



# Botley West Solar Farm

Preliminary Environmental Information Report

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**Volume 1**

**Chapter 2: Existing Baseline**

30 November 2023

## Approval for issue

Christopher Lecointe

30 November 2023

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## Glossary

Term	Meaning
The Applicant	SolarFive Ltd
The Project	The Botley West Solar Farm (Botley West) Project

## Abbreviations

Abbreviation	Meaning
AONB	Area of Outstanding Natural Beauty
AQMA	Air Quality Management Area
BMV	Best and Most Versatile agricultural land
EA	The Environment Agency
LNR	Local Nature Reserve
NGET	National Grid Electricity Transmission Ltd.
NO2	Nitrogen Dioxide
PEIR	Preliminary Environmental Information Report
PM10	Particulate Matter of less than 10 micrometres in diameter
PRoW	Public Right of Way
RAMSAR	A wetland site designated to be of international importance under the 'Ramsar Convention', also known as 'The Convention on Wetlands'
SSSI	Site of Special Scientific Interest
SPA	Special Protection Area, as defined in the Conservation of Habitats and Species Regulations (2017)

## Units

Unit	Description
ha	Hectares
km	Kilometres
m	Metres

## **2 Existing Baseline**

### **2.1 Introduction**

2.1.1.1 This chapter of the Preliminary Environmental Information Report (PEIR) provides a summary of the existing baseline for the Botley West Solar Farm Project (the Project). It identifies key features of the area, in terms of the land which is occupied by the Project and its wider surroundings, including land use and planning designations, heritage assets and public rights of way. The chapter provides an overview, and the detailed components of the baseline are reflected in each of the technical chapters, as relevant.

### **2.2 Existing Development Site**

2.2.1.1 The whole Project is divided across three separate land parcels, to the west and northwest of Oxford, connected by underground electric cables, and with a total area of approximately 1,300 ha. The proposed area of installed panels (excluding internal roads and support areas) is approximately 890 ha.

2.2.1.2 For the purposes of the PEIR, the parcels are described in three parts, referred to as the Northern, Central and Southern Sites. Figure 1.1 in Volume 2 provides a Site Location and Project Site Boundary for the whole Project, and Figure 1.2 in Volume 2 provides the Masterplan Overview.

### **2.3 Northern Site (West Oxfordshire & Cherwell)**

2.3.1.1 The Northern Site, shown in Volume 2 Figures 2.1A and 2.1B, comprises approximately 316 ha. It is located north of the town of Woodstock, west of Tackley and east of Wootton. The A4260 Banbury Road runs to the east of the Northern Site for its entire length, as does the River Dorn to its west. This section is bisected by the B4027 towards the south. The land is predominantly arable with multiple farm holdings scattered around the boundary edges.

2.3.1.2 The site is relatively flat, although it rises gently towards the north. The provisional Natural England Regional Agricultural Land Classification Map (London and the South-East, ALC007, 2010) indicates the area as likely to be Grade 3 agricultural land, but further surveys have been undertaken to ascertain whether it contains 'best and most versatile' (BMV) agricultural land. Chapter 17 sets out the results of this work to date, and identifies the land quality in more detail.

2.3.1.3 A review of Environment Agency (EA) flood mapping confirms that the Northern Site is entirely within Flood Zone 1, which is land with the lowest probability of flooding (see Volume 2, Figure 10.10a as referred to in Chapter 10).

2.3.1.4 This Northern Site is not covered by or near to any statutory designations (e.g. Green Belt, National Park, AONB). There are no statutory ecological designations (SSSI, SPA, RAMSAR, LNR) within the Northern Site.

However, there are three SSSIs and two Nature Reserves close to the Northern Site boundary, as shown in Volume 3 Appendix 9.1., Ecology and Nature Conservation Desk Study. Specifically, Sheep's Banks and Shipton-on-Cherwell & Whitehill Farm Quarries SSSIs are located within 1 km of the Northern Site's boundary.

- 2.3.1.5 There are a number of historical designations in close proximity to the Northern Site. Concentrations of listed buildings can be found in the villages of Wootton, to the west, and Tackley, to the east. They comprise predominantly Grade II buildings, with two examples of Grade II\* listings. The Northern Site largely encloses a scheduled monument adjacent to the B4027, to its north, west and southern sides, which is the site of a Roman Villa. Just south of this is another scheduled monument - Rectangular Earthwork, Hensington. Two further scheduled monuments can be found east of the site, the Long Barrow, 730 m south-west of Enslow Bridge approximately 400 m east of the southern tip of the Northern Site, and the Whitehill Medieval Settlement immediately south of Old Whitehill Farm approximately 2 km north-west of the southern tip of the site. A detailed baseline characterisation of heritage assets is set out in Volume 3, Appendix 7.1, within the Historic Environment Desk-based Assessment and illustrated in its associated figures.
- 2.3.1.6 Blenheim Palace and the associated grounds lies approximately 1 km south of the Northern Site, at the nearest point. Blenheim Palace is a Grade I listed House, Park and Garden as well as being a World Heritage Site, and contains several individual Scheduled Monuments and Grade I and II listed buildings. The northern end of the Northern Site also lies 2 km from Rousham House and Gardens, which is listed Grade I and has a William Kent designed landscape.
- 2.3.1.7 There is an extensive public right of way (PRoW) network running within and around this Northern Site, most prominently the Oxfordshire Way, which crosses the Site on an east-west bearing. The 416/11/20 bridleway also runs in a north-south bearing through the Site for almost its entire length.
- 2.3.1.8 The majority of the Northern Site lies within West Oxfordshire District, but with some fields on the eastern edge falling into Cherwell District. None of the Northern Site is within the Oxford Green Belt.

## 2.4 Central Site (West Oxfordshire & Cherwell)

- 2.4.1.1 The Central Site, shown in Volume 2 Figures 2.2 A, B, C and D, is west of Kidlington and south of Woodstock and comprises approximately 870 ha. The largest of the three Project land parcels, it is encircled by the villages of Bladon, Begbroke, Yarnton, Cassington, Freeland, Eynsham and Long Hanborough. Some of these settlements have residential areas adjacent to the site boundary. The A44 runs to the north-east of the site and the A40 to the south. The northern edge of the Central Site is partly defined by the A4095, passing through Bladon, and connecting the A44 to Witney.

- 2.4.1.2 The Central Site is bisected by a railway line, the 'Cotswold' main line from Oxford to Hereford. Two other roads also cross the Central Site: Lower Road and Burleigh Road.
- 2.4.1.3 As with the Northern Site, the Central Site is made up predominantly of arable farmland. The River Evenlode also runs through the Central Site, flowing from north to south, from the A4095 towards Cassington, and joins the River Thames south of the A40. There are multiple farm buildings and some individual dwellings within the site boundary.
- 2.4.1.4 There are three areas of Ancient Woodland enclosed by, but not forming part of, the Central Site – Burleigh Wood, Bladon Heath and Begbroke Wood (see Volume 3 Appendix 9.1., Ecology and Nature Conservation Desk Study).
- 2.4.1.5 The site is situated on undulating land, with peaks at Purwell Farm and Begbroke Wood / Spring Hill. The provisional Natural England Regional Agricultural Land Classification Map (London and the South East, ALC007, 2010) indicates the area as likely to be Grade 3 agricultural land, but further surveys have been undertaken to ascertain whether it contains BMV agricultural land (please see Chapter 17).
- 2.4.1.6 A review of EA flood mapping confirms that the section is mostly within Flood Zone 1, which is land with the lowest probability of flooding. Where the River Evenlode crosses the Site there are areas of Flood Zone 3 (see Volume 2 Figure 10.10b, as referred to in Chapter 10), but it is not proposed to develop solar arrays in these high-risk areas, but rather that they will be left as managed grassland areas.
- 2.4.1.7 This site is not affected by statutory landscape designations such as National Park, AONB, SPA. The Cotswolds AONB is, however, less than 1 km to the north-west of the Central Site at its closest point. The large majority of the Central Site lies within the Oxford Green Belt, with only the portion of the Site to the west of Lower Road lying outside the Green Belt.
- 2.4.1.8 There are no statutory ecological designations on site (SSSI, RAMSAR, LNR). However, there are multiple SSSIs in close proximity, as shown in Volume 3 Appendix 9.1., Ecology & Nature Conservation Desk Study. The two areas of woodland enclosed within the site are Ancient Woodland. Blenheim Park SSSI is adjacent to the north and there are several other SSSIs to the south including Cassington Meadows, Pixey and Yarnton Meadows, Wolvercote Meadows, Wytham Woods and Wytham Ditches & Flushes. To the east is the Rushey Meadows SSSI and to the west is the Long Hanborough Gravel Pit SSSI, although it is of an 'Unfavourable Declining' quality.
- 2.4.1.9 As with the Northern Site, there is large number of listed buildings, predominantly Grade II, surrounding the Central Site. The main concentrations of nearby listed buildings are found in Bladon, Begbroke, Yarnton, Cassington, Eynsham and Church Hanborough. There also five Grade II listed buildings, which appear to be mainly farm properties, enclosed within the Central Site, albeit not actually situated within the red line of the Project. A detailed baseline characterisation of heritage assets

is set out in Volume 3, Appendix 7.1, within the Historic Environment Desk-based Assessment and illustrated in its associated figures.

- 2.4.1.10 Also enclosed within the section is the scheduled Bladon Camp: a hill fort on Bladon Heath, within Worton Heath. As previously mentioned, Blenheim Palace and grounds are in close proximity, and at points adjacent to the Central Site.
- 2.4.1.11 Although to a lesser extent than the Northern Site, the Central Site is crossed by a number of PRowWs. The route that would be most impacted being the Shakespeare's Way, which runs through the centre of the site, northwest from Yarnton. The 132/5/10 bridleway and 132/4/10 footpath also cross through the northern part of the section for a relatively long distance.
- 2.4.1.12 The large majority of the Central Site lies within West Oxfordshire District, but again some fields on the eastern fringes, nearest to Oxford Airport and Begbroke, lie within Cherwell District.
- 2.4.1.13 To the south east, where the boundary of Oxford City Council begins, following the line of the A34, the administrative area of the City Council is an Air Quality Management Area (AQMA). The AQMA is designated for elevated NO<sub>2</sub> concentrations, rather than PM<sub>10</sub> (particulate matter).

## 2.5 Southern Site (Vale of White Horse)

- 2.5.1.1 The smallest of the three land parcels, comprising approximately 81 ha, the Southern Site lies south-east of Farmoor Reservoir, as shown in Volume 2 Figure 2.3. The Oxford suburb of Botley lies to the east, the village of Cumnor to the south, with the A420 passing to the east. The Southern Site is split by Cumnor Road and Denman's Lane. There are three separate areas of Ancient Woodland bordered by this section (the westernmost one is a Local Wildlife Site) (see Volume 3 Appendix 9.1., Ecology and Nature Conservation Desk Study) and two farm holdings effectively enclosed by the section. A 400kV overhead line crosses this section on an east–west bearing and to which the scheme will connect via a new substation to be constructed by NGET, who is the Transmission Owner (TO) in England and Wales. The precise siting and design of that substation is the subject of ongoing feasibility work by NGET, but for Scoping purposes it is assumed to be located at the western end of the Applicant's land. There will also be a Project substation located in the vicinity of the NGET substation, located within the Applicant's land.
- 2.5.1.2 The land within the Southern Site is also arable farmland. The provisional Natural England Regional Agricultural Land Classification Map (London and the South-East, ALC007, 2010) indicates the area as likely to be Grade 3 and 4 agricultural land, but further surveys have been undertaken to ascertain whether it contains BMV agricultural land (please see Chapter 17).
- 2.5.1.3 A review of EA flood mapping confirms that the large majority of the section is within Flood Zone 1, with a small part in Zone 3 (see Volume 2 Figure 10.10c, as referred to in Chapter 10), but which it is not proposed to build upon. This area will be left as managed meadow grassland.



- 2.5.1.4 This section is not covered by, or in close proximity to, any statutory landscape designations (e.g. National Park, AONB, SPA). All of the Southern Site lies within the Oxford Green Belt.
- 2.5.1.5 There are no statutory ecological designations on site (SSSI, RAMSAR, LNR etc.) within the Southern Site. The nearest environmental designations are the Hurst Hill SSSI to the south-east, on the other side of the suburb of Chawley, and the Wytham Woods SSSI approximately 1 km to the north. The Ecology and Nature Conservation Desk Study, in Volume 3, Appendix 9.1, provides the more detailed baseline context showing statutory and non-statutory designated sites in the vicinity.
- 2.5.1.6 There are scattered Grade II listed buildings around this section, with a concentration in Cumnor. There is a Grade II\* listed Inn in the south of the village. A detailed baseline characterisation of heritage assets is set out in Volume 3, Appendix 7.1, within the Historic Environment Desk-based Assessment and illustrated in its associated figures.
- 2.5.1.7 There are multiple PRoWs running through this section, as many originate from Cumnor, to the south. The most impacted PRoWs would likely be the Oxford Green Belt Way and 184/16/20 footpath. To the north the Thames Path follows the route of the River Thames, and is a long distance walking trail.
- 2.5.1.8 There is an AQMA in Botley, within the Vale of White Horse District, which is 1.4km from the Southern Site and, as for the Oxford City AQMA, which is designated for elevated levels of NO<sub>2</sub>.

## 2.6 Cable Route Options

- 2.6.1.1 The Northern, Central and Southern Sites will be connected to the Project substation, and then to the NGET substation, by underground cables. The proposed route of these cables is largely settled, but at this stage there are three areas along the route where several options continue to be evaluated.
- 2.6.1.2 The three areas are;
- in the area of the Northern Site, between the Oxfordshire Way, and B4027, south east of Wootton;
  - between the Northern and Central Sites, on land to the east of Woodstock; and
  - between the Central and Southern Sites, on land east and south of Eynsham, around the Swinford Bridge where the cable crosses the River Thames.
- 2.6.1.3 Figures 2.4A, 2.4B and 2.4C in Volume 2, show these three locations, respectively.
- 2.6.1.4 The on-going evaluation of the cable route options, including the need for horizontal directional drilling beneath road, rail and river routes, will have regard to their environmental effects, as well as commercial and engineering considerations.

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- 2.6.1.5 Much of the connection cable is proposed to be located in areas of the public highway (situated in the verge, or below the metalled surface where required).
- 2.6.1.6 A detailed description of the cable option proposals is provided in Chapter 6, Project Description.