OAKLANDS FARM SOLAR PARK

Applicant: Oaklands Farm Solar Ltd

Crossing Method Statement
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CROSSING METHOD STATEMENT

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1 INTRODUCTION

1.1 OVERVIEW

1.1.1 This Crossing Method Statement has been prepared on behalf of Oaklands Farm Solar Ltd ("the Applicant") in relation to an Application for a Development Consent Order (DCO) for the development of the Oaklands Farm Solar Park ("The Proposed Development").

1.1.2 The Proposed Development comprises a solar farm with an associated Battery Energy Storage System. 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 Site). The solar park itself, comprising photovoltaic panel arrays, a central electricity substation and Battery Energy Storage System (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 park to the national grid via an electricity substation located at the former Drakelow Power Station which sits south of Burton-upon-Trent. As the Proposed Development would be an onshore generating station with a generating capacity of over 50MW it constitutes a Nationally Strategic Infrastructure Project (NSIP) for which an application for a DCO is being made under the Planning Act 2008 (The Act) to the Planning Inspectorate, for determination by the Secretary of State for Energy Security and Net Zero (SoS).

1.1.3 The Site lies within the administrative area of Derbyshire County Council (DCC) and the District Authority of South Derbyshire District Council (SDDC).

1.1.4 The Powering Up Britain – Energy Security Plan (2023) sets out a need for 70GW of solar energy generation by 2035 in the UK. This represents a fivefold increase on the current installed capacity in less than 12 years. This represents a significant shift in energy policy and demonstrates the transition taking place to renewable energy and a low-carbon economy with solar now forming a key role within that transition.

1.1.5 The Proposed Development is therefore a prime opportunity to deliver a critical part of the portfolio of solar energy generation which is urgently required to deliver the target of 70GW of low-cost energy by 2035 and to meet the Government's ambitious target of net zero by 2050.

1.2 THE APPLICANT

1.2.1 Oaklands Farm Solar Limited is a wholly owned subsidiary of BayWa r.e UK Ltd (BayWa). BayWa is a global developer of large-scale renewable energy projects. The company has delivered 625 solar projects worldwide totalling approximately 1900MW, including at least 32 solar projects in the UK totalling approximately 578MW. The Applicant has previously developed ground mounted solar schemes

at Bracks Farm, in Cambridge, as well as Bann Road in Northern Ireland (NI) which is the largest solar project in NI.

1.3 PURPOSE OF THIS DOCUMENT

1.3.1 Following acceptance of the Application on the 5th March 2024, the Planning Inspectorate issued a letter comprising advice to the Applicant under Section 51 of the Planning Act 2008. The Planning Inspectorate notes within that letter that Paragraph 4.40 of the Environmental Statement had identified the presence of various obstacles which were being crossed by the grid route corridor, where special installation techniques would be considered. The S51 Advice therefore suggested that the Applicant should consider providing crossing method statements for the various types of crossings proposed.

1.3.2 Therefore, this document provides the information and details regarding the cable and access track crossings for the grid route corridor. Reference is made in particular to the following documents and plans within the Application:

- APP-096 – Environmental Statement – Chapter 4 – Project Description
- APP-095 - Environmental Statement - Appendix 4.8 - Crossing Schedule;
- APP-098 - Environmental Statement – Figure 4.12 – Watercourse Crossing;
- APP-098 - Environmental Statement – Figure 4.13 – Indicative Watercourse Crossing Reinforcement;
- APP-098 - Environmental Statement – Figure 4.14 – Indicative Underground Cabling Installation;
- APP-098 - Environmental Statement – Figure 4.15a – 132kV Cable Trench Sections (Option A);
- APP-098 - Environmental Statement – Figure 4.15a – 132kV Cable Trench Sections (Option B).

2 GRID ROUTE CORRIDOR METHOD STATEMENT

2.1 THE CABLE CONNECTION

2.1.1 The solar farm itself, comprising photovoltaic panel arrays, a central electricity substation and Battery Energy Storage System (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 at Oaklands Farm. 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 element of the Proposed Development to the national grid via an electricity substation located at the former Drakelow Power Station which sits to the south of Burton-upon-Trent. Various temporary access tracks would be provided for the installation of the cable, with some of those being retained for the duration of the operation of the Proposed Development.

2.2 WORKS

132 Kilovolt Cable (Grid Connection)

2.2.1 The Grid Route Corridor is identified as Work No. 4 which allows for the trenching and installation of the 132 kilovolt electrical cables connecting Work No. 3 (Grid Connection) and Work No. 5 (connection and installation works to the existing transmission network substation including works to trench and lay 132 kilovolt electrical cables connecting to Work No. 4C). This is shown in the Works Plan [Document 2.3/ExA ref. APP-007]. As reflected in that Works description, the majority of the high voltage cable would be laid using the trenching method.

2.2.2 The grid route corridor (Work no. 4) then encounters a number of obstacles, primarily roads and watercourses. Work No's 4A to 4C are individual works which each allow for either trenching through or directionally drilling beneath the following:

- **Work No. 4A** – crossing Rosliston Road with electrical cabling;
- **Work No. 4B** – temporary stopping up of watercourses to trench and lay cables, installation of culverts, drainage and other features to cross watercourses;
- **Work No. 4C** – crossing Walton Road with electrical cabling;

2.2.3 Additionally, Work No 4D makes provision for the installation of lower voltage cables within the solar park itself to be laid through or beneath Coton Road.

2.2.4 In addition, Chapter 4 of the Environmental Statement [Document 6.1/ExA ref. APP-096] provides the project description for the Proposed Development and table 4.2 sets out the parameters for each of the works.

Access Tracks

2.2.5 A new 2km Temporary Construction Haul Road will be installed across Park Farm, Fairfield Farm, and Oaklands Farm, to allow HGVs to travel from Walton Road to the construction compounds within the Oaklands Farm area, and in order to provide access to the cable route. To that end **Work No. 4** also provides for the laying down of internal access tracks and mean of access, together with drainage infrastructure.

Solar Array Cables

2.2.6 Separately to the cables within the Grid Route Corridor, other cables will connect the solar arrays located to the south of Coton Road with the remainder of the solar park to the north of Coton Road. Provision for cables to be placed is made by **Work No. 4D** - crossing Coton Road with electrical cabling.

2.2.7 In addition, those cables would need to traverse hedgerows, which is provided for within the general provisions in **Work No. 7**.

2.2.8 The location of those crossings would depend on the final configuration and layout of the solar arrays. It is expected that any underground cables crossing Coton Road would be installed via open trenching.

3 CROSSING METHOD STATEMENT

3.1.1 Appendix 4.8 to the Environmental Statement [APP-095] is a Crossing Schedule which identifies and lists each of the crossing points for the main high voltage cable.

3.1.2 There are three scenarios presented in the Crossing Schedule for the installation of the high voltage cable at the various crossing points identified:

(1) Trenching with Horizontal Directional Drilling (HDD) as a secondary option;

(2) Trenching or HDD, with the approach used dependant on an assessment of the crossing;

(3) HDD with Trenching as a secondary option.

3.1.3 The preferred method will be informed by the site investigation and site preparation works at each crossing point.

3.2 CABLE CROSSINGS

Site Preparation

3.2.1 Prior to installation the grid route corridor will be surveyed and for each crossing point the following will be undertaken:

i. Review of the plans, layout and topography of the corridor and wider site;

ii. An assessment of the existing flora and fauna constraints;

iii. A review of the above ground constraints such as surface services, obstructions and features

iv. A review of the sub-surface constraints include existing gas, water, electric utilities;

v. Completion of borehole samples to understanding the soil type and structure if this data is not already available;

vi. Installation of trial pits to confirm sub-surface services, obstructions and structure;

vii. Use of RADAR mapping when trail pits are not feasible.

3.2.2 The high voltage cable comprises three insulated single cores, laid in either flat formation or trefoil formation. The assessments above will be used to determine what method of installation (i.e trenching or HDD) is suitable. HDD would typically be used where ground conditions are water bearing or conditions are otherwise unsuitable for accommodating a high voltage cable, meaning that cable ducts or culverts would be required.

Trenching

3.2.3 The general grid route construction is to be undertaken via open trenching. The cable is laid directly from the cable drum in pre-determined cable lengths once the trench has been established, with the cable being laid on a bed of cement-based sand (CBS) or similar homogenous nonabrasive material to protect the cable sheath (as illustrated by Figures 4.15a and 4.15b of the Environmental Statement – APP-098). Each open trench section is then backfilled.

Public Highway and Public Rights of Way

3.2.4 Where it is necessary to cross a public highway, the crossings will be as short in length as possible to minimise any potential disruption and future maintenance. Open trench construction is possible where the road or track can be closed for the period to prepare a trench and lay the section of cable. Partial road or track closure will employ cable ducts that allows the trench to be back filled and a cable pulled through those ducts without further interruption or closure. Depth of cover and the construction of the backfill are essential to maintain the integrity of the structure of the road or track. The details of the road crossing are to be confirmed once surveying has been completed.

3.2.5 Short trenches across footpaths or bridleways will be constructed with a temporary decking or similar to maintain access.

Watercourses

3.2.6 Where the cable is required to cross a watercourse this will typically be completed via open trenching construction. The water flow would be stopped temporarily for the duration of construction, with regard to weather conditions and level of flow in order to prevent any localised flooding. Cable ducts would be laid within the trench ready for pulling cables through at the appropriate time, with the ducts used to protect the high voltage cable.

3.2.7 HDD methods would be used should it not be possible to temporarily stop the water flow.

Important Hedgerow

3.2.8 Where the cable installation encounters a hedgerow, small sections of the hedgerow will be removed to enable the trenching and installation of the cable, subject to the survey of flora and fauna. Cable ducts will be laid in the trench such that the cable is installed at a later time and the hedgerow is reinstated or replanted. This will be completed in accordance with the Arboricultural Survey Report (Appendix 6.14 of the Environmental statement - Document APP-133) and the Outline Landscape Ecological Management Plan (Appendix 5.6 of the Environmental statement - Document APP-105).

Underground Utilities

3.2.9 Existing utilities are not to be diverted for the cable route and installation, unless unavoidable and in any case subject to prior agreement with relevant utility asset owner. Crossings of utilities are to be, wherever practical, at right angles to the service and not to run in parallel.

3.2.10 The crossing and the method for construction will be notified and agreed with the utility asset operator.

3.2.11 Generally, the 132kV cable shall be laid below all cables less than 132kV service voltage. It shall be laid above main water pipes, main sewer pipes and medium/high pressure gas mains where possible. There shall be suitable separation to limit induction of voltages and degrade the asset performance.

Overhead Low and High Voltage Electricity Lines

3.2.12 The open trenching installation of the cable would be unaffected by Overhead Low and High Voltage Electricity Lines.

Horizontal Directional Drilling

3.2.13 HDD would be used in situations where the initial assessment indicates that trenching is not possible or appropriate, such as where the flow of a watercourse cannot be temporarily stopped, or where it is considered necessary in order to preserve a hedgerow in situ, and where there is practical access for the HDD equipment. HDD is then the preferred option for the crossing of Rosliston Road, given the presence of the road, various utilities and a watercourse in that area.

3.2.14 The HDD process would involve undertaking various tests to determine the appropriate approach based on the geology present, before then establishing an entry and exit compound in appropriate locations either side of the feature being crossed. A pilot hole would typically first be dug by an HDD rig and tested before then being expanded as necessary in order to accommodate the cable, with various methods able to be used for directing the cable through the bored hole, depending on the geology.

3.3 ACCESS TRACKS

3.3.1 As demonstrated by Figure 4.13 of the Environmental Statement (APP-098, replicated in Figure 3.1 below), where the construction access track is required to cross a watercourse the approach will be to construct a reinforced culvert structure, to allow for the watercourse to continue unimpeded whilst construction activities take place.

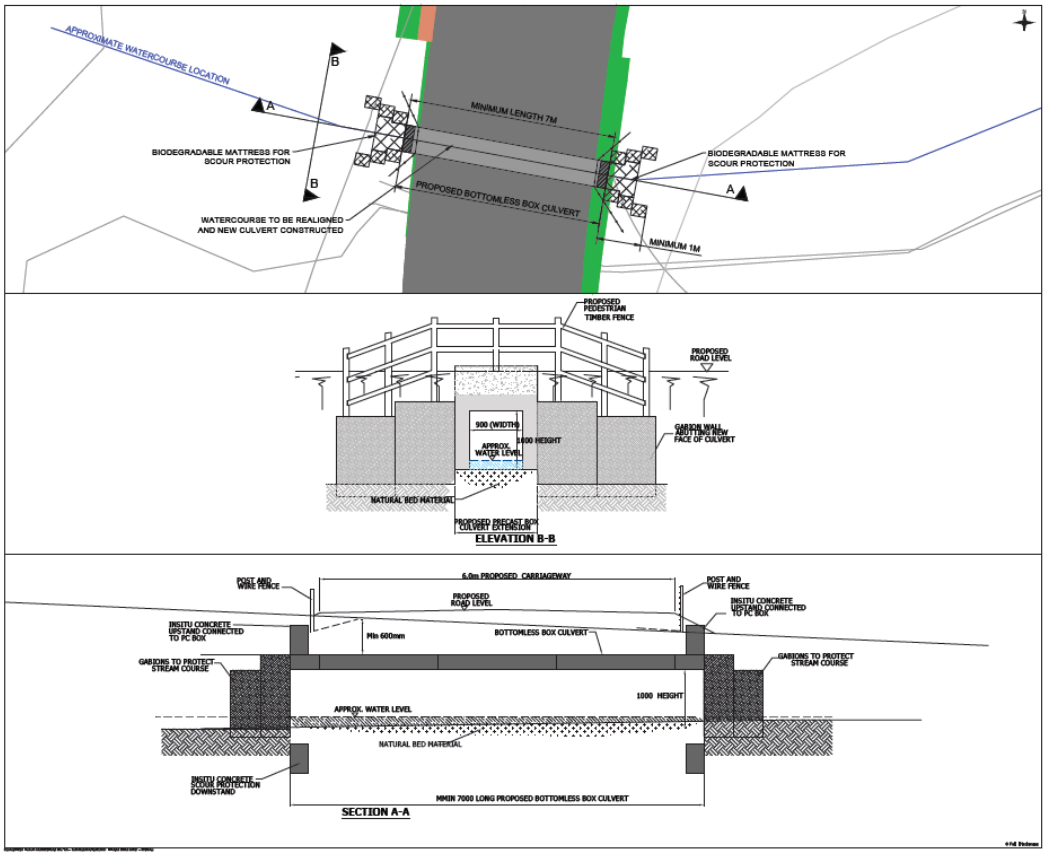

FIGURE 3.1 – INDICATIVE DESIGN OF ACCESS TRACK CROSSING A WATERCOURSE

3.4 CEMP

3.4.1 Requirement 9 of the draft DCO makes provision for a CEMP relating to any phase of the development to be produced and approved by the local planning authority. The CEMP/s produced would include the operations required for the trenching or HDD operations needed for the installation of the cable, as well as the construction of any structures relating to the construction access tracks, in order to identify and document any necessary mitigation and control measures relating to those works to minimise the adverse effects of the Proposed Development.