

Tween Bridge Solar Farm

Environmental Statement Chapter 1: Introduction

Planning Act 2008
Infrastructure Planning (Applications: Prescribed Forms
and Procedure) Regulations 2009

APFP Regulation 5(2)(a)

Document Reference: 6.1.1

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Revision 1

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1 Introduction

1.1. Introduction

- 1.1.1. RWE Renewables UK Solar and Storage Ltd (hereafter, the 'Applicant') has commissioned this Environmental Statement (ES) that forms part of a suite of documents supporting an application under Section 37 of the Planning Act 2008 **[Ref. 1-1]** to the Secretary of State (SoS) for the Department of Energy Security and Net Zero (DESNZ) for a Development Consent Order (DCO) for the Tween Bridge Solar Farm (hereafter, the 'Scheme').
- 1.1.2. The Scheme constitutes a Nationally Significant Infrastructure Project (NSIP) as it comprises the construction of a generating station (section 14 of the Planning Act 2008) in England that does not generate electricity from wind, is not an offshore generating station and has a capacity of more than 50 Megawatts (MW) (section 15(2) of the Planning Act 2008).
- 1.1.3. The Scheme also falls within the definition of 'EIA development' under the Infrastructure Planning (Environmental Impact Assessment) Regulations 2017 **[Ref. 1-2]** (hereafter, 'EIA Regulations'), therefore requiring Environmental Impact Assessment (EIA).
- 1.1.4. This ES presents the findings of the EIA of the Scheme in relation to this DCO application for the construction, operation, and decommissioning of a ground mounted solar photovoltaic (PV) electricity generation station with a capacity of over 50 Megawatts (MW) and associated development (section 115(2) of the Planning Act 2008) comprising of energy storage located on land approximately 10 kilometres to the northeast of Doncaster and 14 kilometres to the west of Scunthorpe (hereafter, the 'Order Limits'), in accordance with the EIA Regulations and the Planning Act 2008.
- 1.1.5. The Scheme will be located within the Order Limits (the land shown in **ES Figure 1.1 Order Limits [Document Reference 6.4.1.1]**).
- 1.1.6. This **ES Chapter 1 Introduction [Document Reference 6.1.1]** is supported by the following appendices as part of ES Volume 3: Appendices:

- **ES Appendix 1.1 – Planning Inspectorate EIA Scoping Opinion [Document Reference 6.3.1.1]**
- **ES Appendix 1.2 – Applicant EIA Scoping Report [Document Reference 6.3.1.2]**
- **ES Appendix 1.3 – EIA Statement of Competence [Document Reference 6.3.1.3]**

1.1.7. This **ES Chapter 1 Introduction [Document Reference 6.1.1]** is supported by the following figures as part of ES Volume 4: Figures:

- **ES Figure 1.1 Order Limits [Document Reference 6.4.1.1]**
- **ES Figure 1.2 Land Parcel Plan [Document Reference 6.4.1.2]**
- **ES Figure 1.3 Development Parcel Plan [Document Reference 6.4.1.3]**

1.1.8. This Chapter outlines the purpose and structure of the ES and provides an overview of the Applicant and the Scheme.

1.2. The Applicant

1.2.1. The Applicant is RWE Renewables UK Solar and Storage Limited, a leading solar and battery energy storage developer with one of the largest development pipelines in the UK. RWE Renewables UK Solar and Storage Limited is a subsidiary of RWE AG, which has more than 125 years of energy expertise, through design, construction, and operation. It is RWE AG's ambition to have a carbon neutral energy portfolio by 2040, providing clean, secure, and affordable energy to millions of households.

1.3. The Consenting Process and Nationally Significant Infrastructure Projects

1.3.1. The Scheme represents a significant planning and investment project and is a NSIP. The Planning Act 2008 introduced a new development consent regime for determining NSIPs. This is known as the DCO regime. The Planning Act 2008 dictates that the SoS is responsible for determining DCO applications, with the power to appoint the Planning Inspectorate to manage and examine the application. In this role, the Planning Inspectorate will examine the application through an appointed Examining Authority for the Scheme and make a

recommendation to the SoS who will then decide whether to make a DCO which authorises and permits the Scheme.

1.3.2. The Planning Act 2008 defines the key stages in the application process for NSIPs. These are summarised below:

- Pre-application – developer notifies and consults the public, statutory consultees and those with an interest in the affected land on its proposed application. Pre-application is typically split into informal, non-statutory phase of consultation followed by the statutory phase of pre-application consultation. The non-statutory community consultation for this Scheme was carried out in late 2023 and consultation with consultees continued throughout 2024. Statutory consultation was carried out in March – May 2025.
- Submission – developer will review the feedback received during consultation and finalise the proposals taking the feedback into account. A DCO application will then be submitted to the Planning Inspectorate, who will appoint the examination team for the application.
- Acceptance – after the application is submitted, the Planning Inspectorate will decide whether it is suitable for examination.
- Pre-examination – if accepted for examination, there will be an opportunity for people to register their interest in the application with the Planning Inspectorate. Anyone registered will be kept informed of the progress of the application by the Planning Inspectorate, including how they can provide comments. The Planning Inspectorate will invite all those registered to a preliminary meeting that will explain the timetable and format of the examination.
- Examination – the examination lasts around six months. People who have registered their interest will be able to take part in the examination and send their comments to the Planning Inspectorate.
- Decision – following the examination, the Planning Inspectorate will make its recommendation on the application to the Secretary of State, and the Secretary of State has the final decision as to whether consent is to be granted.

1.4. Requirement for EIA

- 1.4.1. For NSIPs in England, the legislative requirements for EIA are set by the EIA Regulations and it is defined by Regulation 5 of the EIA Regulations as a process consisting of:
- a) “the preparation of an environmental statement or updated environmental statement, as appropriate, by the applicant;*
 - b) the carrying out of any consultation, publication and notification as required under these Regulations or, as necessary, any other enactment in respect of EIA development; and*
 - c) the steps that are required to be undertaken by the Secretary of State under regulation 21 or by the relevant authority under regulation 25, as appropriate.”*
- 1.4.2. EIA is not required for all developments. ‘Schedule 1’ developments of the EIA Regulations identifies development types that always require EIA. ‘Schedule 2’ developments identifies development types that require EIA if they are likely to lead to significant effects on the environment by virtue of factors such as their nature, size or location in accordance with Regulation 3(1). Schedule 3 of the EIA Regulations provides the selection criteria for reaching a conclusion on that judgement, a process known as ‘Screening’.
- 1.4.3. The Scheme falls under Schedule 2, under Paragraph 3(a) of Schedule 2 of the EIA Regulations as it constitutes ‘industrial installations for the production of electricity, steam and hot water’.
- 1.4.4. The Applicant has confirmed to the Planning Inspectorate under Regulation 8(1)(b) of the EIA Regulations that an ES will be provided with the DCO application for the Scheme (as required by Regulation 5(2)(a) of the Infrastructure Planning (Applications: Prescribed Forms and Procedure) Regulations 2009 [Ref. 1–3] (hereafter, the ‘APFP Regulations’).
- 1.4.5. The statutory requirements for carrying out an EIA and the contents of an ES are set out within the EIA Regulations.

Scoping

- 1.4.6. On 31 January 2023 the Applicant submitted an EIA Scoping Request to the Planning Inspectorate on behalf of the SoS. The issues that the Applicant considers

the EIA will need to address were identified in the Applicant EIA Scoping Report (see **ES Appendix 1.2 – Applicant EIA Scoping Report [Document Reference 6.3.1.2]**).

- 1.4.7. The Planning Inspectorate reviewed and consulted on the Applicant EIA Scoping Report and published an EIA Scoping Opinion on 13 March 2023 which included the formal responses received by the Planning Inspectorate and other consultees (see **ES Appendix 1.1 – Planning Inspectorate EIA Scoping Opinion [Document Reference 6.3.1.1]**). All issues raised in the EIA Scoping Opinion have been considered during the EIA process and are discussed in further detail in the ES Environmental Aspect Chapters (ES Volume 2).

EIA Process

- 1.4.8. An EIA is a process for identifying the likely significance of environmental effects (beneficial or adverse) arising from the Scheme, by comparing the existing environmental conditions prior to development (the baseline) with the environmental conditions during/following the construction, operational and decommissioning phases of a development should it proceed. An ES is a document that sets out the findings of an EIA.
- 1.4.9. The baseline for the EIA assessment has been derived from surveys and studies within and around the Order Limits. The ES includes a range of embedded mitigation (design measures incorporated into the Scheme) and has also considered measures to avoid, reduce, or mitigate any significant adverse effects on the environment and, where possible, enhance the environment. An assessment of the likely significant environmental effects is made assuming embedded mitigation is delivered. It has then identified 'residual' effects, which are defined as the effects that remain on receptors following the implementation of additional mitigation measures.
- 1.4.10. The potential for cumulative effects from the Scheme and other developments are also considered, as well as in-combination effects (multiple environmental effects from the Scheme combined to affect the same receptor or resource). The EIA is carried out prior to the submission of the DCO application. The methodology and approach of the EIA process is explained in detail at **ES Chapter 4 Approach to Environmental Impact Assessment [Document Reference 6.1.4]**.

1.5. Order Limits Location

- 1.5.1. The Scheme is located within the Yorkshire and Humber regions. The Scheme straddles the administrative boundaries of Doncaster Council and North Lincolnshire Council. At a local level, the Scheme is located on land east of Thorne; south of Tween Bridge Moors; west of Crowle; north and northwest of Sandtoft & Sandtoft Industrial Estate; north of Hatfield Moors; and northeast of Hatfield. The Scheme is located on land either side of the M180, High Level Banks (the A18) and the Stainforth and Keadby Canal.
- 1.5.2. The Order Limits, that forms the subject of this ES, extends to approximately 1831 hectares (ha) (4524 acres) of land, presented in **ES Figure 1.1 Order Limits [Document Reference 6.4.1.1]**.
- 1.5.3. The Order Limits is made up of five Land Parcels (described as Land Parcels A to E) as shown on **ES Figure 1.2 Land Parcel Plan [Document Reference 6.4.1.2]**. Each parcel is further described in **Table 1-1**.

Table 1-1: Land Parcels

Land Parcels	Location of Parcel	Area (hectares)
Land Parcel A	Land to the east of Thorne and north of the Stainforth & Keadby Canal.	569.96
Land Parcel B	Land to the west of Crowle and north of the Stainforth & Keadby Canal.	129.96
Land Parcel C	Land south of the Stainforth & Keadby Canal and north of the High Levels Bank (A18).	351.73
Land Parcel D	Land south of the High Levels Bank (A18) and north of the Hatfield Moors Nature Reserve.	335.83
Land Parcel E	Land south of the High Levels Bank (A18) and north of Sandtoft and the M180.	442.44

- 1.5.4. A breakdown of the Land Parcels into field development parcels within the Order Limits is shown on **ES Figure 1.3 Development Parcel Plan [Document Reference 6.4.1.3]** to assist with the identification of particular fields with Scheme in relation to the EIA findings.

1.6. Overview of the Scheme

Need for the Scheme

- 1.6.1. The Scheme would provide vital new energy infrastructure required to ensure security of supply to the UK, supporting the strategy of the DESNZ for responsible energy generation that provides a more sustainable, low carbon economy. It is anticipated that the Scheme could create renewable energy to power approximately 413,416 homes, with the intention of reducing carbon inputs into the atmosphere.
- 1.6.2. Solar power plays an important role in moving the UK away from its reliance on fossil fuels. The Scheme directly aligns with the Government's Critical National Priority (CNP) to deliver nationally significant low carbon infrastructure. Compliance with the Overarching National Policy Statement (NPS) for Energy (EN-1) and the NPS for Renewable Energy Infrastructure (EN-3) will be determined through examination.
- 1.6.3. The **Planning Statement [Document Reference 7.1]** demonstrates the clear need for the Scheme, as supported through national planning policy and energy strategy. The Scheme would contribute to the UK Government's legally binding target to reach net-zero emissions by 2050 and respond to the projected increase in demand for electricity, as well as improving UK energy security and resilience in line with national strategy.

The Scheme

- 1.6.4. The main element of the proposal is the construction, operation, maintenance and decommissioning of a ground mounted solar park and battery energy storage system (BESS) with an export/import connection. Once fully operational, the Scheme will export up to 800MW of electricity to the National Electricity Transmission System (NETS). Flexibility in panel layout design is required to

accommodate expected future technology developments as technology continues to evolve and become more efficient.

1.6.5. The Scheme may be constructed through a single continuous phase or in multiple phases. If the Scheme is constructed in single continuous phase, then an operational period of 40 years would be sought, and the entire Scheme would be decommissioned after an operational lifespan of 40 years. If the Scheme is constructed in phases, then each phase would be decommissioned after achieving its 40 years operational lifespan. The exception to this would be the RWE on-site 400kV Substation and its associated infrastructure whereby it would be built as part of the first phase of works and its decommissioning would be linked to the decommissioning of the final phase of the Scheme.

1.6.6. It is anticipated that the Scheme will include the following key components: –

- Ground-mounted solar PV generating station and associated mounting structures,
- On-site supporting equipment including inverters, transformers and switchgear,
- A BESS including batteries and associated enclosures, monitoring systems, air conditioning, electrical cable and fire safety infrastructure. The BESS is indicatively split into four separate 100MW compounds. Each 100MW compound would be located next to and connected to one of the seven on-site 132kV Substations,
- Seven on-site 132kV Substation compounds, including transformers, switchgear, circuit breakers, control equipment buildings, control functions, material storage, parking, as well as wider monitoring and maintenance equipment,
- Low voltage and 33kV interconnecting cabling to connect and transmit electricity from the solar PV modules and BESS to one of the seven on-site 132kV Substations,
- RWE on-site 400kV Substation,

- Underground 132kV interconnecting cabling to connect the seven on-site 132kV Substations to RWE on-site 400kV Substation,
- Underground 400kV interconnecting cabling from the RWE on-site 400kV substation to edge of Order Limits
- Associated infrastructure including access tracks, parking, CCTV, gates and fencing, lighting, drainage infrastructure, storage containers, earthworks, culverts, surface water management, maintenance and welfare facilities, security cabins and any other works identified as necessary to enable the development,
- Horizontal Directional Drilling for selected cable works where trenching or culvert is not possible or appropriate, including the canal, railway and the M180,
- Highways works to facilitate access for construction vehicles, comprising passing places where necessary to ensure that heavy goods vehicles (HGVs) can be safely accommodated amongst existing traffic, new or improved site accesses and visibility splays,
- Environmental mitigation and enhancement measures, including landscaping, habitat management and biodiversity enhancement,
- Permissive pathways and bird viewing gallery, and
- Temporary development during the construction phase of the Scheme including construction compounds, parking, temporary diversions of Public Rights of Way, and temporary access roadways to facilitate access to all parts of the Order Limits.

1.6.7. A further 400kV export connection cable will be required to connect the Scheme to the transmission network ("the 400kV export connection cable"). The point of connection will be a new National Grid Electricity Transmission (NGET) 400kV substation ("NGET 400kV Substation"), which is to be consented and delivered separately by NGET. As the location of the new NGET 400kV Substation is not yet known, it is not possible at this stage for the Applicant to identify and assess the potential route options for the 400kV export connection cable would take from the RWE on-site 400kV substation to the NGET 400kV substation. As it is not possible for the potential route options for the 400kV export connection cable

until the location of the NGET 400kV substation has been confirmed, the 400kV export connection cable and the NGET 400kV substation itself does not form part of the Scheme nor its accompanying Environmental Impact Assessment.

- 1.6.8. Subject to obtaining the necessary consents, construction of the Scheme is anticipated to commence at the earliest in 2028, and to be completed and the Scheme operational in 2032.
- 1.6.9. The Scheme is anticipated to be operational for a maximum of 40 years, at which point the decommissioning phase will commence (i.e., 2072).
- 1.6.10. Environmental impacts arising from the Scheme have been considered as part of the EIA process, and the results are presented within this ES. The baseline for the assessment has been derived from surveys and studies within and around the Order Limits. The general methodology for the EIA is explained further at **ES Chapter 4 Approach to Environmental Impact Assessment [Document Reference 6.1.4]** and in the methodology section of each ES Environmental Aspect Chapters (ES Volume 2).
- 1.6.11. The Scheme is described further in **ES Chapter 2 Scheme Description [Document Reference 6.1.2]** of this ES.

1.7. Structure and Contents of this ES

- 1.7.1. This ES comprises studies on each aspect of the environment that has been identified as likely to be significantly affected by the Scheme (the ES Environmental Aspect Chapters (ES Volume 2)), which are supported with Figures and Technical Appendices where appropriate.
- 1.7.2. The only exception to this structure is **ES Chapter 16 Other Environmental Topics [Document Reference 6.1.16]** which presents assessments relating to topics where no individual chapter was considered to be needed, due to the brevity of the assessment or the relatively small impact with regard to the Scheme.
- 1.7.3. The ES outlines the likely significant environmental effects identified, proposed 'embedded' and 'additional' mitigation and likely residual significant environmental effects (taking on board any additional mitigation proposed) based on the environmental baseline information and the indicative design of the Scheme.

1.7.4. This ES is structured as follows:

- Volume 1: ES Main Report (Introductory Chapters) – comprises the main volume of the ES, including ‘introductory chapters’ that describe the EIA context, provide a description of the Scheme, and set out the scope of the ES,
- Volume 2: ES Main Report (Environmental Aspect Chapters)– containing topic-by-topic environmental information, concluding with a summary and references/glossary.
- Volume 3: Appendices – comprises the technical appendices supporting the main ES Environmental Aspect Chapters including specialist reports and documentation providing relevant background and technical information. The Non-Technical Summary (NTS) is also submitted as an **ES Appendix 1.0 Non-Technical Summary [Document Reference 6.3.1.0]**. The NTS provides a concise summary of the ES identifying the likely significant environmental effects and the measures proposed to mitigate or to avoid adverse effects of the Scheme, written in non-technical language.
- Volume 4: Figures – includes all the figures that are referenced; however, some figures are integrated into the Environmental Aspect Chapters.

1.7.5. The ES includes a likely significant effect assessment across a range of Environmental Aspect Chapters and the structure of ES is detailed in **Table 1-2**.

Table 1-2 : Structure of ES

CHAPTER NUMBER	TITLE	RESPONSIBLE AUTHOR
0	Contents, Glossary and Abbreviations	Pegasus Group
1	Introduction	Pegasus Group
2	Scheme Description	Pegasus Group
3	Site Description, Site Selection and Iterative Design Process	Pegasus Group

4	Approach to Environmental Impact Assessment	Pegasus Group
5	Policy and Legislative Context	Pegasus Group
6	Landscape and Visual Impact	Pegasus Group
7	Ecology and Nature Conservation	Tyler Grange
8	Cultural Heritage and Archaeology	Pegasus Group
9	Ground Conditions	RSK
10	Water Resource	Pegasus Group
11	Socio Economic	Pegasus Group
12	Transport and Access	Pegasus Group
13	Noise and Vibration	Ion Acoustics
14	Air Quality and Greenhouse Gases	Air Quality Consultants
15	Agricultural Circumstances	Kernon Countryside Consultants
16	Other Environmental Topics <i>Major Accidents and Disasters</i> <i>Waste</i> <i>Electric and Electromagnetic Fields</i> <i>Climate Change Resilience and Adaptation</i> <i>Glint and Glare</i>	Pegasus Group lead Pager Power Air Quality Consultants
17	Cumulative Impacts	EIA Project Team

18	Summary	Pegasus Group
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- 1.7.6. For continuity, the figures and appendices are arranged and presented using the same reference numbers as the chapters as a means of providing supportive background and technical information.
- 1.7.7. **ES Appendix 4.1 – Schedule 4 Requirements of the Infrastructure Planning (Environmental Impact Assessment) Regulations 2017, as amended [Document Reference 6.3.4.1]** sets out information to be included in the ES and identifies where this information can be found within this ES.
- 1.7.8. A glossary and list of abbreviations for key terms used across the ES that are not topic specific are defined in **ES Chapter 0 Table of Contents, Glossary and Abbreviations [Document Reference 6.1.0]** of the ES. ES Environmental Aspect Chapters include a glossary and list of abbreviations relevant to the individual topic at the back of the chapters.
- 1.8. **The EIA Consultant Team**
- 1.8.1. The team responsible for the production of this ES has been coordinated and managed by Pegasus Group. Pegasus Group is accredited under the Institute of Environmental Management and Assessment (“IEMA”) ‘Quality Mark’ scheme which is a mark of excellence in EIA co-ordination and management. IEMA changed its name to ‘Institute of Sustainability and Environmental Professionals (ISEP)’ in July 2025. The guidance produced and referenced in this ES drafted by IEMA is still valid and has been used for this assessment. Pegasus Group have extensive experience of undertaking EIA work across a range of projects and development types. including energy and renewable energy schemes.
- 1.8.2. The consultants who have contributed to the preparation of this ES are set out in **Table 1-2** above.
- 1.8.3. Regulation 14(4)(a) of the EIA Regulations require that the ES is prepared by ‘competent experts’. A Statement of Competence setting out the relevant expertise of each of the topic authors is provided in **ES Appendix 1.3 – Statement of Competence [Document Reference 6.3.1.3]** of this ES.
- 1.9. **Availability of the ES and Comments**

- 1.9.1. Copies of the ES may be obtained via the contact details set out on the website of the Scheme (<https://tweenbridgesolar.co.uk/>) , the costs for which are set out below:
- Main Text and Technical Appendices – 0.35p per sheet to cover printing costs;
 - Non-Technical Summary (“NTS”) – £25; and
 - Digital copies of the above documents on a CD or pen drive – £15.
- 1.9.2. Postage is payable on all orders. For copies of any of the above please contact Pegasus Group (quoting reference P22-3484) at the following address:
- Pegasus Group – Bristol Office,
First Floor South Wing,
Equinox North,
Great Park Road,
Almondsbury,
Bristol,
BS32 4QL
- 1.9.3. The ES and other DCO application material will also be available to view on the National Infrastructure Planning Website – <http://infrastructure.planninginspectorate.gov.uk/>
- 1.9.4. The website is managed by the Planning Inspectorate, the Government agency responsible for examining applications for NSIPs.

1.10. References

- Ref. 1-1: HMSO (2008) The Planning Act 2008.
- Ref. 1-2: HMSO (2017) The Infrastructure Planning (Environmental Impact Assessment) Regulations 2017
- Ref. 1-3: HMSO (2009) Infrastructure Planning (Applications: Prescribed Forms and Procedure) Regulations 2009