

## **Longfield Solar Farm**

**Environmental Statement PINS Ref: EN010118** 

Volume 1

Chapter 0: Table of Contents, Glossary and Abbreviations

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ES Volume 4 [EN010118/APP/6.4]: Environmental Statement Non-Technical Summary



## **Glossary**

| Term        | Description   | Work No. |
|-------------|---|----------|
| Applicant   | Longfield Solar Energy Farm Ltd.  |          |
| Application | The application for a DCO submitted by the Applicant for the Scheme.  |          |
| The Scheme  | Longfield Solar Farm - comprising the construction, operation and maintenance, and decommissioning of a solar photovoltaic (PV) array electricity generating facility and energy storage facility with a total capacity exceeding 50 megawatts (MW) and export connection to the National Grid. The Scheme will be located within the Order limits and is the subject of the Application. |          |
|             | The details of the Scheme are described in Chapter 2 of this Environmental Statement and Schedule 1 of the draft DCO submitted with the Application.  The Scheme is also known as "Longfield Solar Farm".   |          |

### **Project Geographical Zones Terminology**

| Ancillary Infrastructure                            | Works within Work No. 6 including Low Voltage Distribution Cables, Primary Access Tracks, [Secondary Access Tracks and other means of access including permissive paths], means of enclosure and boundary treatment, security and monitoring infrastructure, landscaping and biodiversity measures including planting, drainage and irrigation infrastructure, signage, earthworks, temporary construction compounds, works to divert and underground existing electrical overhead lines, and other associated works | Work No.6   |
|---|--|---|
| Ancillary Infrastructure<br>Area                    | The areas within the Solar Farm Site, as shown as Work No. 6 on the Works Plans, which will contain the Ancillary Infrastructure   |   |
| Battery Energy Storage<br>System (BESS)<br>Compound | The area within the Solar Farm Site which will contain<br>the BESS, inverters, transformers and switchgear,<br>Low Voltage Distribution Cables, some Primary<br>Access Tracks, fencing and other associated works.<br>The BESS would be delivered in two phases.   | Work No. 2<br>(first phase<br>Work No. 2A,<br>second<br>phase Work<br>No. 2B)<br>Work No. 6 |
| Bulls Lodge Substation<br>Site                      | The site within the Order limits located at the existing Bulls Lodge 400kV Substation. The Scheme includes works for an extension to the Bulls Lodge Substation which will be carried out within this area.  | Work No. 5  |
| Grid Connection Route                               | The proposed grid connection route is within the Order limits, connecting the Solar Farm Site to the Bulls Lodge Substation Site. As part of the Scheme the Grid Connection Cables, other associated cables, Jointing Pits and other works associated with cable laying will be located within this area.  | Work No. 4A   |
| Habitat Management<br>Areas                         | Areas of habitat management comprising landscape and biodiversity enhancement measures; habitat creation and management, including earthworks,   | Work No. 10   |



| •                                    | •   |  |
|--------------------------------------|---|--|
|                                      | landscaping, means of enclosure, and the laying and   |  |
| Order limits                         | construction of drainage infrastructure.  The land shown on the Works Plans within which the  |  |
|                                      | Scheme can be carried out.  |  |
| Permissive Paths                     | A new recreational informal path signed as permissive that the landowner allows the public to use for the life of the Scheme.   |  |
| Potential Developable                | Parcels of land within the Solar PV Array Works Area  | Work No. 1   |
| Area (PDA)                           | which are numbered to locate the parcel within the Scheme as shown on the Works Plans. Numbered 1-31, excluding 24 & 25.  |  |
| Site Access Works                    | Works to facilitate access to Work Nos. 1 to 8 and 10 including:  | Work No. 9   |
|                                      | <ul> <li>Creation of accesses from the public highway;</li> <li>Creation of visibility splays; and</li> <li>Works to widen and surface the public highway</li> </ul>  |  |
| Solar PV Array Works                 | The area located within the Solar Farm Site and which   | Work No.1  |
| Area                                 | will be the location for the PV Arrays, Balance of Solar System (BoSS) Plant, solar Stations, Secondary Access Tracks, some Low Voltage Distribution Cables and associated works.   | Work No. 6   |
| Temporary construction               | The temporary construction laydown areas will   | Work Nos.  |
| Temporary construction laydown areas | <ul> <li>The temporary construction laydown areas will comprise of:</li> <li>Work No. 4B: temporary construction laydown areas along the Grid Connection Route;</li> <li>Work No. 6: secondary temporary construction compounds, both within the permanent work area and outside the permanent work area on the Solar Farm Site;</li> <li>Work No. 7A: a main temporary construction laydown area on the Solar Farm Site;</li> <li>Work No. 7B: a temporary construction laydown area in connection with Work No. 5 (the Bulls Lodge Substation Extension) and a new temporary access from the existing private road to the temporary compound.</li> <li>The temporary compounds within Work No. 7 would include: areas of hardstanding; car parking; site and welfare offices, canteens and workshops; storage for materials and equipment; storage and waste skips; an area for download and turning; security infrastructure, including cameras, perimeter fencing, and lighting; site drainage and waste management infrastructure; electricity, water waste water and telecommunications connections.</li> </ul> | Work Nos.<br>4B, 6, 7A<br>and 7B   |
| The Solar Farm Site                  | The area within the Order limits comprised of the Solar PV Array Works Area, the Longfield Substation, the BESS Compound, the Ancillary Infrastructure Area, Habitat Management Areas and the Ancillary Building.   | Work Nos. 1,<br>2, 3, 6, 8, 10<br>(note parts of<br>Work Nos. 4<br>and 9 are<br>also within<br>the Solar<br>Farm Site) |
| Project Components Terr              | minology  |  |
| Ancillary Building                   | The office, warehouse and plant storage building comprising office and welfare facilities; storage facilities; waste skips; parking areas; and a warehouse building for the storage of spare parts and plant  | Work No. 8   |

building for the storage of spare parts and plant.



#### Volume 1, Chapter 0: Table of Contents, Glossary and Abbreviations **Balance of Solar System** Work No. 1 Inverters, transformers and switch gear and would be (BoSS) Plant either-(a) "Solar Stations" being a station comprising centralised inverters, transformers and switch gear with each component for each solar station either-(i) a "Solar Station" located outside, with a concrete foundation slab or placed on metal skids for each of the inverters and transformers and switch gear; or (ii) housed together within a container sitting on a concrete foundation slab or placed on metal skids: or (b) string inverters attached either to mounting structures or a ground mounted frame, switchgear and transformers on a concrete foundation slab or placed on metal skids; The BoSS Plant will be located within the Solar PV Array Works Area. Battery storage located within the BESS Compound. **Battery Energy Storage** Work No. 2 System (BESS) The existing 400kV substation owned and operated by **Bulls Lodge Substation** National Grid Electricity Transmission. **Bulls Lodge Substation** The works to the Bulls Lodge Substation which will Work No. 5 **Extension** include: Work No. 5A - an electricity switching station including-(iii) a main substation building to include an indoor gas insulated switchgear (GIS) switch hall, ancillary plant rooms, amenities block, storage and workshop units; (iv) outdoor air insulated (AIS) switchgear, GIS busbars, two overhead line gantries associated foundations and structures: (v) a new permanent access road from the existing private road including a new bellmouth entrance; (vi) internal roadways and footpaths; (vii) earthworks; (viii) car parking area; (ix) lighting columns and lighting; (x) perimeter fencing and security cameras; (xi) drainage system and a new drainage outfall to Boreham Brook; (xii) new connections from pylons 4VB061A and 4VB061B including pylon modifications; and

Work No. 5B –temporary overhead line alterations including two new temporary pylons and realignment of

The buried 400kV cables connecting the Longfield Substation to the Bulls Lodge Substation Extension.

Located within the Grid Connection Route.

Underground structures constructed at regular

intervals along the Grid Connection Cables to join sections of cable and facilitate installation of the

the existing 400kV overhead line.

**Grid Connection Cables** 

**Jointing Pit** 

Work No. 4A

Work No. 4A



|                            | cables into the buried ducts. Located within the Grid Connection Route.  |            |
|----------------------------|--|------------|
| Longfield Substation       | The substation located within the Solar Farm Site. The Longfield Substation will be comprised of transformers and switchgear. It will be connected to the PV Arrays and BESS via the Low Voltage Distribution Cables in order to collect electricity (at 33kV) from those components of the Scheme. The Longfield Substation will convert the electricity to 400kV for onward transmission to the Bulls Lodge Substation Extension via the Grid Connection Cables. | Work No. 3 |
| Low Voltage Distribution   | 33 kV cables, which transmit electricity from the Solar  | Work No. 6 |
| Cables                     | Stations or the BESS to the Longfield Substation,  |            |
| Duimana Assasa Tasaba      | located within the Solar Farm Site.  | Maria Na C |
| Primary Access Tracks      | The roads within the Solar Farm Site constructed to  | Work No. 6 |
| PV Array                   | provide primary access around the Solar Farm Site.  A PV Array is a distinct grouping of PV Tables. The PV   | Work No. 1 |
| FVAIIay                    | Arrays are arranged within the Solar PV Array Works  | WOIK NO. I |
|                            | Area.  |            |
| PV Mounting Structure      | The metal frames onto which the PV Panels are attached.  | Work No. 1 |
| PV Panel                   | A panel comprising a grouping of photovoltaic (PV) cells connected to each other and set within a single physical frame. The PV Panel is attached to a PV  | Work No. 1 |
|                            | Mounting Structure. Also referred to as a PV Module.   |            |
| PV Tables                  | PV Panels mounted onto the PV Mounting Structure, forming tables, which are then set out in rows.  | Work No. 1 |
| Secondary Access<br>Tracks | The roads constructed to provide access within the Solar PV Array Works Area which will consist of a layer of rock fill placed on a suitable underlying layer.   | Work No. 6 |



# **Abbreviations and Acronyms**

| Term             | Meaning   |
|------------------|---|
| AA               | Appropriate Assessment  |
| AADT             | Annual Average Daily Traffic  |
| AC               | Alternating current   |
| AEP              | Annual Exceedance Probability   |
| ALC              | Agricultural Land Classification  |
| AGL              | Above Ground Level  |
| AOD              | Above Ordnance Datum  |
| AONB             | Area of Outstanding Natural Beauty  |
| APFP Regulations | Infrastructure Planning (Applications: Prescribed Forms and Procedure) Regulations 2009 |
| AQMA             | Air Quality Management Area   |
| BAP              | Biodiversity Action Plan  |
| BEIS             | Department for Business, Energy and Industrial Strategy                                 |
| BESS             | Battery Energy Storage System   |
| BGS              | British Geological Survey   |
| BMV              | Best and Most Versatile   |
| BNL              | Basic Noise Level   |
| BoSS             | Balance of Solar System   |
| BPM              | Best Practicable Means  |
| BS               | British Standard  |
| CAFE             | Clean Air for Europe  |
| CCRA             | Climate Change Risk Assessment  |
| CEMP             | Construction Environmental Management Plan  |
| CIEEM            | Chartered Institute of Ecology and Environmental Management                             |
| CJEU             | The Court of Justice of the European Union  |
| CLR              | Contaminated Land Report  |
| COPA             | Control of Pollution Act  |
| COSHH            | Control of Substances Hazardous to Health   |
| CPRE             | Campaign to Protect Rural England   |
| CRMP             | Construction Resource Management Plan   |
| CRoW             | Countryside and Rights of Way Act 2000  |
| CSM              | Conceptual Site Model   |
| СТМР             | Construction Traffic Management Plan  |
| CVPR             | Chelmer Valley Park & Ride  |
| CWS              | County Wildlife Site  |
| dB               | Decibel   |
| DC               | Direct current  |



| DCLG     | Department for Communities and Local Government       |
|----------|---|
| DCO      | Development Consent Order                             |
| DEFRA    | Department for Environment, Food and Rural Affairs    |
| DfT      | Department for Transport                              |
| DMRB     | Design Manual for Roads and Bridges                   |
| DRMB     | Decommissioning Resource Management Plan              |
| DWS      | Drinking Water Standards                              |
| EA       | Environment Agency                                    |
| ECC      | Essex County Council                                  |
| EcIA     | Ecological Impact Assessment                          |
| EIA      | Environmental Impact Assessment                       |
| END      | Environmental Noise Directive                         |
| EPS      | European Protected Species                            |
| ES       | Environmental Statement                               |
| EU       | European Union  |
| FRA      | Flood Risk Assessment                                 |
| FTE      | Full-time employment                                  |
| GCN      | Great Crested Newt                                    |
| GHG      | Greenhouse Gas  |
| GI       | Ground Investigations                                 |
| GIS      | Geographical Information System                       |
| GLVIA    | Guidelines for Landscape and Visual Impact Assessment |
| GPR      | Ground Penetrating Radar                              |
| GRA      | Groundwater Risk Assessment                           |
| GRP      | Glass Reinforced Plastic                              |
| GVA      | Gross Value Added                                     |
| Ha or ha | Hectare   |
| HCA      | Homes and Communities Agency                          |
| HDD      | Horizontal Directional Drilling                       |
| HDV      | Heavy Duty Vehicles                                   |
| HER      | Historic Environment Record                           |
| HGV      | Heavy Goods Vehicle                                   |
| HRA      | Habitats Regulations Assessment                       |
| HSC      | Hazardous Substances Consent                          |
| HSE      | Health and Safety Executive                           |
| HSE      | Health and Safety Executive                           |
| HVAC     | Heating, ventilation and air conditioning             |
| IAN      | Interim Advice Note                                   |
| IAQM     | Institute of Air Quality Management                   |
|          | · · · · · · · · · · · · · · · · · · ·                 |



| IUCN             | International Union for Conservation of Nature                        |
|------------------|---|
| JNCC             | Joint Nature Conservation Committee                                   |
| Km               | Kilometres  |
| kV               | Kilovolt  |
| L <sub>A10</sub> | A-weighted, sound level exceeded for 10% of the measurement period.   |
| L <sub>A90</sub> | A-weighted, sound level exceeded for 90% of the measurement period.   |
| L <sub>Aeq</sub> | A-weighted, equivalent sound level over the measurement period.       |
| LAFmax           | A-weighted, maximum sound level over the measurement period, measured |
|                  | on 'fast' response  |
| LAQM             | Local Air Quality Management  |
| LCA              | Landscape Character Area  |
| LCT              | Landscape Character Type  |
| LEMP             | Landscape and Ecology Management Plan                                 |
| LGS              | Local Geological Sites  |
| LiDAR            | Light Detection And Ranging   |
| LLCA             | Local Landscape Character Area  |
| LNR              | Local Nature Reserve  |
| LOAEL            | Lowest Observable Adverse Effect Level                                |
| LSOAs)           | Lower Layer Super Output Areas  |
| LTCA             | Local Townscape Character Area  |
| LV               | Limit Value   |
| LVIA             | Landscape and Visual Impact Assessment                                |
| Lw               | Sound Power Level   |
| MAFF             | Ministry of Agriculture, Fisheries and Food                           |
| MCA              | Mineral Consultation Areas  |
| MHCLG            | Ministry of Housing, Communities and Local Government                 |
| MSA              | Mineral Safeguarding Areas  |
| MSOAs            | Middle Layer Super Output Areas                                       |
| MT               | Motorised Travellers  |
| MW               | Megawatts   |
| NCA              | National Character Areas  |
| NERC             | Natural Environment and Rural Communities                             |
| NHLE             | National Heritage List for England                                    |
| NIA              | Noise Impact Area   |
| NMU              | Non-Motorised Users   |
| NNR              | National Nature Reserve   |
| NNR              | National Nature Reserve   |
| NOEL             | No Observed Effect Level  |
| Non-motorised    | Pedestrians, cyclists, equestrians.                                   |
| Users (NMUs)     |   |
| . ,              |   |



| NPPF    | National Planning Policy Framework 2018   |
|---------|---|
| NPS     | National Policy Statement. National Policy Statements are produced by government. They comprise the government's central policy documents for the development of nationally significant infrastructure. |
| NRMM    | Non-road Mobile Machinery   |
| NSIP    | Nationally Significant Infrastructure Project   |
| NTS     | Non-Technical Summary   |
| NVC     | National Vegetation Classification  |
| ODP     | Outline Design Principles   |
| OCEMP   | Outline Construction Environmental Management Plan  |
| OEMP    | Operation Environmental Management Plan   |
| OHL     | Overhead lines  |
| OLEMP   | Outline Landscape and Ecology Management Plan   |
| ONS     | Office for National Statistics  |
| OOEMP   | Outline Operation Environmental Management Plan   |
| OS      | Ordnance Survey   |
| OUV     | Outstanding Universal Value   |
| PA 2008 | Planning Act 2008   |
| PCS     | Power Conversion Systems  |
| PDA     | Potential Developable Area  |
| PEI     | Preliminary Environmental Information   |
| PERA    | Preliminary Environmental Risk Assessment   |
| PHE     | Public Health England   |
| PiR     | Passive Infra Red   |
| POC     | Point of Connection   |
| PPE     | Personal Protective Equipment   |
| PPG     | Planning Practice Guidance  |
| PPS     | Planning Policy Statement   |
| PPV     | Peak Particle Velocity  |
| PRoW    | Public Right of Way   |
| PV      | Photovoltaic  |
| PWS     | Private Water Supplies  |
| RBMP    | River Basin Management Plan   |
| RHS     | River Habitat Survey  |
| RPG     | Registered Park and Garden  |
| RV      | Representative Viewpoint  |
| SAC     | Special Area of Conservation  |
| SCI     | Sites of Community Importance   |
| SLA     | Special Landscape Area  |
| SM      | Scheduled Monument  |
| SOAEL   | Significant Observed Adverse Effect Level   |
|         |   |



| SOCC   | Statement of Community Consultation                              |
|--------|--|
| SoCG   | Statement of Common Ground                                       |
| SoS    | Secretary of State   |
| SOUV   | Statement of Outstanding Universal Value                         |
| SPA    | Special Protection Area  |
| SPI    | Species of Principal Importance                                  |
| SPZ    | Source Protection Zone   |
| SSSI   | Site of Special Scientific Interest                              |
| SuDS   | Sustainable Drainage Systems                                     |
| TA     | Transport Assessment   |
| TPO    | Tree Preservation Order  |
| TS     | Transport Statement  |
| TTM    | Temporary Traffic Management                                     |
| UK     | United Kingdom   |
| UNECE  | United Nations Economic Commission for Europe                    |
| UNESCO | United Nations Educational, Scientific and Cultural Organisation |
| VP     | Viewpoints   |
| VR     | Visual Receptor  |
| WCA    | Wildlife and Countryside Act                                     |
| WFD    | Water Framework Directive  |
| WHO    | World Health Organisation  |
| WHS    | World Heritage Site  |
| ZTV    | Zone of Theoretical Visibility                                   |