



# OAKLANDS FARM SOLAR PARK

Applicant: Oaklands Farm Solar Ltd

Environmental Statement

Chapter 1 - Introduction

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# Oaklands Farm Solar Park - Environmental Statement Volume 1

## Chapter 1: Introduction

**Final report**  
Prepared by LUC  
January 2024

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# Chapter 1

## Introduction

### Introduction

**1.1** This Environmental Statement (ES) has been prepared by Land Use Consultants (LUC) and supporting specialist consultants on behalf of Oaklands Farm Solar Limited (hereafter referred to as the 'Applicant').

**1.2** The ES accompanies an application, to be made to the Secretary of State for Energy Security and Net Zero, for a Development Consent Order (DCO) under Section 37 of the Planning Act 2008, for permission to construct and operate Oaklands Farm Solar Park (the 'Proposed Development').

**1.3** The Oaklands Farm Solar Park Project comprises a proposed solar farm with an associated Battery Energy Storage System (BESS). The Proposed Development would have a generating capacity of over 50MW and would be situated on 191 hectares of land at Oaklands Farm to the south-east of Walton-on-Trent and to the west of Rosliston in south Derbyshire. The solar farm itself, comprising photovoltaic panel arrays, a central electricity substation and BESS together with access, landscaping and other works would be located on 135 hectares of agricultural land currently in use for arable production and grazing. A high voltage underground electricity cable would then run through land at Fairfield Farm and Park Farm to the north to connect the solar farm to the national grid via an electricity substation located at the former Drakelow Power Station which sits south of Burton-upon-Trent.

**1.4** The over-arching goal of the Proposed Development is to deliver a utility-scale ground-mounted solar PV development with associated BESS which will supply renewable electricity to the UK's National Grid and contribute to meeting the UK Government's Net Zero targets.

**1.5** As the Proposed Development would be an onshore generating station with a generating capacity of over 50MW an application for a DCO is being made under the Planning Act 2008 to the Planning Inspectorate, for determination by the Secretary of State for Energy Security and Net Zero.

**1.6** The Proposed Development may export simultaneously or independently depending on market conditions and operating profiles. The Proposed Development will also be capable of simultaneously exporting electricity to, and importing electricity from, the grid to charge the BESS.

**1.7** The red line in **Figure 1.1: Site Location** and **Figure 1.2: Aerial Photo of the Order Limits** defines the Site and the Order limits<sup>1</sup>. The Work Plans set out in **Appendix 1.3** show the Proposed Development with appropriate levels of flexibility to accommodate future technological advances. It is based on likely maximum footprint including maximum equipment sizes, and therefore represents the ‘worst case’ scenario in terms of environmental impact.

**Figure 4.1: Illustrative Concept Design** provides an illustrative example of how the Proposed Development could be built out in accordance with the Work Plans. **Figure 1.3: Areas of the Site** shows the areas of the Site referred to in the ES, including Oaklands Farm area, Park Farm area, Fairfield Farm area and the National Grid Drakelow Substation land. The fields within the Site have been numbered for ease of reference in **Figure 1.4: Field Numbers**.

**1.8** This chapter describes the Site of the Proposed Development, outlines the purpose and structure of the ES and provides an introduction to the Applicant. It is supported by the following figures and appendices provided in **Volume 2** and **3** respectively:

- **Figure 1.1: Site Location Plan.**
- **Figure 1.2: Aerial Photo of the Order Limits.**
- **Figure 1.3: Areas of the Site.**
- **Figure 1.4: Field Numbers.**
- **Figure 4.1: Illustrative Concept Design.**
- **Appendix 1.1: Statement of Expertise.**
- **Appendix 1.2: Glossary and Abbreviations.**
- **Appendix 1.3: Work Plans.**

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<sup>1</sup> ‘The Site’ is the same area as the Order Limits and is the term used throughout the ES.

## Site Description

**1.9** The Site (**Figures 1.1** and **1.2**) lies within the administrative boundaries of South Derbyshire District Council (SDDC) and Derbyshire County Council (DCC), located approximately 0.25km west of the village of Rosliston and 0.7km south east of Walton-on-Trent and stretching from the former Drakelow Power Station, north of Walton Road, to the south of Coton Road. The entire Site occupies a total area of approximately 191 hectares (ha).

**1.10** The Site itself includes land within three farms, Park Farm in the north, Fairfield Farm in the centre of the Site and Oaklands Farm in the south. The National Grid Drakelow substation land, where the Proposed Development will connect to the grid, is north of Walton Road within the former Drakelow coal fired Power Station site (see **Figure 1.3: Areas of the Site**).

**1.11** The topography of the Site is gently rolling with some localised undulations, rising to a maximum elevation of 90m AOD in the centre of the area, and generally falling towards the Pessall Brook to the northeast at 59m AOD.

**1.12** The southern part of the Site (Oaklands Farm area), where the solar panels, Proposed Development substation and BESS will be sited, comprises agricultural land to the south of Rosliston Road and west of Catton Lane that wraps around the north and east of the farmstead at Oaklands Farm. A small part of the Site (fields O1 and O2) extends south of Coton Road. Land use in the Oaklands Farm area comprises medium-large scale mixed arable and pastoral fields, enclosed by low-clipped hedgerows (consisting mainly of hawthorn and blackthorn) with occasional hedgerow trees, and post and wire fencing. Small copses and ponds are an occasional feature of this landscape, sometimes coinciding with former earthworks (marl pits).

**1.13** A small section of the Cross Britain Way / National Forest Way long distance path (which runs between the villages of Walton-on-Trent and Rosliston), crosses the northern fields of the Oaklands Farm area and is partly enclosed by woodland associated with the Rosliston Forestry Centre to the north-east. The Site is located within the National Forest<sup>2</sup>.

**1.14** Immediately north of Rosliston Road is the land holding of Fairfield Farm and, further north, the Park Farm area up to Walton Road. Land use here comprises medium-large scale mixed arable and pastoral fields, enclosed by low-clipped hawthorn and blackthorn hedgerows with occasional hedgerow trees. Two driveways lined by formal avenues of trees provide access to Park Farm from Walton Road.

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<sup>2</sup> <https://www.nationalforest.org/>

**1.15** The area of land within the Site, between Walton Road and the operational National Grid Drakelow substation comprises scrub and trees with clearings for overhead power lines. To the north of this, and outside the Site boundary, lie the remains of the Drakelow Power Station (see below) characterised by large expanses of hardstanding and dismantled foundations.

**1.16** Several areas of woodland are located close to (but outside) the Site boundary including Redferns Wood and Grove Wood to the east of the Site and a small band of mixed woodland along the edges of Walton Road.

**1.17** Two separate overhead electricity transmission lines run north to south through the Site, connecting into the National Grid Drakelow substation. One 11kV overhead electricity distribution line also runs north into the Park Farm buildings.

**1.18** Several adopted roads either border or run through the Site. These include:

- Coton Road, which connects Walton-on-Trent to Coton in the Elms and runs through the southern part of the Site.
- Catton Lane which links Rosliston to Lads Grave and borders the south eastern edge of the Site.
- Rosliston Road, which connects Walton-on-Trent to Rosliston and runs east-west through the Site.
- Walton Road, which connects Walton-on-Trent to the south west with Stapenhill to the north east, runs through the north of the Site along the southern boundary of the Drakelow Power Station area.

### **Constraints and Proximity to Sensitive Receptors**

**1.19** Each topic in the ES has a specific study area which has been used to identify receptors and/or effects. Most topics look at the Site boundary with a buffer (e.g. LVIA up to 5km, historic environment 2.5-5km and ecology 2-15km depending on the ecological feature). For the review of environmental constraints to inform the design of the Proposed Development, the Site itself was the focus of the search area. This was expanded beyond the Site to gain an understanding of the wider context of the Site. This focussed on the immediate surrounding area (up to 1km) but was then enlarged to identify the closest statutory designated sites (going beyond 15km where necessary).

## Within the Site

**1.20** The Site contains no statutory designations. The boundary of Grove Wood Local Wildlife Site lies partially within the north east part of the Site south of Walton Road. Grove Wood is also designated as ancient woodland however none of the woodland is within the Site boundary.

**1.21** An unnamed tributary of the River Trent, which has an associated flood plain (flood zone 3 – high risk of fluvial flooding), bisects the Site south of the Park Farm farmstead and Rosliston Forestry Centre. The remainder of the Site is in Flood Zone 1 (low risk of flooding). This is considered further in **Chapter 8: Water Resources and Flood Risk**.

**1.22** A number of utilities including gas, electricity (underground and overhead lines) and water facilities are located within the Site. These have been considered further in **Chapter 16: Other Issues**. The Site contains trees and hedgerows of varying ages and quality and a network of field ditches.

## Within Proximity to the Site

**1.23** The following statutory designated sites are located beyond the Site:

- Area of Outstanding Natural Beauty (AONB) – the closest AONB (Cannock Chase) lies over 16km south west of the Site.
- National Parks – the Peak District National Park lies over 32km north of the Site.
- World Heritage Site (WHS) – Derwent Valley Mills WHS lies over 20km north east of the Site.
- The closest Scheduled Monument (Borough Walls Iron Age hillfort) lies approximately 2km west of the Site.
- Listed buildings or registered parks and gardens – Grove Farmhouse (Grade II listed) lies immediately adjacent to the Site within the main farmstead at Park Farm. The next nearest listed structure comprises gate piers and adjoining walls at Drakelow Lodge entrance (Grade II listed) located 100m north west of the Site. The Grade II\* listed Church of St Mary lies approximately 400m east of the Site in the village of Rosliston.
- Site of Special Scientific Interest (SSSI) - The River Mease SSSI is located 4.4km to the south of the Site.



- Special Area for Conservation (SAC) - The River Mease SAC is located 4.4km to the south of the Site.
- Special Protection Area (SPA) - Peak District Moors is the closest SPA, over 30km north of the Site.
- Ramsar Sites – The nearest Ramsar site (Midland Meres and Mosses) lies approximately 20km north west of the Site.
- Local Nature Reserve (LNR) – Badgers Hollow LNR lies approximately 3km east of the Site.

**1.24** There also are a number of other sensitive sites in proximity to the Site:

- Ground Water Protection Zones – the nearest groundwater protection zones lies over 5km south east of the Site.
- The National Memorial Arboretum is located just outside Alrewas, approximately 4.4km to the south east of the Site.

**1.25** The closest residential properties to the Site (within a few hundred metres) are:

- Walton Hill Farm and Ashtree Farm to the north-west.
- Oaklands Farm, No. 1 Oaklands Farm, No. 3 Oaklands Farm, No. 4 Oaklands Farm, Twin Oaks, Pennywort Cottage, Orchard Cottage and Boroughfields Farm Cottage all to the south-west.
- Ladsgrave Cottage to the south.
- Corner Farm, New Corner Farm and the Old Byre to the north-east.

**1.26** The key constraints relevant to the Site and the Proposed Development are shown on **Figure 1.5**.

### **Drakelow Power Station**

**1.27** Drakelow Power Station was built in three phases (A, B and C) with Station A operational in 1955, Station B operational in 1959 and Station C in 1964. It was the largest power generating plant in Britain<sup>3</sup>. The cooling towers were up to 100m high and there were 10 on site

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<sup>3</sup> Staffordshire Live (2018) Drakelow Power Station Housing Development. Available at: <https://www.staffordshire-live.co.uk/news/local-news/drakelow-power-station-housing-development-1491431> [accessed 10/08/23]

at its peak. Drakelow was a coal fired power station with the coal being delivered by rail and the cooling water abstracted from the River Trent. The power station employed hundreds of local people.

**Plate 1.1: View of Drakelow Power Station in the 1980s**



Source: Staffordshire Live<sup>4</sup>

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<sup>4</sup> Staffordshire Live (2022) 'Plan for major electricity storage facility on former Drakelow Power Station site'. Available at: <https://www.staffordshire-live.co.uk/news/local-news/plan-major-electricity-storage-facility-7101366> [accessed 08/08/23]

**Plate 2: Aerial Photo of Drakelow Power Station C – Looking south to Site**



Source: Staffordshire Live<sup>3</sup>

**1.28** Drakelow Power Station A closed in 1984. Station B closed in 1993 and its cooling towers demolished in 1998. Station C closed in 2002 and was demolished in phases with the final buildings coming down in 2006<sup>3</sup>.

**1.29** National Grid continue to operate a large scale substation at Drakelow which, owing to its capacity, acts as a major connection hub within the UK's electricity network. As a result of the substation a number of large scale overhead power lines and pylons are prominent in the local landscape.

**1.30** Outwith and adjacent to the substation the remaining Drakelow site is currently being redeveloped to provide an energy from waste facility, a solar farm and residential housing.

## **The Applicant**

**1.31** The Applicant is a wholly owned subsidiary of BayWa r.e. UK Limited, which is 100% owned by its German parent company BayWa r.e. AG, a €27.1 billion global business.

**1.32** BayWa r.e. AG is a leading global renewable energy developer, service provider, distributor and energy solutions provider, based in 31 countries. BayWa r.e. AG has constructed 5.5 GW of renewable energy farms, while managing over 10 GW of assets.

**1.33** In the UK, BayWa r.e. has an onshore wind development pipeline in excess of 400MW, and a solar pipeline of 1.275GW peak, being delivered from offices in Glasgow and Edinburgh. BayWa r.e. also has an operation services business in the UK, which is based in Milton Keynes and manages 2GW of solar and onshore wind sites across England and Scotland. BayWa r.e is a leading global developer, service supplier, distributor and solutions provider which has brought over 5.5GW of energy online, also managing over 10.5GW of assets. The company is also an Independent Power Producer with an expanding energy trading business.

**1.34** BayWa r.e. UK Ltd has extensive experience of delivering solar projects in the UK. They have already delivered 23 UK solar projects (totalling approximately 384MW) including Vine Farm (a 46MWp solar park in Cambridge) as well as Bracks Solar Farm (a 30MWp solar park in Cambridgeshire). BayWa r.e. is currently constructing Scurf Dyke Solar Farm in the East Riding of Yorkshire, which will be a 80MWp solar farm co-located with 8MW of battery energy storage system.

## The need for and requirements of EIA

**1.35** The EIA requirement for NSIPs is set out in the Infrastructure Planning (Environmental Impact Assessment) Regulations 2017 (hereafter ‘the EIA Regulations’). The Proposed Development falls under Paragraph 3(a) of Schedule 2 to the EIA Regulations, being defined as “*Industrial installations for the production of electricity, steam and hot water*”. Schedule 2 development must be subject to an EIA if it is considered “*likely to have significant effects on the environment by virtue of factors such as its nature, size or location*”. The criteria on which this judgement must be made are set out in Schedule 3 to the EIA Regulations. In paragraph 1.5 of the EIA Scoping Report (available at **Appendix 2.1**), the Applicant confirmed that an ES would be provided with the application.

**1.36** This ES presents the findings of the EIA undertaken for the Proposed Development and has been compiled in accordance with Regulation 5 and Schedule 4 to the EIA Regulations. Further details regarding the EIA legislative requirements and the methodology used to define and assess the significance of environmental effects are provided in **Chapter 2: The Environmental Impact Assessment**.

## Structure of the ES

**1.37** The ES comprises three volumes in addition to a standalone Non-Technical Summary (NTS):

- Volume 1: Main Text (this volume).
- Volume 2: Figures.
- Volume 3: Appendices.
- Volume 4: Visualisations.

**1.38** This volume comprises the following:

- **Chapters 1-4:** provide an introduction to the Applicant, details of the legislative context, the EIA process and consultation undertaken, information on the design process and the alternatives considered, and a detailed description of the Proposed Development;
- **Chapters 5-16:** describe the likely significant effects of the Proposed Development on a topic by topic basis; and
- **Chapter 17:** provides a consolidated summary of all likely significant effects of the Proposed Development and mitigation identified through the EIA process.

**Table 1.1: Structure of the ES and Responsibilities**

Document	Description	Author
Non-Technical Summary	A standalone <b>Non-Technical Summary</b> has been provided to accompany the ES and provides a clear account of the Proposed Development written in non-technical language.	All
Volume 1: Main Text		
Chapter 1	<b>Introduction</b> provides a brief introduction to the Proposed Development, the Site, the legislative requirements of EIA and outlines the structure of the ES.	LUC

Document	Description	Author
Chapter 2	<b>The Environmental Impact Assessment and Methodology</b> provides more details on the EIA process including consultation.	LUC
Chapter 3	<b>Site Selection and Design Strategy</b> summarises the reason for selection of the location of the Proposed Development. The approach to the design strategy and information on how the layout has evolved through the EIA process is also detailed.	LUC
Chapter 4	<b>Project Description</b> provides a detailed description of the Proposed Development.	LUC
Chapter 5	<b>Landscape and Visual</b>	LUC
Chapter 6	<b>Ecology</b>	LUC
Chapter 7	<b>Historic Environment</b>	LUC
Chapter 8	<b>Water Resources and Flood Risk</b>	Yellow Sub Geo
Chapter 9	<b>Ground Conditions</b>	Yellow Sub Geo
Chapter 10	<b>Transport and Access</b>	Integrated Transport Planning
Chapter 11	<b>Noise</b>	Sustainable Acoustics
Chapter 12	<b>Socio-Economics and Recreation</b>	LUC
Chapter 13	<b>Climate Change</b>	LUC and 3Adapt

Document	Description	Author
Chapter 14	<b>Glint and Glare</b>	Pager Power
Chapter 15	<b>Agriculture and Land Use</b>	Kernon Consulting
Chapter 16	<b>Other Issues</b> (Major Accidents and Disasters, Human Health, Air Quality and Telecommunications).	LUC and Pager Power
Chapter 17	<b>Summary of Effects</b>	LUC

**1.39** Within each of the topic chapters (**Chapters 5 to 16**) of this ES, the information provided is structured in a consistent way, as far as practicable. Further information on the structure of each chapter is outlined below. However, it should be noted that the assessment section of each specialist chapter is structured in a way that is most logical for that particular topic area, and whilst maintaining the general structure identified below, may include other sections specific to that topic.

**1.40** The structure of the ES assessment chapters is as follows:

- **Introduction:** Provides a description of the study area and outlines the effects which have been assessed in full, and those which have been 'scoped out' of the EIA.
- **Scope of the Assessment:** Details key issues appropriate to the topic that the assessment has addressed.
- **Assessment Methodology:** Outlines the key legislation and guidance appropriate to the topic. Summarises the key methods used in the assessment (desk based study, field survey, consultation and consideration of significance of effect, including criteria used).
- **Baseline Conditions:** Summarises the existing conditions, including the field survey results where appropriate.
- **Implications of Climate Change:** Describes the way in which the baseline may alter as a result of climate change.

- **Future Baseline in the Absence of the Proposed Development:** Describes the predicted environmental conditions and changes likely to occur in the absence of the Proposed Development.
- **Design Considerations and Embedded Mitigation:** Describes the constraints considered in designing the layout and any modifications to the layout as part of the iterative design process. It also takes account of any embedded mitigation measures assumed to be in place during construction of the Proposed Development or integral to the design prior to the assessment being undertaken.
- **Additional Mitigation Measures:** Provides details of additional mitigation measures to be implemented.
- **Assessment of Effects:** Provides an overview of the type of effects considered in the assessment:
  - *Construction Effects:* Describes the predicted effects, proposed mitigation and residual effects associated with construction of the Proposed Development. Decommissioning effects are considered to be no greater than construction effects and are not considered further in the ES.
  - *Operational Effects:* Describes the predicted effects, proposed mitigation and residual effects associated with the operation of the Proposed Development.
  - *Cumulative Effects:* Describes the incremental construction/operational effects associated with adding the Proposed Development to the other developments being considered in the cumulative assessment. Proposed mitigation measures and residual cumulative effects are also described.
  - *Combined Effects:* Describes the indirect and secondary effects resulting from the interaction of separate direct effects arising both within a topic area and interrelated with other topics areas.
- **Further Survey Requirements and Monitoring:** Describes any additional survey work or monitoring proposed, including that to monitor the effectiveness of proposed mitigation.
- **Summary of Significant Effects:** This includes a table summarising any identified significant effects including mitigation measures and residual effects.



## Statement of Expertise

**1.41** In line with Regulation 14(4) of the EIA Regulations, the ES has been prepared, and all technical assessments undertaken, by suitably qualified 'competent experts' within the project team.

**1.42** The EIA process is managed by LUC. LUC is a Registrant of the Institute of Environmental Management and Assessment (IEMA) EIA Quality Mark Scheme which allows organisations that lead the co-ordination of statutory EIAs in the UK to make a commitment to excellence in EIA activities, and to have this commitment independently reviewed on a regular basis.

**1.43** Details have been provided in **Appendix 1.1: Statement of Expertise** regarding each chapter author's professional expertise.