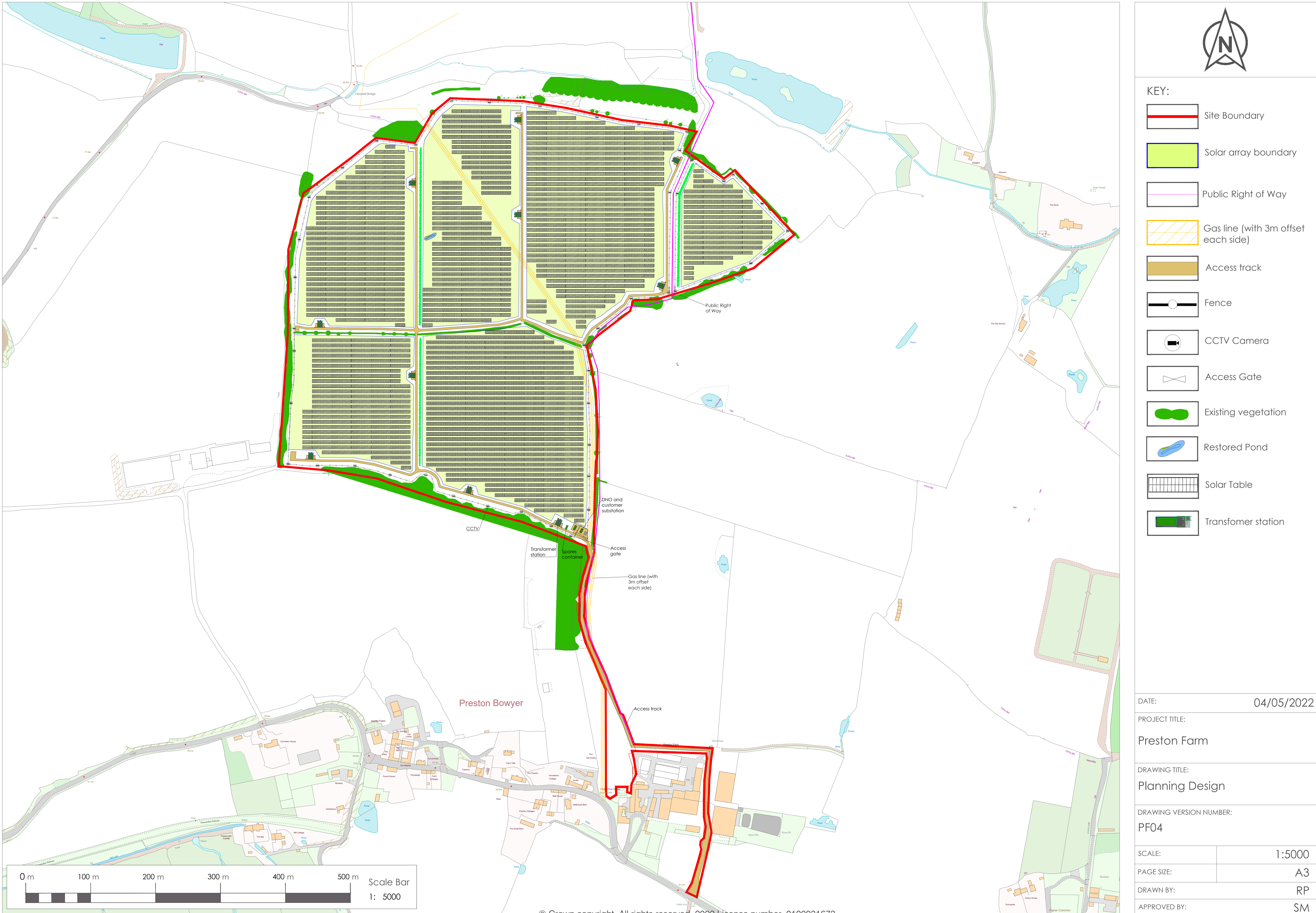


# North Preston Farm Solar Project

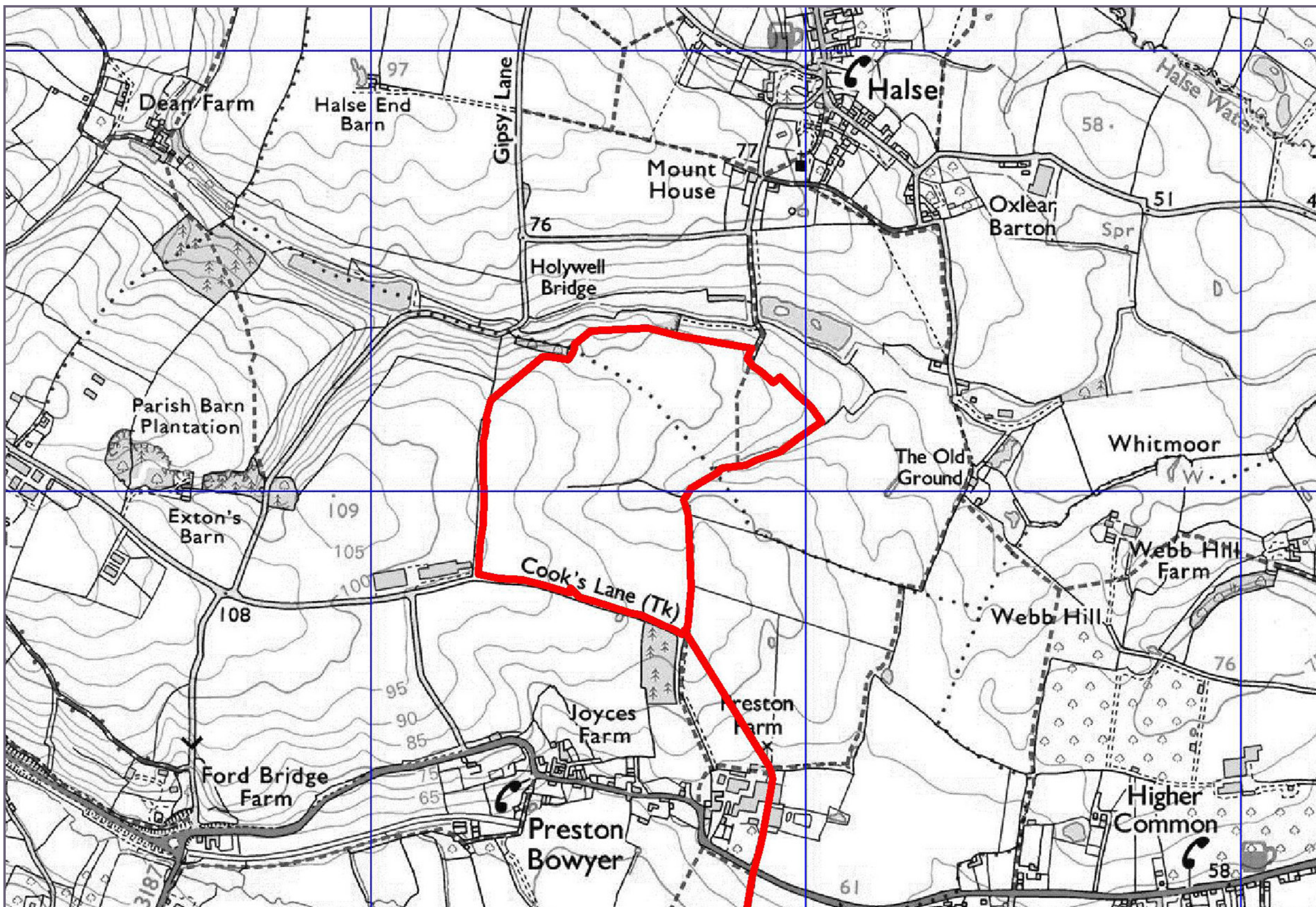


## Proposed Site Location and Layout



The proposed solar array is located north of Preston Bowyer and east of Milverton, as shown on the map to the right.

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 quality.



Contains OS data © Crown copyright and database right (2022). Not to scale.



# North Preston Farm Solar Project



## The Proposal

**Solar Array:** The solar array is proposed to consist of ground-mounted solar photovoltaic panels covering approximately 33 hectares with a power output of 25MWp, typically generating 27 438MWh 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 6 844 homes<sup>1</sup> in Somerset and West Taunton. It is also predicted that the solar farm will save 6 339 Tonnes of CO<sub>2</sub> per year<sup>2</sup>.

**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 x 70cm x 30cm) will be mounted on the back of the solar panels at intervals.

**Buildings:** Transformer units (approximately 10.5m overall x 3.5m x 3.0m) will be required for each section of the solar farm to step the voltage up to a suitable export level. A substation building (approximately 6.1m x 2.4m x 2.6m) 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 4 009kWh in Somerset and West Taunton. 2. <https://www.gov.uk/government/publications/greenhouse-gas-reporting-conversion-factors-2020>. NB. All figures reported to 3 significant figures unless stated otherwise.





# North Preston Farm Solar Project



## The Project Team

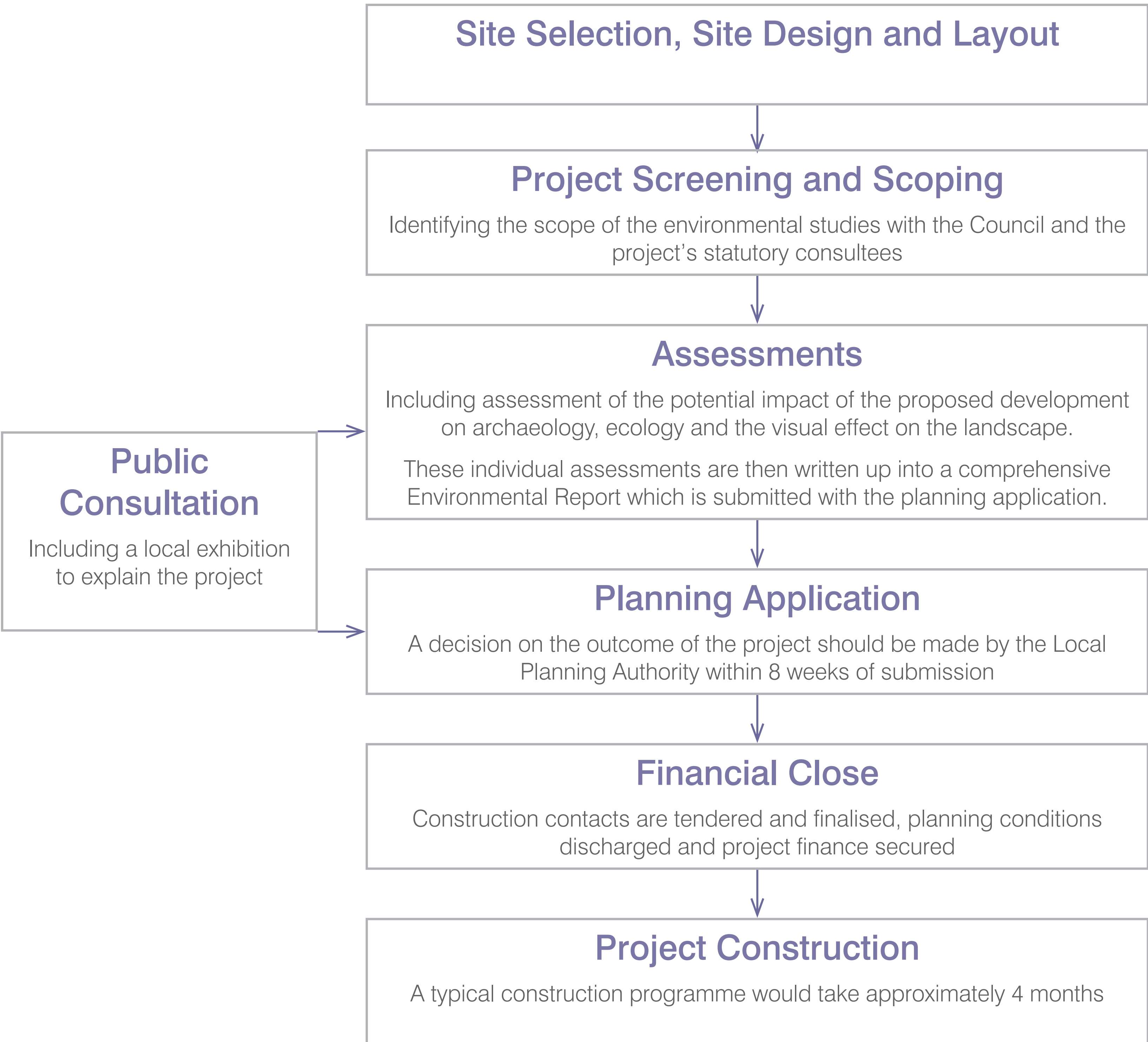
Novus Renewable Services is a leading UK solar PV development company. We are working in partnership with Innova Group who will build, own and operate the Solar Farm. We have been active in the development of solar projects since 2010. Our team have extensive experience delivering and operating renewable 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 North Preston Farm Solar Project.

### The assessment team for this project include:

- Landscape - Anne Priscott Associates
- Land Quality - Kernon Countryside Consultants
- Cultural Heritage and Archaeology - Orion Heritage
- Ecology - Tyler Grange
- Hydrology - RAB Consultants
- Noise - Ion Acoustics
- Glint and Glare - Neo Environmental

### The Development Process of a Solar Farm





# North Preston Farm Solar Project



## 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. Enhancements will encourage wildlife within the site. The hedgerow network will be retained and reinforced and the site seeded as meadow preventing further soil erosion.

### LANDSCAPE & VISUAL

The site extends across three very large fields, well screened within an extensive network of bounding hedges and woodland. A Landscape and Visual Impact Assessment is currently underway.

### CULTURAL HERITAGE

No designated heritage assets are located within the proposed development. A geophysical survey of the site has identified few archeology features. The assessment will include listed buildings and historic built-form.

### 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

Access to the site will use an existing farm entrance from the B3227. Advance notification will be provided for road users and local residents ahead of the 16-week construction period.

### NOISE

Modelling is underway to assess the potential noise impacts during construction and as a result of electrical infrastructure during operation. There is expected to be low to negligible impact. Mitigation measures can be applied if necessary.



# North Preston Farm Solar Project



## 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 North Preston Farm Solar, 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 25MWp North Preston Farm Solar Project 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. As part of this initiative, our landscape planting, seeding and habitat creation plans will focus on native species. These initiatives will contribute to securing long term biodiversity net gain across the site.

### Hedge and Pond Restoration

Attention has been paid to historic field maps, as a result we will be reintroducing historic hedgerows and ponds to the site that have been removed.

### Right of Way

Footpath access is retained and fences are set back leaving a wide Green Lane 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 suitable for grazing.

### 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.





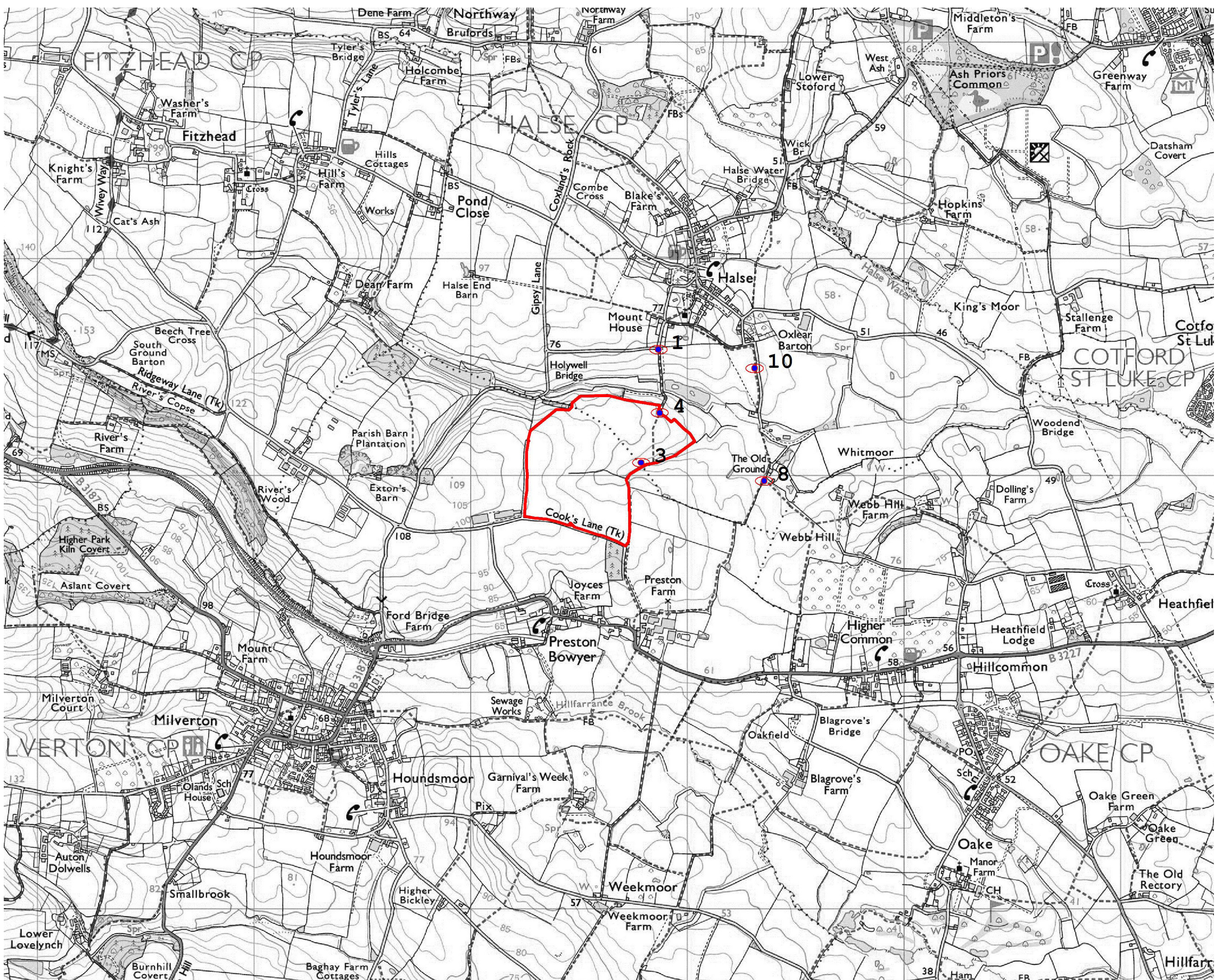
# North Preston Farm Solar Project



## 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. The application will demonstrate the impact of planting as it establishes.





# Visualisations

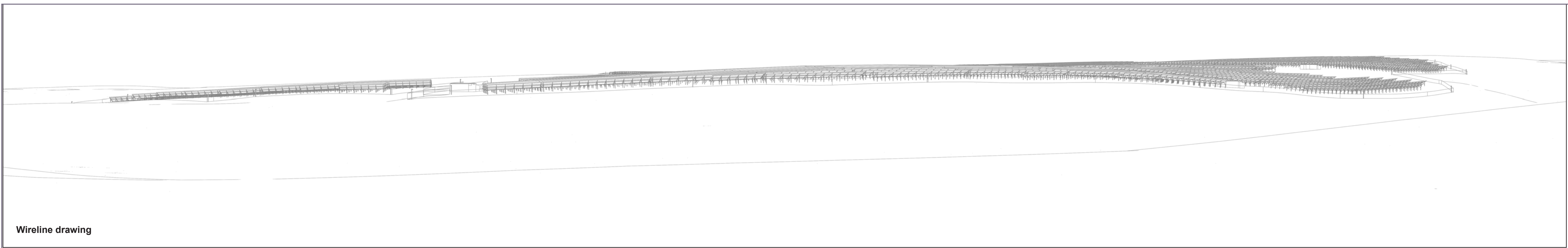


1 Taken from the field gateway on the Halse road running south out of the village looking south across the foreground valley towards the site on the skyline

Existing View



Wireframe Model

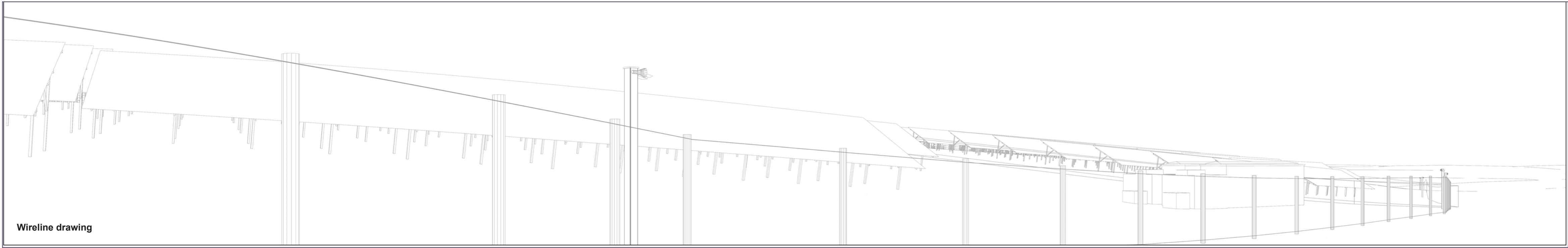


3b Taken from the Public Right of Way crossing the site looking west through north and to the east adjacent to the site (right)

Existing View



Wireframe Model



Predicted View



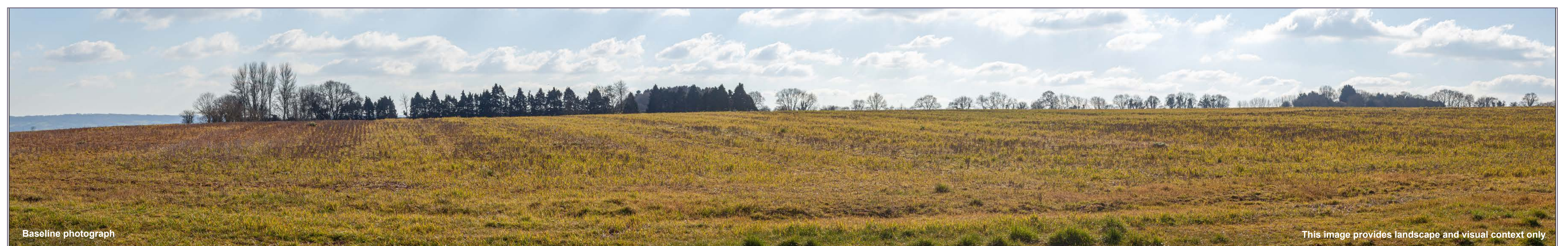


# Visualisations

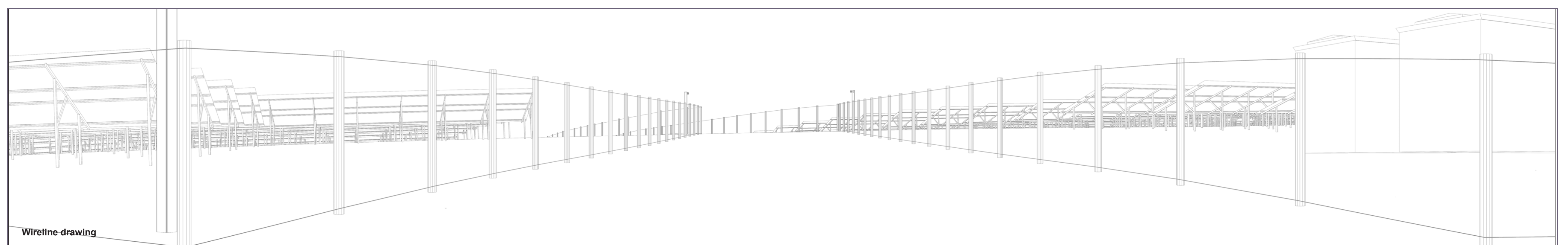


4 taken from the location where the footpath rises up from the goyle and emerges into the site looking south to a full open view

Existing View



## Wireframe Model

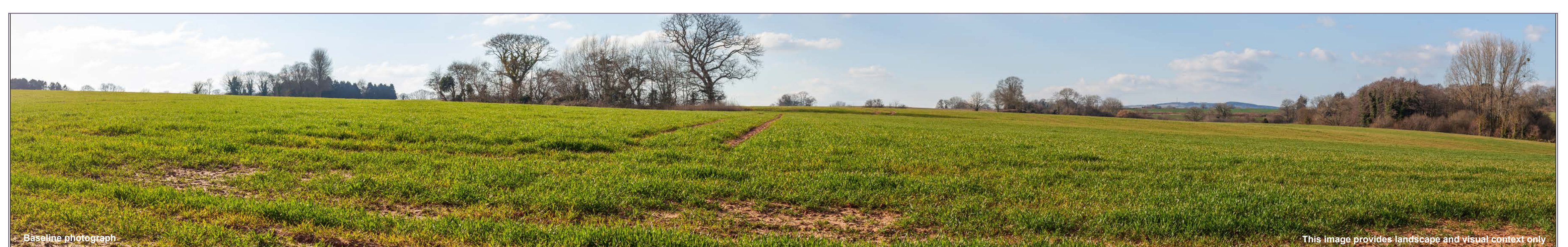


*Predicted View*

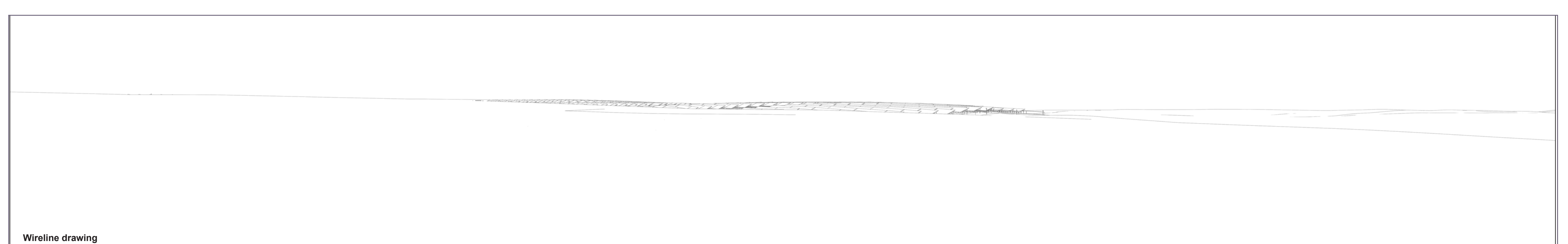


8 Taken from the public right of way running east of the site at The Old Ground with the site on the horizon beyond the trees surrounding the pond in the foreground field looking west

Existing View



## Wireframe Model



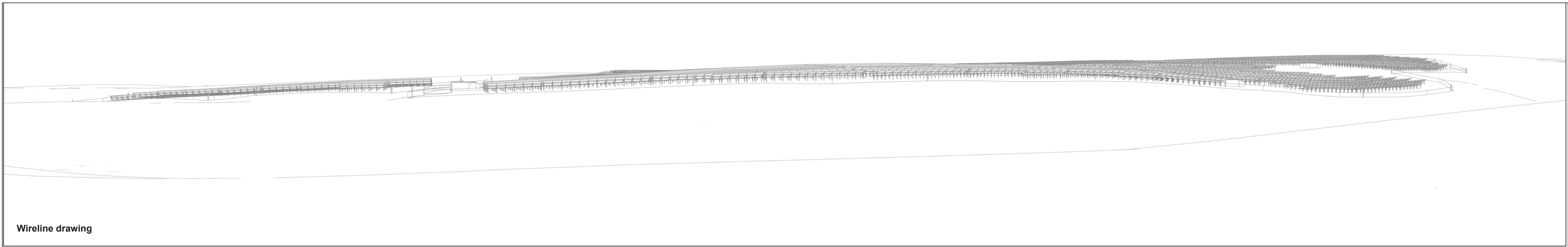


10 Taken from the public right of way running north-south east of Halse and connecting to the village looking south-west

Existing View



Wireframe Model



Predicted View

