



Botley West Solar Farm

Environmental Statement

Volume 1

Chapter 2: Existing Baseline

November 2024

PINS Ref: EN010147

Document Ref: EN010147/APP/6.3

Revision P0

APFP Regulation 5(2)(a); Planning Act 2008; and Infrastructure Planning (Applications: Prescribed Forms and Procedure) Regulations

Approval for issue

Jonathan Alsop

14 November 2024

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Glossary

Term	Meaning
The Applicant	SolarFive Ltd
The Project	The Botley West Solar Farm
The Site or Order Limits	The area of land encompassing the Project development and shown on the Site Location and Order Limits Overview (Volume 2, Figure 1.1 of the ES).

Abbreviations

Abbreviation	Meaning
AONB	Area of Outstanding Natural Beauty
AQMA	Air Quality Management Area
BMV	Best and Most Versatile
EA	The Environment Agency
LNR	Local Nature Reserve
NGET	National Grid Electricity Transmission plc
NO ₂	Nitrogen Dioxide
PEIR	Preliminary Environmental Information Report
PM ₁₀	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)
WHS	World Heritage Site

Units

Unit	Description
ha	Hectares
km	Kilometres
m	Metres

2 Existing Baseline

2.1 Introduction

2.1.1 This chapter of the Environmental Statement (ES) provides a summary of the existing baseline for the Botley West Solar Farm (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.

2.1.2 Paragraph 3 within Schedule 4 of the Infrastructure Planning (Environmental Impact Assessment) Regulations 2017 (EIA Regulations 2017) provides that the following should be included in the ES:

“A description of the relevant aspects of the current state of the environment (baseline scenario) and an outline of the likely evolution thereof without implementation of the development as far as natural changes from the baseline scenario can be assessed with reasonable effort on the basis of the availability of environmental information and scientific knowledge”.

2.1.3 In accordance with the EIA Regulations 2017, this chapter provides an overview of the existing baseline, whilst the detailed components of the baseline for each specific technical topic along with the future baseline scenarios are reflected in each of the technical chapters, as relevant.

2.1.4 The Environmental Statement [EN010147/APP/6] sets out a full environmental assessment of the Project on these baseline characteristics in accordance with the EIA Regulations 2017. The individual topic chapters report on the specific interactions with the relevant baseline characteristics for each of those topics. For a full summary of any likely significant effects across all topics, see Chapter 21: Summary of significant effects [EN010147/APP/6.3].

2.2 Existing Development Site

2.2.1 The Project has a total area of approximately 1,418 ha (see Volume 2, Figure 1.1 – ‘Site Location and Order Limits Overview’) [EN010147/APP/6.4], with the installation of solar panels across approximately 839 ha. The solar farm, whilst a single project, does not comprise one single area of land; rather it is dispersed over a wide area, separated by roads, open land, woodland, rivers and settlements. For ease of description, the Applicant has broadly divided the Project into three main sites, linked together by common electrical infrastructure, including electrical cabling: the Northern Site Area, the Central Site Area and the Southern Site Area (see Figure 1.2) [EN010147/APP/6.4].

2.2.2 The Project extends from an area of land in the north, situated between the A4260 and the Dorn River Valley near Tackley and Wootton (Northern Site Area), through a central section, situated broadly between Bladon and Cassington (Central Site Area), and connecting to a section further south near to Farmoor Reservoir and north of Cumnor (Southern Site Area), where the Project will connect to the National Grid transmission network (the Site Areas, as shown in Figure 1.2 [EN010147/APP/6.4]). The majority of the land

proposed for the Project is currently used for arable crops, the majority of which is grown as livestock feed, or is otherwise down to pasture.

- 2.2.3 Across the Project Site in its entirety, the provisional Natural England Regional Agricultural Land Classification Map (London and the South-East, ALC007, 2010) indicates the whole Site as being predominantly Grade 3 agricultural land. However, further surveys have been undertaken to ascertain whether it contains ‘best and most versatile’ (BMV) agricultural land, which includes Grade 1, Grade 2 or Grade 3a land. Chapter 17: Agricultural Land Use and Public Rights of Way [EN010147/APP/6.3] of the ES sets out the results of this work and identifies the land quality in more detail, and discusses the use of soil and land use management plans for the operational period. The survey work, covering an area of 1351 ha (95% of the Project area) and comprising the Northern, Central and Southern Sites and most of the cable route, indicates 36.4% (490 ha) of the whole Site as BMV; 29% (391 ha) being Grade 3a, 7.2% (97 ha) being Grade 2 and 0.2% (2 ha) being Grade 1.

2.3 Northern Site (West Oxfordshire & Cherwell)

- 2.3.1 The Northern Site, shown in Volume 2 Figures 2.1A and 2.1B [EN010147/APP/6.4], 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.
- 2.3.2 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 predominantly Grade 3 agricultural land, but further surveys have been undertaken to ascertain whether it contains BMV agricultural land. Chapter 17 of the ES sets out the results of this work and identifies the land quality in more detail.
- 2.3.3 A review of the 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 [EN010147/APP/6.4] as referred to in Chapter 10: Hydrology and Flood Risk [EN010147/APP/6.3]).
- 2.3.4 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 [EN010147/APP/6.5], 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.
- 2.3.5 There are historical designations in proximity to the Northern Site. Listed buildings can be found in the villages of Wootton, 0.5km to the west, and Tackley, 1.5km to the east. They comprise predominantly Grade II buildings,

with two examples of Grade II* listings. Outside of the Order Limits, but bounded by areas of the Northern Site, there is a scheduled monument adjacent to the B4027, 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, 730m south-west of Enslow Bridge and approximately 400m east of the southern tip of the Northern Site, and the Whitehill Medieval Settlement immediately south of Old Whitehill Farm approximately 2km 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 **[EN010147/APP/6.5]**, within the Historic Environment Desk-based Assessment and illustrated in its associated figures.

- 2.3.6 Blenheim Palace and the associated grounds lies approximately 1km 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 (WHS), and contains several individual Scheduled Monuments and Grade I and II listed buildings. A Heritage Impact Assessment, developed in consultation with Historic England, considers the potential impacts on the WHS is provided in Volume 3, Appendix 7.4 **[EN010147/APP/6.5]**.
- 2.3.7 The northern end of the Northern Site is 2km from Rousham House and Gardens, which are both listed Grade I.
- 2.3.8 There is a 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 and National Cycle Network Route No. 5 also runs in a north-south bearing through the Site, from the B4027 along Dornford Lane, towards Rousham Gap, for 2km.
- 2.3.9 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 The Central Site, shown in Volume 2 Figures 2.2 A, B, C and D **[EN010147/APP/6.4]**, 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, Eynsham, Freeland, Church Hanborough and Long Hanborough. Some of these settlements, most notably Bladon, Begbroke, Cassington and Church Hanborough, have residential areas in proximity to the Order Limits. 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.
- 2.4.2 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.
- 2.4.3 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 farm buildings and some individual dwellings located within the wider area surrounding the Central Site, but on land that is not situated within the Order Limits.

- 2.4.4 There are three areas of Ancient Woodland Burleigh Wood, Bladon Heath and Begbroke Wood (see Volume 3 Appendix 9.1., Ecology and Nature Conservation Desk Study **[EN010147/APP/6.5]**) which the Applicant has excluded from the Central Site.
- 2.4.5 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, and the results are set out in Chapter 17 of the ES **[EN010147/APP/6.3]**.
- 2.4.6 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 **[EN010147/APP/6.4]**, as referred to in Chapter 10). The Applicant is not proposing to develop solar arrays in these areas, but they will be managed grassland areas.
- 2.4.7 The Central Site is not affected by statutory landscape designations such as National Park, AONB, SPA. The Cotswolds AONB is less than 1 km to the north-west of the Central Site at its closest point. The majority of the Central Site lies within the Oxford Green Belt, with a portion of the Site to the west of Lower Road lying outside the Green Belt.
- 2.4.8 There are no statutory ecological designations on site (SSSI, RAMSAR, LNR). However, there are SSSIs in proximity, as shown in Volume 3 Appendix 9.1 **[EN010147/APP/6.5]**, 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 other SSSIs to the south including Cassington Meadows, Pixey and Yarnton Meads, 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, the latter with its status being of 'Unfavourable Declining' quality.
- 2.4.9 As with the Northern Site, there are 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. These five Grade II listed buildings have been excluded from the red line of the Project. A detailed baseline characterisation of heritage assets is set out in Volume 3, Appendix 7.1 **[EN010147/APP/6.5]**, within the Historic Environment Desk-based Assessment and illustrated in its associated figures.
- 2.4.10 Also enclosed within the section is the scheduled Bladon Camp: a hill fort on Bladon Heath, within Worton Heath. Blenheim Palace and grounds are in close proximity, and at points adjacent to the Central Site.

- 2.4.11 Although to a lesser extent than the Northern Site, the Central Site is crossed by a number of PRoWs, including 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 Central Site, with the footpath running through the Central Site for 1.5km from Heath Lane in Bladon to the edge of Begbroke .
- 2.4.12 The majority of the Central Site lies within West Oxfordshire District, but as with the Northern Site, some fields on the eastern fringes, nearest to Oxford Airport and Begbroke, lie within Cherwell District.
- 2.4.13 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 NO₂ concentrations.

2.5 Southern Site (Vale of White Horse)

- 2.5.1 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 [EN010147/APP/6.4]. 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, and encloses Denman's Farm. 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 [EN010147/APP/6.5], Ecology and Nature Conservation Desk Study). 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 Environmental Assessment purposes it is assumed to be located at the western end of the Order Limits. There will also be a Project substation located in the vicinity of the NGET substation, located within the Order Limits.
- 2.5.2 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 and the results are set out in Chapter 17 of the ES.
- 2.5.3 A review of EA flood mapping confirms that the majority of the section is within Flood Zone 1, with a small part in Zone 3 (see Volume 2 Figure 10.10c [EN010147/APP/6.4], as referred to in Chapter 10). The Applicant is not proposing to build on the area of Zone 3 land which will be managed meadow grassland.
- 2.5.4 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.

- 2.5.5 There are no statutory ecological designations (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 [EN010147/APP/6.5], provides the more detailed baseline context showing statutory and non-statutory designated sites in the vicinity.
- 2.5.6 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 [EN010147/APP/6.5], within the Historic Environment Desk-based Assessment and illustrated in its associated figures.
- 2.5.7 There are PRoWs running through this section, as many originate from Cumnor, to the south, including 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.
- 2.5.8 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, is designated for elevated levels of NO₂.

2.6 Cable Route

- 2.6.1 The Northern, Central and Southern Sites will be connected to the Project substation, and then to the NGET substation, by underground cables, approximately 24.6km in length.
- 2.6.2 There are four areas where flexibility is particularly required as further design work is carried out;
- 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 in the vicinity of the Bladon roundabout on the A44;
 - within the Central Site, on land east of Burleigh Wood and around Bladon Heath Wood; and
 - between the Central and Southern Sites, on land east and south of Eynsham, around Swinford Bridge and where the cable crosses the River Thames.
- 2.6.3 Figures 2.4A, 2.4B, 2.4C and 2.4D in Volume 2 [EN010147/APP/6.4], show these four locations, respectively. Cable corridor areas and options are considered further within Chapter 5: Alternatives Considered [EN010147/APP/6.3] and respective figures 5.1 to 5.5h [EN010147/APP/6.4].
- 2.6.4 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).
- 2.6.5 A detailed description of the cable option proposals, and the engineering components of the work, is provided in Chapter 6: Project Description [EN010147/APP/6.3].

2.7 References

Environment Agency Flood Risk Mapping (interactive map), Available at: [Flood map for planning - GOV.UK \(flood-map-for-planning.service.gov.uk\)](https://floodmapforplanning.service.gov.uk)

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