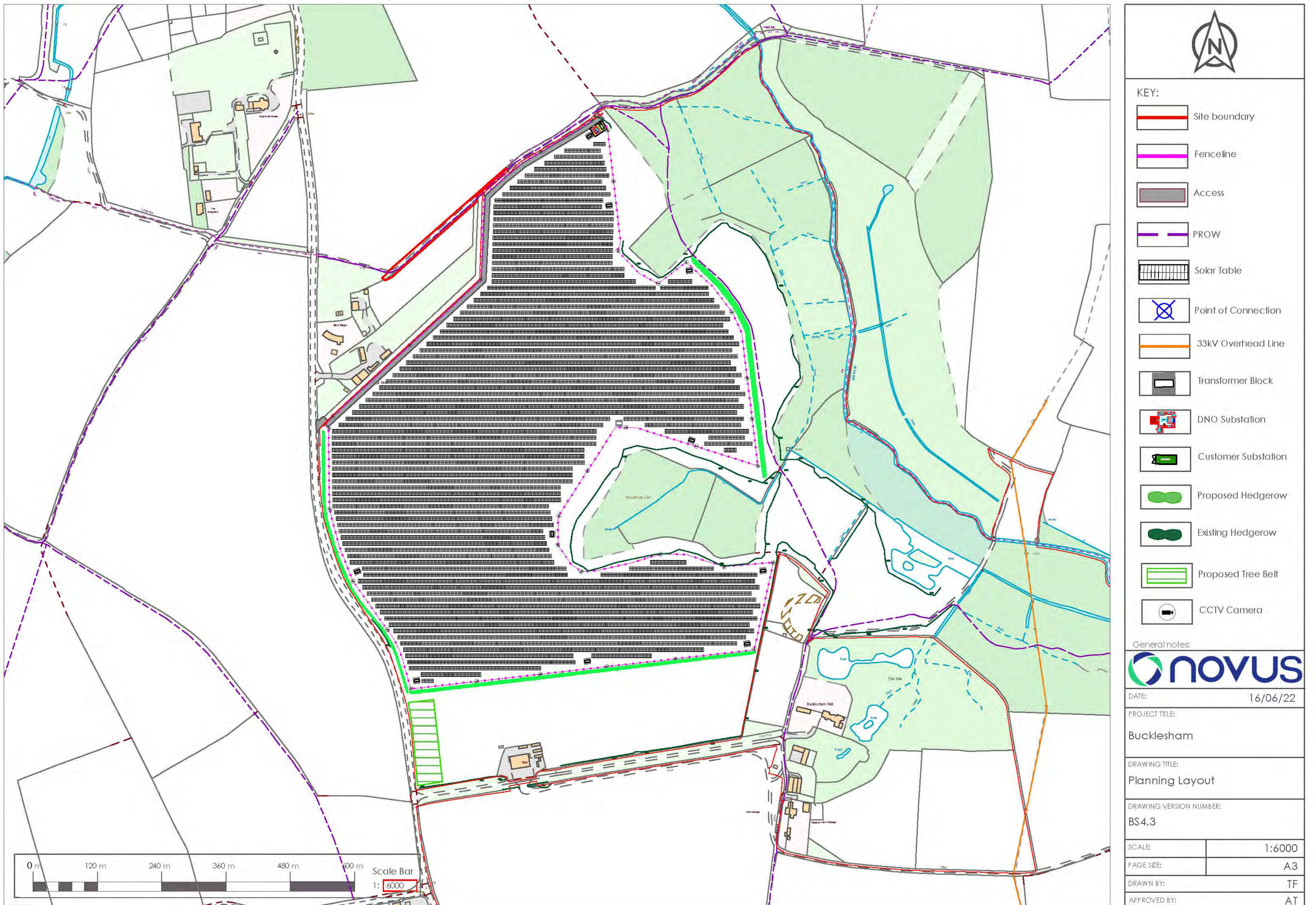


Bucklesham Solar Farm



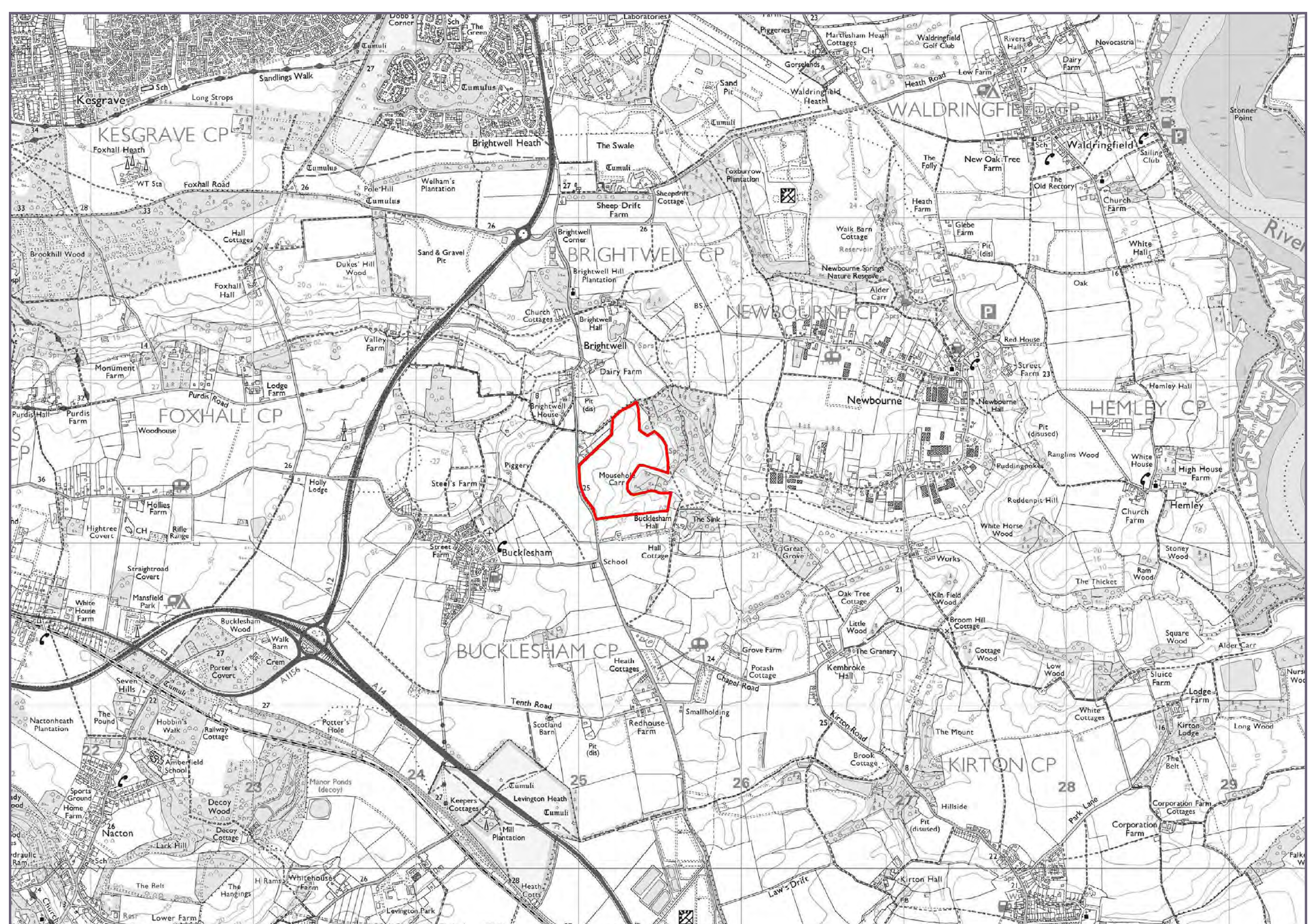
Proposed Site Location and Layout



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We are proposing a solar project on Bucklesham Hall Farm, East of Brightwell Road near Bucklesham and Newbourne, Suffolk, as shown on the maps to the right and in more detail above.

The site has been carefully selected and designed during a detailed assessment process considering grid availability and solar irradiance, heritage, landscape & amenity, ecology and environmental designations, access and agricultural land quality.



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The Need

DOMESTIC HEATING
ELECTRIFICATION



TRANSPORT
ELECTRIFICATION



There is widespread awareness of the need to reduce dependence on fossil fuels and an encouragement to increase the generation and use of renewable energy.

UK electricity consumption is set to double as the population transitions to electric vehicles and domestic gas heating and cooking moves to electricity.

East Suffolk Council has declared a climate emergency and is committed to working towards the aspiration of making the area as a whole carbon neutral by 2030.

The UK has committed to becoming Net Zero by 2050 and a target to decarbonise the electricity grid by 2035. This requires an extra 3GW of solar to be built each year. Renewable energy developments like the Bucklesham Solar Farm are a key part of addressing the Climate Emergency, as part of the delivery of an overall mix of new renewable energy generation projects across the Country. The importance of this was reinforced in the British Energy Security Strategy, released by UK Government in April 2022.

CLIMATE
EMERGENCY



NET ZERO



ENERGY
SECURITY



The Proposal

Solar Array: The solar array is proposed to consist of ground-mounted solar photovoltaic panels covering approximately 23.1 hectares (57.1 acres) with a power output of 24.8MW, typically generating 27 919MWh per year.

It is currently estimated prior to layout optimisation that the solar farm will be sufficient to offset the equivalent annual energy needs of approximately 7 449 homes¹ in East Suffolk. It is also predicted that the solar farm will save 6 450 Tonnes of CO₂ per year².

Frames, Panels and Inverters: The solar panels will be mounted with a maximum height of approximately 3m using frames fixed to the ground with piled posts or ground screws. Surface mounted feet may be used in specific areas where ground disturbance should be avoided. The solar panels generate Direct Current (DC) electricity, which is converted to electricity with Alternating Current (AC) for the local network by power inverters. Inverters units (approximately 1m (h) x 70cm (w) x 30cm (d)) will be mounted on the back of the solar panels at intervals.

Buildings: Transformer units (approximately 3.5m (h) x 10.5m (w) overall x 3.0m (d)) will be required for each section of the solar farm to step the voltage up to a suitable export level. A substation building (approximately 2.6m (h) x 6.1m (w) x 2.4m (d)) is required to connect the solar farm to the local electricity network, and meter the production. All electrical cabling to the substation will be underground. Small container size buildings are also required for storage. It is proposed that all buildings have a green or dark brown finish.

Access Tracks: Existing tracks will be used where available. New access tracks will be 4 metres wide and will be built of crushed stone over a geo-textile membrane, no concrete will be required. Where possible, tracks will be allowed to grass over once construction is finished.

Security: A perimeter fence will be approximately 2 metres high, consisting of wooden posts supporting traditional wire stock fencing to match the local vernacular as required by the local authority.

*1 Stated figure is calculated using the Domestic Energy Map (<http://www.domesticenergymap.uk>), based on average domestic consumption per household of 3 748kWh in East Suffolk. 2. <https://www.gov.uk/government/publications/greenhouse-gas-reporting-conversion-factors-2020>. NB. All figures reported to 3 significant figures unless stated otherwise.



Environmental Report

The Environmental Report will collate all the assessments undertaken to support the planning application.

The scope of the assessments have been agreed with the local planning authority and their statutory consultees through formal pre-application consultation process and is also advised by national planning guidance.



Preliminary Environmental Survey Results

ECOLOGICAL SURVEYS

Typical farmland species have been observed, together with rare heath land invertebrates. Enhancement planting beneath and around the panels with habitat management will encourage the return of the site to heath.

LANDSCAPE & VISUAL

The site is contained within a single large field, well screened within an extensive network of bounding hedges and woodland, with further planting proposed. A Landscape and Visual Impact Assessment is underway.

CULTURAL HERITAGE

No designated heritage assets are located within the proposed development. A geophysical survey of the site has identified potential archeology features which will be avoided using surface mounted foundations.

HYDROLOGY, GEOLOGY AND SOILS

The infrastructure is located outside of areas of high risk of flooding. Where land is taken out of intense agricultural production, soils will be rested and improve without the application of chemicals for the duration of the scheme.

TRAFFIC AND TRANSPORT

The existing farm entrance shared with Twisted Oaks Bike Park will provide access off Brightwell Road. Traffic will be routed from either the A12 or A14 junctions. Advance notice will be provided for road users and residents ahead of the 16-week construction period.

NOISE

Modelling has been completed to assess the potential noise impacts during construction and from electrical infrastructure during operation. There is expected to be an overall low level of noise and no adverse effect.

Enhancements and Benefits

In addition to the renewable energy generation benefits, and associated savings in Carbon Dioxide and other greenhouse gas emissions as a result of Bucklesham Solar Farm, the project will bring a number of other environmental and community benefits to the surrounding area.

Our Community Promise

We believe it is important that local communities share in the benefit our project brings. For all our solar projects we offer a community benefit fund, which can be used to support local projects and priorities and work with our host communities to agree the best way to provide and administer that fund. Every year the 24.8MWp Bucklesham Solar Farm will contribute £250 per MWp plus a further £100 per MWp charitable donation for the whole 40 year lifetime.

Boosting Biodiversity

A bespoke biodiversity strategy is being prepared that ensures existing and new habitats are enhanced or created to benefit local wildlife. Planting of heathland grasses and heathers with green hay will support Nationally scarce but locally present native mining bees.

Right of Way

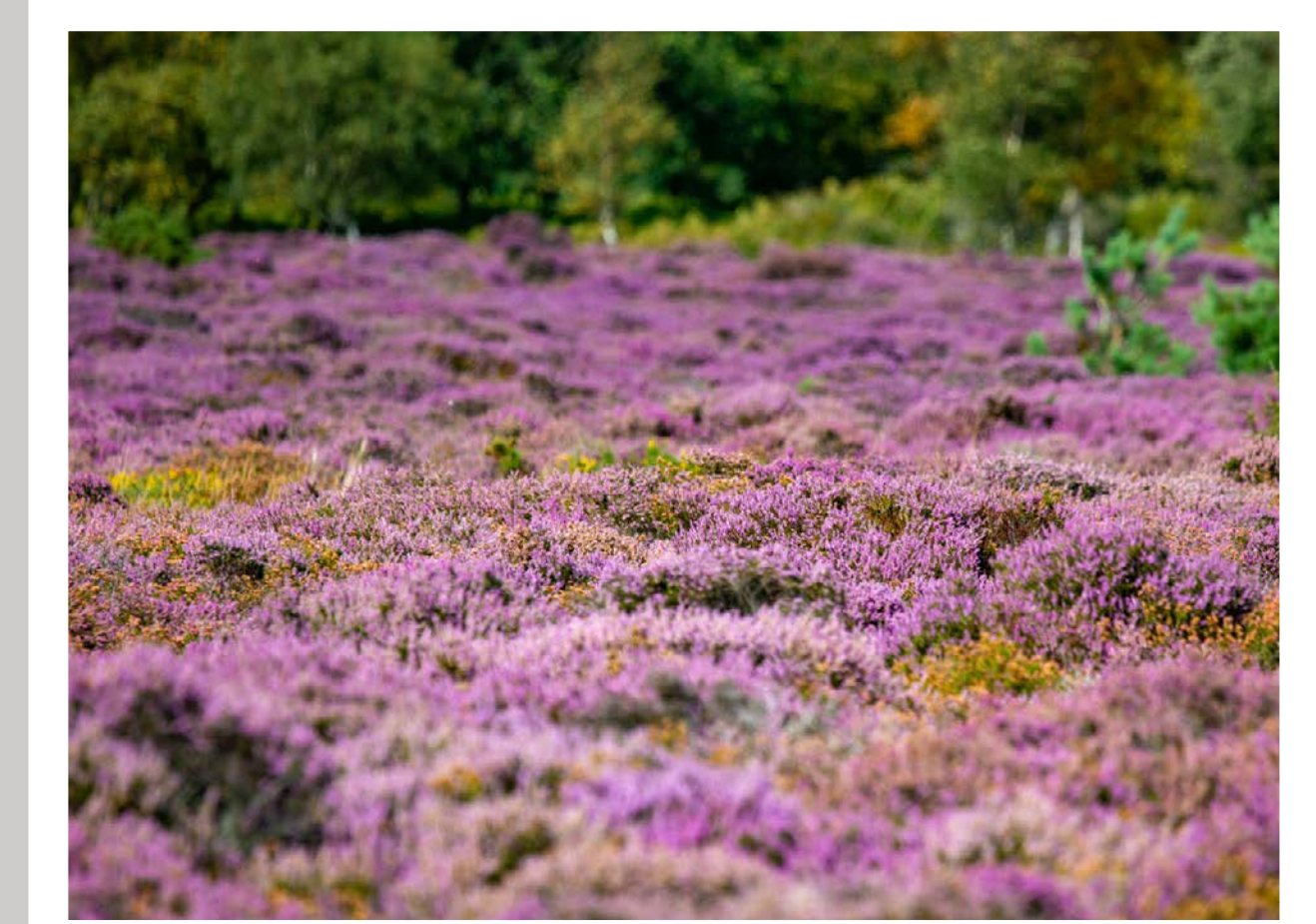
Footpath access is retained and fences are set back leaving a wide corridor with new hedgerow planting.

Land Use

The installation has been designed to leave spaces around the site boundaries and between the rows of panels to avoid shading and maximise electricity generation. This will leave the majority of the fenced solar array area as uncovered grassland managed so as to return the area to low-level heath.

Sensitive Design

The iterative design process has informed a layout which provides a buffer from adjacent land uses and potential receptors of the site whilst benefiting from mature and effective woodland screening minimising visual impact. Additional planting of hedgerow and woodland is proposed to further screen the site.



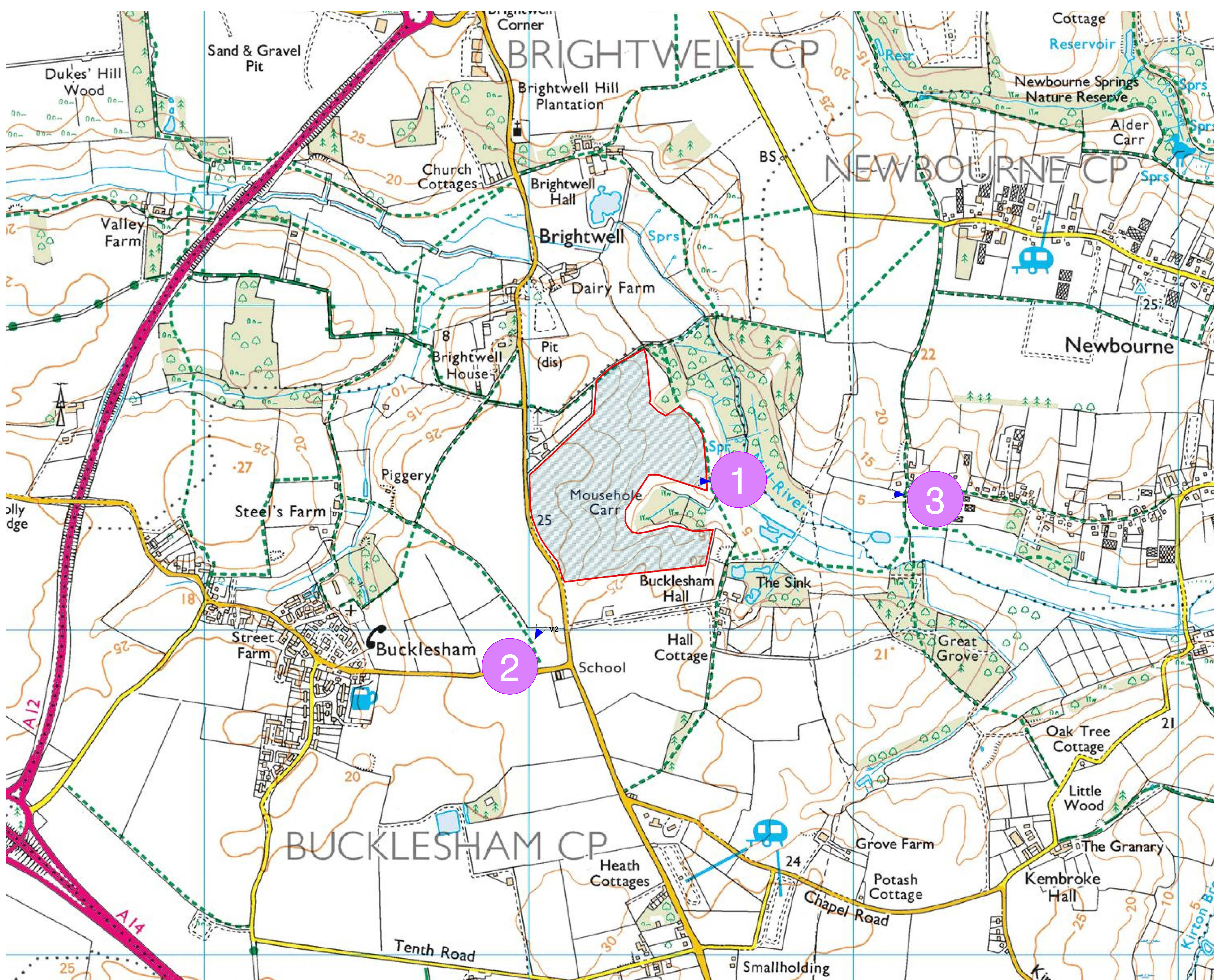
Bucklesham Solar Farm



Visualisations

These photomontages, produced for exhibition purposes, are intended to illustrate the scale and location of the proposal through a representative selection of viewpoints agreed with the Local Planning Authority. They are produced using Ordnance Survey terrain data to accurately locate the solar farm over the existing view.

These viewpoints form a part of a larger landscape and visual assessment, focussing on a 5km study area around the site to identify all significant impacts upon landscape and visual amenity from the proposal. A larger number of viewpoints have been agreed with the Local Planning Authority from which we are presenting an indicative selection. The visuals are presented before any planting as well as after it establishes.



1 Footpath near Mill River (left)

Predicted View at Completion



VIEWPOINT 1: Footpath near Mill River (left)

Bucklesham Solar Farm

OS-reference: ADQ: Direction of view: Nearest solar panel:	625652E 242458N 230° 27m	Visualisation Type: Horizon/field of view: Vertical field of view: Engagement factor:	Page 3 30° (horizontal projection) 20° 95% @ A1	Camera: Lens: Camera height: Date and time:	Canon EOS M3 R Canon EF 28mm F1.8 1.8m A02 2023/02/02 09:48
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Prepared by New Visual Solutions Ltd for Novus Environmental Limited

Predicted View After 10 Years



VIEWPOINT 1: Footpath near Mill River (left)

Bucklesham Solar Farm

OS-reference: ADQ: Direction of view: Nearest solar panel:	625652E 242458N 230° 27m	Visualisation Type: Horizon/field of view: Vertical field of view: Engagement factor:	Page 3 30° (horizontal projection) 20° 95% @ A1	Camera: Lens: Camera height: Date and time:	Canon EOS M3 R Canon EF 28mm F1.8 1.8m A02 2023/02/02 09:48
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Prepared by New Visual Solutions Ltd for Novus Environmental Limited

1 Footpath near Mill River (right)

Predicted View at Completion



VIEWPOINT 1: Footpath near Mill River (right)

Bucklesham Solar Farm

OS-reference: ADQ: Direction of view: Nearest solar panel:	625652E 242458N 230° 27m	Visualisation Type: Horizon/field of view: Vertical field of view: Engagement factor:	Page 3 30° (horizontal projection) 20° 95% @ A1	Camera: Lens: Camera height: Date and time:	Canon EOS M3 R Canon EF 28mm F1.8 1.8m A02 2023/02/02 09:48
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Prepared by New Visual Solutions Ltd for Novus Environmental Limited

Predicted View After 10 Years



VIEWPOINT 1: Footpath near Mill River (right)

Bucklesham Solar Farm

OS-reference: ADQ: Direction of view: Nearest solar panel:	625652E 242458N 230° 27m	Visualisation Type: Horizon/field of view: Vertical field of view: Engagement factor:	Page 3 30° (horizontal projection) 20° 95% @ A1	Camera: Lens: Camera height: Date and time:	Canon EOS M3 R Canon EF 28mm F1.8 1.8m A02 2023/02/02 09:48
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Prepared by New Visual Solutions Ltd for Novus Environmental Limited

2 Footpath near Bucklesham Primary School

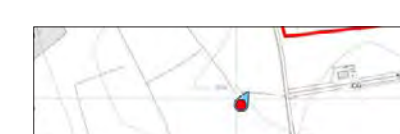
Predicted View at Completion



Photomontage at completion

VIEWPOINT 2: Footpath near Bucklesham Primary School

Bucklesham Solar Farm



Location Plan

OS reference: 620100E 241577N
 AOC: 25m
 Direction of view: 220°
 Observer vantage point: 211m

Visualisation Type: Historical field of view
 Horizontal field of view: 220°
 Vertical field of view: 95% @ 4.1°
 Engagement factor: 220°

Type 3
 80% (historical projection)
 20%
 95% @ 4.1°

Camera: Canon
 Camera height: 1.5m AOC
 Date and time: 22/03/2022 14:48

Canon EOS M6 II
 Canon EOS M6 II
 2022/03/22 14:48
 Prepared by New Visual Solutions Ltd for Veritas Environmental Limited

Predicted View After 10 Years



Photomontage after 10 years

VIEWPOINT 2: Footpath near Bucklesham Primary School

Bucklesham Solar Farm



Location Plan

OS reference: 620100E 241577N
 AOC: 25m
 Direction of view: 220°
 Observer vantage point: 211m

Visualisation Type: Historical field of view
 Horizontal field of view: 220°
 Vertical field of view: 95% @ 4.1°
 Engagement factor: 220°

Type 3
 80% (historical projection)
 20%
 95% @ 4.1°

Camera: Canon
 Camera height: 1.5m AOC
 Date and time: 22/03/2022 14:48

Canon EOS M6 II
 Canon EOS M6 II
 2022/03/22 14:48
 Prepared by New Visual Solutions Ltd for Veritas Environmental Limited

3 Footpath near Newbourne

Predicted View at Completion



Predicted view at completion

VIEWPOINT 3: Footpath near Newbourne

Bucklesham Solar Farm



Location Plan

OS reference: 621100E 242417N
 AOC: 25m
 Direction of view: 075m

Visualisation Type: Historical field of view
 Horizontal field of view: 220°
 Vertical field of view: 95% @ 4.1°
 Engagement factor: 220°

Type 3
 80% (historical projection)
 20%
 95% @ 4.1°

Camera: Canon
 Camera height: 1.5m AOC
 Date and time: 22/03/2022 14:23

Canon EOS M6 II
 Canon EOS M6 II
 2022/03/22 14:23
 Prepared by New Visual Solutions Ltd for Veritas Environmental Limited

The Development Team

Novus Renewable Services is a leading UK solar PV development company.

We are working in partnership with Innova Group who will build, own and operate the Solar Farm. We have been active in the development of solar projects since 2010. Our team have extensive experience delivering and operating renewable energy projects around the United Kingdom.

Engena is a renewable energy consultancy with over 60 years worth of combined experience in the renewable energy industry. Our core skills are initial project design, environmental impact assessment and project implementation. Engena has drawn on the experience of specialist consultants for the various environmental assessments undertaken for the Bucklesham Solar Farm.

Next Steps

We have completed the initial site selection, site design and layout work as well as commencing discussions with East Suffolk Council.

Environmental assessments are now in their final stages and the design refined based on the results. We now have a scheme we can bring to the community in advance of submitting a planning application during the summer.

Your views matter to us as we finalise the planning application - please get in touch and share your thoughts with us so we can include them in the final design and application.

Get in touch...

- Please complete a questionnaire as you leave the exhibition with your thoughts or questions;
- Visit the project website for more detail (type or scan);

www.novus-rs.co.uk/projects/bucklesham/



- Write to us at:
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GL54 3LQ
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