



EAST PARK ENERGY

East Park Energy

EN010141

Preliminary Environmental Information Report Volume 1 – Main Report

**Chapter 4 – Environmental Impact Assessment
Methodology**

September 2024

Version 01

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Version	Date	Status
01	September 2024	PEIR

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4.0 ENVIRONMENTAL IMPACT ASSESSMENT METHODOLOGY

4.1 Introduction

4.1.1 This chapter of the Preliminary Environmental Information Report ('PEIR') sets out the approach to the Environmental Impact Assessment ('EIA'), providing an outline of the general structure to each PEIR Chapter and how this relates to the EIA process.

4.1.2 The core purpose of EIA is to assess the likely significant environmental effects (both adverse and beneficial) of the Scheme, which is an iterative and staged process. As the Scheme is a Nationally Significant Infrastructure Project ('NSIP'), the following are the key EIA reporting stages through to submission of the application for development consent:

- **EIA Screening** – depending on the scale of the development, EIA screening is undertaken to establish whether the development has the potential for significant environmental effects. The Applicant did not undertake EIA Screening but instead acknowledged that the Scheme has the potential for significant environmental effects, and therefore notified the Secretary of State of their intention to provide an Environmental Statement (ES) with the application for development consent.
- **EIA Scoping** – the scope of the EIA is consulted on with the Planning Inspectorate and statutory consultees including the Local Planning Authorities. An EIA Scoping Report was submitted to the Planning Inspectorate on 30 October 2023, with the Planning Inspectorate issuing their Scoping Opinion on 8th December 2023. The Scoping Opinion informs the scope of the EIA.
- **Preliminary Environmental Information** – the Applicant must prepare and consult on 'Preliminary Environmental Information' as part of a statutory consultation that includes prescribed statutory consultees and

members of the public. This PEIR presents the Applicant's Preliminary Environmental Information for the Scheme and takes the form of an early draft Environmental Statement (ES).

- **Environmental Statement** – the Applicant must submit an ES with the application for development consent which reports on the likely significant effects of the Scheme, along with any proposed mitigation to reduce effects. The ES is taken into account as part of decision-making on whether to grant the application for development consent.

4.1.3 In order to provide a consistent and robust assessment, each of the technical chapters presented within the PEIR follows the general structure set out as follows

- Introduction;
- Legislation, Policy, and Guidance;
- Assessment Methodology;
- Assumptions and Limitations;
- Stakeholder Engagement
- Baseline Conditions;
- Design, Embedded Mitigation, and Enhancement Measures
- Assessment of Likely Significant Effects;
- Additional Mitigation and Monitoring;
- Residual Effects; and
- Conclusions.

4.1.4 The introduction to each chapter will provide a statement outlining the relative expertise and qualifications of the specialist that has undertaken the assessment.

4.1.5 The PEIR has been prepared to satisfy the requirements of The Infrastructure Planning (Environmental Impact Assessment) Regulations 2017 (hereafter referred to as 'the EIA Regulations')¹.

4.1.6 Reference has been made to the Scoping Opinion received from the Secretary of State on 08 December 2023 (**PEIR Volume 2: Appendix 4-1**) and the advice contained within it regarding assessment methodology, topics and presentation of the PEIR, together with responses received through consultation.

4.1.7 In response to the Scoping Opinion, this PEIR includes assessments of the following topics:

- **PEIR Volume 1 Chapter 5:** Landscape and Visual;
- **PEIR Volume 1 Chapter 6:** Cultural Heritage and Archaeology;
- **PEIR Volume 1 Chapter 7:** Ecology and Nature Conservation;
- **PEIR Volume 1 Chapter 8:** Hydrology and Flood Risk;
- **PEIR Volume 1 Chapter 9:** Traffic and Transport;
- **PEIR Volume 1 Chapter 10:** Noise and Vibration;
- **PEIR Volume 1 Chapter 11:** Air Quality;
- **PEIR Volume 1 Chapter 12:** Ground Conditions;
- **PEIR Volume 1 Chapter 13:** Land and Soils;
- **PEIR Volume 1 Chapter 14:** Socio-Economics, Land Use and Tourism;
and
- **PEIR Volume 1 Chapter 15:** Climate Change.

4.1.8 The EIA Scoping Opinion concluded that several topics did not require a full chapter within the PEIR and ES. These topics are described in **PEIR Volume 1 Chapter 16:** Other Environmental Topics and include:

- Human Health;
- Waste;
- Major Accidents or Disasters; and
- Electromagnetic Fields.

4.1.9 **PEIR Volume 1 Chapter 17:** Cumulative and Intra-Project Effects provides an overview of the approach that will be taken to identifying the likely significant effects of the Scheme in combination with other emerging,

consented, or under-construction developments. In addition it considers the approach to identifying in-combination effects of the Scheme on receptor groups.

4.1.10 **PEIR Volume 1 Chapter 18:** Summary of Effects provides a tabulated summary of the likely residual significant effects of the Scheme, and a comparative summary of the differing effects of the Option 1 and Option 2 scenarios for the East Park BESS and East Park Substation (as set out in **PEIR Volume 1 Chapter 2**).

4.2 Consultation

4.2.1 The Applicant has been actively engaging with the Local Planning Authorities ('LPAs'), Statutory Environmental Bodies and other relevant stakeholders as part of the EIA process.

4.2.2 The Applicant has been holding monthly meetings with Planning Officers at Bedford Borough Council, Huntingdonshire District Council and Cambridgeshire County Council since November 2023 and is in the process of agreeing a Planning Performance Agreement ('PPA') that sets out the terms of current and future engagement with the LPAs through to submission of the application for development consent, and beyond.

4.2.3 A series of meetings have been held with other technical Officers at the LPAs covering the following topics:

- Highways and Public Rights of Way;
- Cultural Heritage;
- Archaeology;
- Environmental Health and Protection; and
- Ecology and Nature Conservation.

4.2.4 The Applicant has also been engaging with Historic England, Natural England, and the Environment Agency and where relevant a summary of the advice received is set out in individual chapters of this PEIR.

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- 4.2.5 Cambridgeshire Fire and Rescue Service (CFRS) were consulted in February 2024 in relation to the East Park BESS which would be located in either East Park Site C or Site D (both of which are in the CFRS response area).
- 4.2.6 The views of consultation bodies and the local community serve to focus the environmental studies and to identify specific issues that require further investigation, as well as to inform aspects of the design of the Scheme.
- 4.2.7 Consultation is an on-going process and the publication of this PEIR forms an important part of that process.

4.3 Approach to Assessment

- 4.3.1 This section sets out the approach taken within each technical chapter of the PEIR, under the headings used within each chapter.
- 4.3.2 In general, whilst preparing this PEIR, reference has been made to the following guidance:
- Planning Inspectorate Advice Note 3: EIA Consultation and Notification²;
 - Planning Inspectorate Advice Note 7: Environmental Impact Assessment Process, Preliminary Environmental Information and Environmental Statements³;
 - Planning Inspectorate Advice Note 9 Rochdale Envelope⁴; and
 - Planning Inspectorate Advice Note 17 Cumulative Effects Assessment⁵.

Legislation, Policy and Guidance

- 4.3.3 This section of each PEIR Chapter describes the legislation, planning policy and guidance relevant to the assessment of the topic area. This section is not intended to provide a comprehensive analysis of whether the Scheme would comply with legislative requirements and does not provide an appraisal of the Scheme against the planning policies identified. However, this section helps to inform the reader of the relevant documents which have informed the

approach to the assessment, and also the factors the decision maker will need to take into account when considering the acceptability of the Scheme.

Assessment Methodology

4.3.4 This section of each PEIR Chapter provides details of the assessment method followed and typically includes:

- A description of the study area used for the assessment;
- The approach taken to gathering of any desk-based or field data. Where specific surveys have been undertaken an outline of the survey methodology will be provided;
- The approach to the impact assessment. This includes how the particular topic has defined the sensitivity of environmental receptors, the magnitude of impacts, and how these relate to the overall level of effect and significance in EIA terms.

Rochdale Envelope and Scheme Parameters

4.3.5 As set out in ***PEIR Volume 1 Chapter 2***, it is necessary for the technical assessments to assess an ‘envelope’ within which the works will take place. As such, the EIA is based upon maximum and, where relevant, minimum parameters which are defined in Chapter 2. To remain in accordance with the EIA Regulations the parameters are as ‘limited’ as possible to ensure that the ‘likely significant effects’ are identified. These parameters are considered in detail in Chapter 2 and where necessary in the Assessment Methodology section of technical chapters to ensure the realistic worst-case effects of the Scheme are assessed for each potential receptor.

Temporal Scope - Assessment Years

4.3.6 The assessment of effects for each environmental topic is structured around the following phases:

- Construction Phase;

- Operational Phase; and
- Decommissioning Phase.

Construction Phase

- 4.3.7 It is assumed the Construction Phase will begin in Summer 2027 and take 30 months to complete, with a conclusion date of late 2029 or early 2030.
- 4.3.8 The effects of the Scheme during construction will vary depending on the activity being undertaken, with some construction activities expected to last longer than others. For example, the impact of laying access tracks during the enabling works will be relatively short, whilst the electrical works to install the solar arrays will persist over a longer period.
- 4.3.9 For most environmental topics, construction effects are generally considered to be short-term and lasting only for the duration of the Construction Phase, however for some topics the impact of particular construction activities could have long-term effects.

Operational Phase

- 4.3.10 It is assumed that the Scheme would be commissioned and become operational in 2030.
- 4.3.11 The effects of the Scheme once operational will be restricted to its operation, use, and maintenance of the equipment and landscaping.
- 4.3.12 For most environmental topics, operational effects are considered to be either short-term, medium-term, or long-term as follows:
- Short-term – a change typically persisting for less than three years;
 - Medium-term – a change typically persisting for between three and ten years; and
 - Long-term – a change typically persisting for more than ten years.

4.3.13 In addition, effects can be defined as reversible or permanent. Reversible effects are those which would end once the Operational Phase is complete, and the Scheme is decommissioned. Permanent effects are those which cannot be reversed.

Decommissioning Phase

4.3.14 The Scheme is being applied for on a temporary basis with a 40 year operational period. It is assumed that the Decommissioning Phase would commence in 2070 and take between 12 and 24 months to complete

4.3.15 The effects of the Scheme at decommissioning are similar in nature to the Construction Phase, although would be of a shorter duration and of less intensity. For example, removing the solar PV mounting structures at the Decommissioning Phase is a relatively straightforward and quick task compared to accurately piling them into the correct position during the Construction Phase.

4.3.16 For most environmental topics, decommissioning effects are generally considered to be short-term and lasting only for the duration of the Decommissioning Phase.

Spatial Scope – Geographical Area

4.3.17 The spatial scope or ‘study area’ of each assessment is set out in the relevant technical chapter, including the rationale for determining the study area. The study areas generally relate to the geographic area in which there is potential for a receptor to experience an impact.

Assumptions and Limitations

4.3.18 This section of each PEIR Chapter sets out any key assumptions and limitations to the assessment.

Stakeholder Engagement

- 4.3.19 This section of each PEIR chapter outlines any consultations undertaken to date and how the assessment chapter is being informed by the Scoping Opinion provided by the Planning Inspectorate.

Baseline Conditions

- 4.3.20 This section of each PEIR Chapter provides a description of the baseline conditions relevant to the topic being assessed. The baseline conditions have been established through consultation, collation and analysis of existing data sets and reports, and in some cases site-specific field data. The baseline identifies any sensitive receptors or resources that need to be evaluated in the assessment.
- 4.3.21 Each chapter provides an outline of the likely evolution of the baseline conditions without implementation of the Scheme. The ‘future baseline’ is then taken into account when assessing the likely effects of the project over its lifetime.

Design, Embedded Mitigation, and Enhancement Measures

Overview

- 4.3.22 This section of each PEIR Chapter provides a description of the relevant aspects of the design that have developed as part of the Scheme’s embedded mitigation.
- 4.3.23 It is a requirement of the EIA Regulations to describe the measures envisaged to avoid, reduce, remediate and where possible offset any significant effects on the environment. Whilst not a requirement of the EIA Regulations, mitigation measures which can include monitoring and enhancement can be used to reduce, avoid or offset any adverse effect, whether or not that effect is deemed to be ‘significant’ in EIA terms. This approach is often referred to

as the mitigation hierarchy with mitigation being selected as high up the hierarchy as possible:

- Avoid;
- Reduce;
- Remediate; and
- Offset / Compensate.

Embedded Mitigation

4.3.24 The purpose of embedded mitigation is to avoid or reduce potential significant effects as part of the design process. The embedded mitigation is considered to form an intrinsic part of the Scheme and has therefore been taken into account as part of the assessment of effects.

4.3.25 The design process began at the outset of the project through the site selection process, which is considered a first step in avoiding significant environmental effects where practicable, as set out in ***PEIR Volume 1 Chapter 3***.

4.3.26 A series of Design Objectives have been established from the outset of the project to guide decision making in relation to Scheme design, and to avoid or minimise the environmental impacts of the Scheme as far as practicable. These Design Objectives have evolved since the inception of the Scheme as an understanding of the project has also evolved, and in response to the EIA process. The Design Objectives are as follows:

- **Design Objective 1:** The Scheme will seek opportunities to deliver solar development as efficiently as practicable to support national electricity network decarbonisation targets;
- **Design Objective 2:** The Scheme will be sensitive to landscape and views, and how people perceive the landscape;

- **Design Objective 3:** The Scheme will be sensitive to heritage assets, looking to protect the most valuable assets that contribute to a sense of place;
- **Design Objective 4:** The Scheme will be sensitive to biodiversity, and look to provide enhancement where possible;
- **Design Objective 5:** The Scheme will be sensitive to the water environment, looking to avoid harm to watercourses and improve water quality where practicable;
- **Design Objective 6:** The Scheme will be sensitive to local amenity and human health; and
- **Design Objective 7:** The Scheme will seek opportunities to leave a positive legacy through the delivery of multiple social and environmental benefits.

4.3.27 Further detail on the Design Objectives will be set out in a Design Approach Document which will accompany the application for development consent, as well as in the ES.

4.3.28 It is assumed that standard best practice measures are incorporated as part of the construction, operation and decommissioning of the Scheme, and these are set out in the following documents:

- **PEIR Volume 2 Appendix 2-2:** Outline Landscape and Ecological Management Plan (oLEMP);
- **PEIR Volume 2 Appendix 2-3:** Outline Construction Environmental Management Plan (oCEMP);
- **PEIR Volume 2 Appendix 2-4:** Outline Operational Environmental Management Plan (oOEMP); and
- **PEIR Volume 2 Appendix 2-5:** Outline Decommissioning Environmental Management Plan (oDEMP).

4.3.29 Each of the above management plans will be developed into detailed documents once a contractor is appointed. The final management plans

would be in substantial accordance with the outline management plans, and will be a requirement of the DCO for submission and approval by the relevant planning authorities.

- 4.3.30 Further management plans that are considered embedded mitigation for the Scheme are identified in each PEIR Chapter as appropriate.
- 4.3.31 Where appropriate, enhancement measures have been identified which are not required as mitigation for the Scheme, but are environmental opportunities the Scheme will deliver to achieve additional benefits.

Assessment of Likely Significant Effects

- 4.3.32 This section of the chapter describes the likely significant environmental effects of the Scheme on the baseline conditions at the Site and the surrounding area relevant to the assessment topic. The assessment includes a description of the nature, extent and significance of these effects. The assessment of effects considers the construction, operational and decommissioning phases of the Scheme.
- 4.3.33 The EIA Regulations do not provide definitive methods for the assessment of significance and a variety of methods are employed within environmental statements. The method used to assess the effects is specific to each discipline. Where available and appropriate, the assessments follow impact assessment criteria and methodology set out by relevant professional institutions. Where such guidance is not available, or prescriptive methods are not set out by the relevant professional body, then assessment criteria are developed by the technical specialists to enable a clear and structured assessment to be undertaken.
- 4.3.34 The level of the effect is, in general, derived by considering the magnitude of the impact and the sensitivity of the receptor to a change resulting from the Scheme.

4.3.35 Depending on the discipline, there are several factors that need to be taken into account when establishing the type and magnitude of an impact, including:

- whether the impact is adverse or beneficial;
- whether it is temporary or permanent;
- extent or spatial scale of the impact;
- duration of the impact;
- whether the impact is reversible; and
- probability / likelihood of the impact.

4.3.36 Similarly, the sensitivity of a receptor is the function of several elements dependent on the discipline and effect being assessed, these could include:

- designation and legal status;
- quality;
- rarity; and
- ability to adapt to change.

4.3.37 Having established the magnitude of the impact and the sensitivity of the receptor, the level of the effect is then defined. For some disciplines, a matrix is used to classify the level of effect by correlating magnitude of impact and sensitivity. Where a matrix is to be used it will be set out within the relevant chapter and the levels of effect described.

4.3.38 Where a matrix is not used, the magnitude of impact and the sensitivity of the receptor is used to make a reasoned professional judgement to establish the level of the effect and whether it is considered to be significant or not significant. For some topics, e.g. ground conditions, an environmental risk assessment approach may be used to establish the potential environmental effects of the Scheme.

4.3.39 Where the findings of an assessment are set out as different levels of effect (e.g. major, moderate, minor, etc.) the assessment clearly sets out where an

effect is considered to be significant in EIA terms. This may vary between disciplines and the threshold is defined within each chapter of the PEIR.

- 4.3.40 In all instances, the assessments set out the basis of the judgements made so that the readers of the PEIR can understand the rationale of the assessment. In this sense, the PEIR clearly explains how likely significant effects are identified.

Additional Mitigation and Monitoring

- 4.3.41 As set out above, many of the mitigation measures associated with the Scheme have been incorporated into the design of the Scheme as embedded mitigation. Accordingly, they feature within the detailed scheme description of the PEIR and, where appropriate, are set out in the accompanying outline management plans and taken into account in the assessment undertaken.
- 4.3.42 Where additional mitigation or monitoring measures are proposed to prevent, reduce or offset adverse effects identified through the initial assessment and are unavoidable through design, these are described separately within this section of each chapter. Where such measures have been defined, an explanation is provided of how these measures will mitigate / reduce the identified effects of the Scheme.

Residual Effects

- 4.3.43 This section of each PEIR chapter provides a textual description of the likely residual effects of the Scheme following the implementation of any additional mitigation measures.

Conclusions

- 4.3.44 This section of each PEIR chapter provides a summary of the effects of the Scheme and any preliminary conclusions that can be drawn. Further work that will be completed and reported in the ES is identified for each topic.

4.4 Cumulative Effects

4.4.1 The EIA Regulations require that a description of the likely significant effects of the development on the environment be included in the ES, including cumulative effects.

4.4.2 Cumulative effects can occur in two distinct ways:

- **Intra-Project Effects** – where the environmental impacts of the Scheme can interact and combine to potentially increase the level of effect on a particular receptor; and
- **Cumulative Effects** – where the environmental impacts of the Scheme with other emerging or approved development could combine to potentially increase the level of effect on a particular receptor.

4.4.3 **Volume 1 Chapter 17** of this PEIR provides an overview of the approach that will be taken in the ES to the assessment of intra-project and cumulative effects.

4.5 Indirect Effects

4.5.1 In order to comply with Regulation 5(2) and Schedule 4 of the EIA Regulations¹, specifically in relation to the provision of a description of the likely significant direct and ‘*indirect*’ effects, the EIA process must consider the likely upstream and downstream effects of the Scheme. Upstream and downstream environmental impacts have been considered where:

- i) the impact would be an inevitable causation of the Scheme; and
- ii) the impact would give rise to likely significant effects that are capable of evidence-based meaningful assessment.

4.5.2 It is not considered likely that the Scheme would result in any such indirect upstream or downstream impacts that are an inevitable result of the Scheme and could give rise to significant effects.

4.5.3 Note that a reduction in UK greenhouse gas emissions as a result of the renewable electricity generated by the Scheme reducing the reliance on electricity generated from fossil fuel sources is treated as a direct impact of the Scheme, and is considered in ***Volume 1 Chapter 15 Climate Change***.

