Rosefield Solar Farm

Environmental Statement

Volume 1
Chapter 5: Approach to the EIA

APFP Regulation 5(2)(a)

Planning Act 2008

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

EN010158/APP/6.1
September 2025
Rosefield Energyfarm Limited

Table of Contents

5. Approach to the EIA

5.1. Introduction

5.1.1. An Environmental Impact Assessment (EIA) is a systematic process that examines the likely significant effects (beneficial or adverse) on the environment resulting from the construction, operation (including maintenance) and decommissioning of a proposed development. The findings of an EIA are presented in an Environmental Statement (ES), which is used to report to decision makers, consultees and stakeholders on the likely significant environmental effects of a development and helps the decision maker (in the case of a Development Consent Order, the Secretary of State) determine the application for consent.

5.1.2. The design of the Proposed Development, as presented in this ES, has been informed by the ongoing EIA process and consultation responses as detailed further within **ES Volume 1, Chapter 3: Proposed Development Description [EN010158/APP/6.1]** and **ES Volume 1, Chapter 4: Reasonable Alternatives Considered [EN010158/APP/6.1]** and within the **Consultation Report [EN010158/APP/5.1]** and **Design Approach Document [EN010158/APP/5.8]** submitted in support of the DCO Application.

5.1.3. This chapter is supported by the following figure and appendices presented in **ES Volume 3 [EN010158/APP/6.3]** and **ES Volume 4 [EN010158/APP/6.4]**:

- **Figure 5:1: Desk-based Study of Existing Utilities**;
- **Appendix 5.1: EIA Scoping Report**;
- **Appendix 5.2: EIA Scoping Opinion**;
- **Appendix 5.3: EIA Scoping Opinion Response Matrix**;
- **Appendix 5.4: Glint and Glare Assessment**;
- **Appendix 5.5: Health and Wellbeing Summary Statement**;
- **Appendix 5.6: EMF Assessment**; and
- **Appendix 5.7: Indicative Construction, Operation and Decommissioning Waste**.

5.2. Overview of the EIA process

5.2.1. The main stages of the EIA process are as follows:

- **EIA Screening**: Screening is undertaken to determine whether a proposed development constitutes ‘EIA Development’, particularly in

cases where there is uncertainty if a project requires an EIA to be undertaken. However, as detailed in **Section 1.4** of **ES Volume 1, Chapter 1: Background and Context [EN010158/APP/6.1]**, the Applicant recognises that the Proposed Development has the potential to give rise to significant environmental effects. Consequently, the Applicant notified the Secretary of State under Regulation 8(1)(b) of the Infrastructure Planning (Environmental Impact Assessment) Regulations 2017 (hereafter, the 'EIA Regulations') **[Ref. 5-1]** of its intention to prepare an ES in respect of the Proposed Development. Therefore, by virtue of Regulation 6(2)(a) of the EIA Regulations, the Proposed Development is considered 'EIA Development', requiring an EIA to be undertaken and an ES prepared. Accordingly, an EIA Screening Report was not required for the Proposed Development.

- **EIA Scoping**: EIA Scoping refers to the process of identifying the scope of the assessment for the development with the relevant decision maker (in the case of a DCO, the Planning Inspectorate on behalf of the Secretary of State). As detailed in **Section 5.5**, an EIA Scoping Report was prepared by the Applicant in respect of the Proposed Development and submitted to the Planning Inspectorate on 13 November 2023 and a Scoping Opinion was adopted by the Secretary of State on 21 December 2023.
- **Preliminary Environmental Information Report (PEIR)**: The PEIR, as stated in Regulation 12(2) of the EIA Regulations **[Ref. 5-1]**, sets out the preliminary environmental information for the Proposed Development. The purpose of the PEIR is to provide sufficient information to enable consultation bodies to develop an informed view of the likely significant environmental effects of the development being proposed. A PEIR was prepared by the Applicant and published as part of the Statutory Consultation which took place in September – December 2024. Following minor changes to the Proposed Development, a PEIR addendum was produced and issued as part of targeted consultation which was undertaken in June 2025.
- **Environmental Statement (ES)**: The ES presents the results of the EIA undertaken for the project and sets out the likely significant environmental effects that would result from the construction, operation (including maintenance), and/or the decommissioning of the project, alongside the proposed mitigation measures to avoid, prevent, reduce or, if possible, offset any identified significant adverse effects. An ES is submitted as part of an application for development consent and is taken into account during the decision-making process.

5.2.2. As part of ongoing assessments since the PEIR was published, a new significant inter-project cumulative landscape and visual effect has been identified. Specifically, this effect concerns the Local Character Area (LCA) 9.2, North Buckinghamshire Way, and the Midshires Way. Further detail is

presented in **ES Volume 2, Chapter 17: Cumulative Effects [EN010158/APP/6.2]**.

5.3. Assessment approach and guidance

5.3.1. The approach to EIA is in accordance with applicable legislation and guidance which has been tailored to each environmental factor of the EIA using industry standard methods and criteria, and professional opinion where appropriate. Further detail on the assessment approach and methodology applied to each environmental factor assessment is presented within the respective environmental factor assessment chapters provided in **ES Volume 2, Chapters 6 - 17 [EN010158/APP/6.2]**.

5.3.2. This ES has been prepared to satisfy the requirements of the EIA Regulations **[Ref. 5-1]**. In preparing this ES, reference has been made to the following guidance:

- Nationally Significant Infrastructure Projects: Advice on the Preparation and Submission of Application Documents **[Ref. 5-2]**;
- Nationally Significant Infrastructure Projects: Advice on working with public bodies in the infrastructure planning process **[Ref. 5-3]**;
- Nationally Significant Infrastructure Projects - Advice Note Seven: Environmental Impact Assessment: process, preliminary environmental information and environmental statements **[Ref. 5-4]**;
- Nationally Significant Infrastructure Projects - Advice Note Nine: Rochdale Envelope **[Ref. 5-5]**;
- Nationally Significant Infrastructure Projects: Advice on Cumulative Effects Assessment **[Ref. 5-6]**;
- Nationally Significant Infrastructure Projects – Advice on Transboundary Impacts and Process **[Ref. 5-7]**;
- Nationally Significant Infrastructure Projects: Advice on Habitats Regulations Assessments **[Ref. 5-8]**;
- Nationally Significant Infrastructure Projects: Advice on the Water Framework Directive **[Ref. 5-9]**;
- Nationally Significant Infrastructure Projects: Advice on EIA Notification and Consultation **[Ref. 5-10]**;
- Nationally Significant Infrastructure Projects - Commitments Register **[Ref. 5-11]**;
- Nationally Significant Infrastructure Projects - Technical Advice Page for Scoping Solar Development **[Ref. 5-12]**;

- Ministry of Housing, Communities and Local Government. Planning Act 2008: Pre-application stage for Nationally Significant Infrastructure Projects (30 April 2024) **[Ref. 5-13]**; and
- Institute of Environmental Management and Assessment (IEMA) 'Environmental Impact Assessment Guide to Shaping Quality Development' (2015) **[Ref. 5-14]**.

5.4. Objectives of the EIA

5.4.1. The EIA aims to identify, assess, and mitigate the potential environmental effects and impacts that a proposed project may have before it is approved and implemented. The primary purpose of conducting an EIA is to ensure that projects are designed and managed in a way that minimises their negative impacts on the environment and promotes sustainable development. Furthermore, the EIA aims to:

- Set the relevant legal and planning policy framework;
- Document the consultation and engagement process that has informed the EIA;
- Outline any reasonable alternatives considered;
- Establish baseline environmental conditions at the site and within the surrounding area;
- Identify, predict and assess the environmental effects associated with the proposed project: beneficial and adverse; permanent and temporary; direct and indirect and short/medium/long term; significant or not significant;
- Identify, predict and qualitatively assess the cumulative effects of the proposed project, including those associated with other existing development and/or approved development(s);
- Identify suitable mitigation measures to avoid, prevent, reduce or, if possible, offset likely significant adverse effects on the environment and identify the likely significant residual effects following the implementation of these measures; and
- Identify monitoring measures where likely significant residual adverse effects are identified.

5.5. EIA scoping

5.5.1. EIA Scoping is the process of identifying the environmental factors to be considered within the ES and establishing the receptors/matters that will comprise the scope of the assessment. The Applicant submits an EIA Scoping Report setting out a description of the proposed project and an explanation of the likely significant effects of the project on the

environment and requests that the Secretary of State states in writing their opinion as to the scope and level of detail of the information to be provided in the ES. Although scoping is not a mandatory requirement under the EIA Regulations **[Ref. 5-1]**, it is recognised as a useful preliminary procedure which helps to identify the main effects that a development is likely to have on the environment, taking into account responses from prescribed consultees.

5.5.2. An EIA Scoping Report was prepared by the Applicant in respect of the Proposed Development and was submitted to the Planning Inspectorate on 13 November 2023, with a request for the Secretary of State to adopt a scoping opinion in relation to the Proposed Development. In considering the request for an EIA Scoping Opinion, the Secretary of State consulted with the relevant prescribed consultees under the EIA regime. The EIA Scoping Opinion was issued by the Planning Inspectorate on 21 December 2023. The EIA Scoping Report and Scoping Opinion are provided in **ES Volume 4, Appendix 5.1: EIA Scoping Report [EN010158/APP/6.4]** and **ES Volume 4, Appendix 5.2: EIA Scoping Opinion [EN010158/APP/6.4]**.

5.5.3. It should be noted that since **ES Volume 4, Appendix 5.1: EIA Scoping Report [EN010158/APP/6.4]** was submitted, the Nationally Significant Infrastructure Projects: Technical Advice Page for Scoping Solar Development **[Ref. 5-12]** has been published by the Planning Inspectorate. The Applicant acknowledges the new advice page and considers **ES Volume 4, Appendix 5.1: EIA Scoping Report [EN010158/APP/6.4]** to be consistent with it and the approach to supporting technical assessments in the ES.

5.5.4. A table outlining the EIA Scoping Opinion response and how the ES and other reports submitted in support of the DCO Application have addressed the matters raised within the response received is provided in **ES Volume 4, Appendix 5.3: EIA Scoping Opinion Response Matrix [EN010158/APP/6.4]**.

5.5.5. As EIA is an iterative process taking place alongside the design of the Proposed Development, the process of scoping the assessment has also been iterative. Engagement has been undertaken with stakeholders to clarify and inform the scope of the assessment and to agree any further work to be undertaken. A summary of the scope which has been assessed in this ES, having full regard to and reflecting the Scoping Opinion response, is presented in **Table 5.1** below.

Table 5.1: Summary of the scope of this ES

Environmental factor	Location within Volume 2 of this ES
Air quality	**ES Volume 2, Chapter 6 [EN010158/APP/6.2]**
Biodiversity	**ES Volume 2, Chapter 7 [EN010158/APP/6.2]**
Climate	**ES Volume 2, Chapter 8 [EN010158/APP/6.2]**
Cultural heritage	**ES Volume 2, Chapter 9 [EN010158/APP/6.2]**
Landscape and visual	**ES Volume 2, Chapter 10 [EN010158/APP/6.2]**
Land and groundwater	**ES Volume 2, Chapter 11 [EN010158/APP/6.2]**
Soil	**ES Volume 2, Chapter 12 [EN010158/APP/6.2]**
Noise and vibration	**ES Volume 2, Chapter 13 [EN010158/APP/6.2]**
Population	**ES Volume 2, Chapter 14 [EN010158/APP/6.2]**
Traffic and transport	**ES Volume 2, Chapter 15 [EN010158/APP/6.2]**
Water	**ES Volume 2, Chapter 16 [EN010158/APP/6.2]**
Cumulative effects	**ES Volume 2, Chapter 17 [EN010158/APP/6.2]**

5.5.6. The scope of each of the above assessments, including the elements that have been assessed and the key issues that have been raised in the Scoping Opinion response, are outlined within each environmental factor assessment chapter presented in **ES Volume 2, Chapters 6 - 17 [EN010158/APP/6.2]**.

5.5.7. The Planning Inspectorate has agreed (via the Scoping Opinion) that the following environmental factors/other environmental considerations can be

scoped out of the assessment. Justification for this agreement, and the approach taken, is presented below.

Glint and glare

5.5.8. Solar PV modules are specifically designed to absorb light rather than reflect it. Light reflecting from Solar PV modules results in the loss of energy output. Solar PV modules are dark in colour due to their anti-reflective coatings and are manufactured with low-iron, ultra-clear glass with specialised coatings and textures to enable maximum absorption. The combination of these factors significantly increases electrical energy production of the panels and at the same time significantly reduces reflected rays.

5.5.9. Whilst the Planning Inspectorate has agreed that glint and glare can be scoped out of the assessment, a glint and glare assessment has been undertaken, as presented in **ES Volume 4, Appendix 5.4: Glint and Glare Assessment [EN010158/APP/6.4]**. The Glint and Glare Assessment outlines the assessment methodology and the likely extent and distance of potential glint and glare. Mitigation to reduce the glint and glare impacts, in the form of planting, is embedded within the design and is presented in **Appendix 1 - Green and Blue Infrastructure Parameters** of the **Outline Landscape and Ecological Management Plan [EN010158/APP/7.6]**.

Heat and radiation

5.5.10. The Planning Inspectorate has agreed that heat and radiation can be scoped out of the assessment, on the basis that it is not anticipated that there would be any significant sources of heat or radiation during either construction, operation (including maintenance) or decommissioning. As required by **ES Volume 4. Appendix 5.2: EIA Scoping Opinion [EN010158/APP/5.4]**, **ES Volume 1, Chapter 3: Proposed Development Description [EN010158/APP/6.1]** outlines sources of heat and how this has been considered in the design. This includes the spacing of BESS containers to avoid overheating, inclusion of Heating, Ventilation and Air Conditioning (HVAC) systems within each BESS unit and inclusion of a separation distance of 0.5m to 1m between cables within the trench to avoid overheating. There are no identified sources of radiation within the Proposed Development.

Major accidents and disasters

5.5.11. The Planning Inspectorate has agreed that major accidents and disasters can be scoped out of the assessment, on the basis that by implementing recognised and approved safety legislation and regulation, no significant effects in relation to major accidents and disasters are anticipated during

the construction, operation (including maintenance) and decommissioning phases.

5.5.12. However, the impacts of major accidents and disasters are considered within the **BESS Plume Assessment Summary [EN010158/APP/7.13]**, **ES Volume 4, Appendix 5.4: Glint and Glare Assessment [EN010158/APP/6.4], ES Volume 4, Appendix 16.1: Flood Risk Assessment [EN010158/APP/6.4]**, and **ES Volume 2, Chapter 16: Water [EN010158/APP/6.2]**, with any relevant mitigation measures secured within the **Outline Construction Environmental Management Plan (Outline CEMP) [EN010158/APP/7.2]**, **Outline Operational Environmental Management Plan (Outline OEMP) [EN010158/APP/7.3], Outline Decommissioning Environmental Management Plan (Outline DEMP) [EN010158/APP/7.4]**and **Outline Battery Safety Management Plan [EN010158/APP/7.9]** which are submitted in support of the DCO Application.

Utilities

5.5.13. The Planning Inspectorate has agreed that utilities can be scoped out of the assessment, on the basis that further consultation will be carried out with the relevant utility companies and that the ES should set out the findings of the desk-based study and signpost to where any required mitigation measures are secured. The **Outline CEMP [EN010158/APP/7.2]** details additional mitigation measures to protect against interference with below ground utilities during construction. The Applicant would also expect to agree protective provisions with each utility owner, in order to ensure the DCO includes appropriate protections and restrictions on the Applicant's exercise of its powers, for the protection of utilities.

5.5.14. National Grid overhead lines cross the Site in Parcel 3. The Applicant is mindful that these may change location when the Proposed Development is due to be constructed. It is therefore stated that the appropriate buffer distances, in line with National Grid guidance, will be applied at that time to the detailed design. This is detailed within the Protective Provisions which are secured within the **Draft Development Consent Order (DCO) [EN010158/APP/3.1]**.

5.5.15. A desk-based study of existing utilities within the Order Limits has been undertaken as presented in **ES Volume 3, Figure 5.1: Desk-based Study of Existing Utilities [EN010158/APP/6.3]** and has informed the design of the Proposed Development.

Human health

5.5.16. The Planning Inspectorate has agreed that human health can be scoped out of the assessment, on the basis that the ES should clearly set out

potential impacts to human health from the Proposed Development during construction, operation (including maintenance) and decommissioning and cross-reference where impacts are considered and assessed within other relevant chapters of **ES Volume 1 [EN010158/APP/6.1]**, with any relevant mitigation measures secured within the **Outline CEMP [EN010158/APP/7.2]** which is submitted in support of the DCO Application.

5.5.17. **Table 5.2** sets out the potential impacts to human health from the Proposed Development during construction, operation (including maintenance), and decommissioning and references where these impacts are assessed within the ES. In addition and following feedback from Phase Two consultation, **ES Volume 4, Appendix 5.5: Health and Wellbeing Summary Statement [EN010158/APP/6.4]** has been produced to bring together these human health related aspects in one document to aid the reader.

Table 5.2: Potential human health impacts from the Proposed Development and where these are assessed in the ES

Environmental factor	Potential human health impacts	Where this matter is assessed
Air quality	During construction and decommissioning: • Temporary impacts on residents' wellbeing caused by respiratory conditions.	**ES Volume 2, Chapter 6: Air Quality [EN010158/APP/6.2]** **ES Volume 4, Appendix 5.5: Health and Wellbeing Summary Statement [EN010158/APP/6.4]**
Landscape and visual	During construction and decommissioning: • Impacts on the visual amenity of residents and users of the public right of way and minor road network, which can influence an individual's health and wellbeing; • Impacts on residents' amenity.	**ES Volume 2, Chapter 10: Landscape and Visual [EN010158/APP/6.2]** **ES Volume 4, Appendix 5.5: Health and Wellbeing Summary Statement [EN010158/APP/6.4]**
Noise and vibration	During construction and decommissioning:	**ES Volume 2, Chapter 13: Noise and Vibration [EN010158/APP/6.2]**

Environmental factor	Potential human health impacts	Where this matter is assessed
	• Impacts on residents' wellbeing.	**ES Volume 4, Appendix 5.5: Health and Wellbeing Summary Statement [EN010158/APP/6.4]**
Population	During operation (including maintenance): • Impacts on mental and physical health and wellbeing to users of the existing and new PRoW, new permissive paths and existing bridleways and diverted PRoW.	**ES Volume 2, Chapter 14: Population [EN010158/APP/6.2]** **ES Volume 4, Appendix 5.5: Health and Wellbeing Summary Statement [EN010158/APP/6.4]**
Traffic and transport	During construction and decommissioning: • Health and wellbeing impacts caused by disruption to amenity or safety (e.g. related to fear and intimidation on and by road users); • Health and wellbeing where community links and access to facilities and employment may be materially changed (i.e. via severance of communities, driver and passenger delay).	**ES Volume 2, Chapter 15: Transport and Access [EN010158/APP/6.2]** **ES Volume 4, Appendix 5.5: Health and Wellbeing Summary Statement [EN010158/APP/6.4]**
Glint and glare	During operation (including maintenance): • Nuisance to people living in nearby residential properties.	**ES Volume 4, Appendix 5.4: Glint and Glare Assessment [EN010158/APP/6.4]** **ES Volume 4, Appendix 5.5: Health and Wellbeing Statement [EN010158/APP/6.4]**

Electric, magnetic and electromagnetic fields (EMF)

5.5.18. The majority of underground cabling within the Site to facilitate the connection between the Solar PV modules, Balance of Solar System (BoSS), Satellite Collector Compounds, BESS and Rosefield Substation would be up to 132kV, apart from the section of 400kV underground cabling which would connect the Rosefield Substation to the National Grid East Claydon Substation. **ES Volume 4, Appendix 5.1: EIA Scoping Report [EN010158/APP/6.4]** proposed to scope out EMF as the 400kV underground cable that would be required to connect the Rosefield Substation and East Claydon Substation would be minimal in length. This approach was agreed within **ES Volume 4, Appendix 5.2: EIA Scoping Opinion [EN010158/APP/6.4]** on the basis that in-combination impacts with the overhead lines on human health should be considered and significant effects assessed where they are likely to occur.

5.5.19. The 400kV underground cabling would be buried within trenches, with each up to 2m in width and approximately 1.5m in depth and would be sited at a sufficient distance from the nearest sensitive receptors to not cause any impacts. This is designed in accordance with the relevant guidance (DECC Power Lines: Demonstrating compliance with EMF public exposure guidelines, A Voluntary Code of Practice 2012) **[Ref. 5-15].**

5.5.20. In accordance with the Technical Advice Page for Scoping Solar Development **[Ref. 5-12]**, a standalone EMF study has been undertaken and is presented in **ES Volume 4, Appendix 5.6: EMF Assessment [EN010158/APP/6.4]**. The study sets out the proposed siting zone for the cabling and includes an assessment of EMF for underground cabling and the Rosefield transformers. The assessment recommends a minimum clearance distance of 5m to human receptors relative to public exposure limits for magnetic and electric fields which is secured in the **Works Plans [EN010158/APP/2.3]** and concludes that there would be no effects to residential receptors.

Material assets and waste

5.5.21. As stated in **ES Volume 4, Appendix 5.2: EIA Scoping Opinion [EN010158/APP/6.4]**, the Planning Inspectorate requested that material assets and waste be scoped into the assessment and requested that the ES should confirm the cut and fill balance and include an assessment of the likely impact of component replacement and outline what measures, if any, would be put in place to ensure that these components are able to be diverted from the waste chain.

5.5.22. It is not intended that significant quantities of excavated arisings from the Site during construction (there are currently no demolition works proposed, for example), operation (including maintenance) or decommissioning will

be removed. There may, however, be a need to remove some soils from the Site for treatment or disposal, if found to be contaminated, as it is not practical to treat this on Site. However, this is unlikely to be required (refer to **ES Volume 2, Chapter 11: Land and Groundwater [EN010158/APP/6.2]**). Soil arisings will be balanced through a cut and fill exercise to retain volumes on Site and there is anticipated to a zero cut and fill balance (i.e. no material will need to be reused outside of the Site) as set out in **ES Volume 1, Chapter 3: Proposed Development Description [EN010158/APP/6.1]**. The detailed cut and fill balance for the Site will be developed during detailed design; however, any soil arisings from the relevelling works will be repurposed on the Site.

5.5.23. The proposed component replacement rates are outlined in **Table 3.23** of **ES Volume 1, Chapter 3: Proposed Development Description [EN010158/APP/6.1]** and these have been incorporated into the assessments contained within the ES. Mitigation measures to ensure that materials are diverted from landfill and undertaken in line with the waste hierarchy are detailed in and secured by the **Outline Site Waste Management Plan**, which forms **Appendix 1** of the **Outline CEMP [EN010158/APP/7.2]**.

5.5.24. Mitigation measures in relation to waste management are secured within the **Appendix 1 – Outline Site Waste Management Plan** of the **Outline CEMP [EN010158/APP/7.2]** which is secured as a Requirement in the **Draft DCO [EN010158/APP/3.1]**, which would also form the basis for mitigation measures for waste management for the operation (including maintenance) and decommissioning phases of the Proposed Development, as detailed in and secured by the **Outline OEMP [EN010158/APP/7.3]** and **Outline DEMP [EN010158/APP/7.4]** which are submitted in support of the DCO Application.

5.5.25. The Planning Inspectorate also requested that the ES should include estimates, by type and quantity, of expected residues and emissions and quantities and types of waste produced during the construction and operational phases in line with Schedule 4 of the EIA Regulations and assess the likely significant effects from decommissioning waste to the extent possible at the time of DCO Application submission.

5.5.26. **ES Volume 4, Appendix 5.7: Indicative Construction, Operation and Decommissioning Waste [EN010158/APP/6.4]** sets out the estimated quantities and types of waste produced during the construction, operation (including maintenance) and decommissioning phases. The indirect impacts and emissions associated with materials consumption are primarily assessed in the greenhouse gas emission assessment detailed in **ES Volume 2, Chapter 8: Climate [EN010158/APP/6.2]**, which considers lifecycle greenhouse gas emissions of materials (embodied carbon), off-site transportation, disposal of waste, and water consumption,

among other emissions sources. **Section 8.8** of **ES Volume 2, Chapter 8: Climate [EN010158/APP/6.2]** presents all assessed emissions sources aligned to the Royal Institute of Chartered Surveyors (2023) guidance. These indirect impacts have also been accounted for within **ES Volume 2, Chapter 13: Noise and Vibration [EN010158/APP/6.2]** and **ES Volume 2, Chapter 15: Transport and Access [EN010158/APP/6.2]**.

5.5.27. The indirect impacts of any off-site waste management facilities and material production facilities are (and where necessary, mitigated) under the planning and permitting regime for those sites and thus do not form part of an EIA for a development that uses such facilities for material supply or waste management.

5.5.28. During decommissioning, any material assets and waste will be removed and recycled or disposed of in accordance with good practice and all legislative requirements in force at the time. If items can be recycled, this will be the first choice. The impacts of waste during the decommissioning phase will be managed and mitigated through the use of the waste hierarchy and measures detailed in and secured by the **Outline DEMP [EN010158/APP/7.4]** and **Outline Site Waste Management Plan**, which forms **Appendix 1** of the **Outline CEMP [EN010158/APP/7.2]**. A detailed Site Waste Management Plan will be produced in substantial accordance with the **Outline Site Waste Management Plan** and will be prepared as part of the detailed Decommissioning Environmental Management Plan prior to the decommissioning of the Proposed Development. The detailed Decommissioning Environmental Management Plan will be discussed and agreed with the relevant planning authority at the time of decommissioning to ensure any impacts on waste arising at this stage are considered and mitigated.

5.5.29. The Applicant does not consider it possible to provide a meaningful quantitative assessment of decommissioning waste at this present time due to the uncertainty of future waste management measures and facilities. It is anticipated that further consideration of the potential waste at decommissioning will be a matter for the relevant consenting authority at the time and will be incorporated into the detailed Decommissioning Environmental Management Plan. During the operation (including maintenance) and decommissioning phases, the Applicant will engage with the relevant local authority to provide the anticipated quantities of waste for re-use, recycling and landfill, adopting the waste hierarchy and timings on when this waste would be produced as early as possible before each stage of the Proposed Development, once this is known to understand the capacities of recycling facilities in the region. With relevant mitigation to manage waste at decommissioning detailed in the **Outline Site Waste Management Plan**, which forms **Appendix 1** of the **Outline CEMP [EN010158/APP/7.2]** and is secured by the **Outline DEMP [EN010158/APP/7.4]**, it is anticipated that the majority of waste would be

diverted from landfill and transported and managed in line with best practice and legislation at the time; therefore, there is not anticipated to be a significant adverse effect on material assets and waste and the local regions landfill capacity.

5.5.30. It is anticipated (and based on evidence of other markets) that private sector waste companies will develop waste recycling facilities to respond to market demands. Current solar panel waste generation is low, so there is little demand for facilities, hence the limited available capacity presently and it is anticipated that future markets will be created to respond to this future demand. Therefore, it is expected that facilities which reuse, recycle, or recover end of-life solar panels will be developed as the quantities of this waste stream increase.

5.5.31. The Waste Electrical and Electronic Equipment (WEEE) Regulations place obligations on those who place solar panels on the market to finance the costs of collection, treatment, recovery and environmentally sound disposal at the end of their life; and the landfill tax and best practice (including the use of waste regulations) strongly incentivise reuse, recycling and recovery.

5.5.32. In light of the above and with the knowledge that there is anticipated to be no significant effects on material assets and waste due to the mitigation measures that are secured as part of the DCO Application and the level of detail present at this time, the Applicant has not presented material assets and waste as a standalone chapter of **ES Volume 2 [EN010158/APP/6.2]**.

5.6. Consultation and engagement

5.6.1. Consultation and engagement throughout the EIA process is essential for the development of a comprehensive and proportionate ES. The views of both the statutory and non-statutory consultees are valuable to ensure that the EIA prioritises specific issues with potential significant environmental effects and identifies areas requiring further investigation.

5.6.2. Consultation and engagement, as an ongoing process, facilitate the evolution of design, allowing the integration of both embedded and additional mitigation measures into the Proposed Development. This approach aims to minimise adverse environmental effects and optimise environmental benefits.

5.6.3. Early engagement with consultees has played a crucial role in influencing the design process of the Proposed Development and the preparation of the EIA. Where appropriate, targeted consultations have been conducted with relevant stakeholders to gather feedback and ensure that their inputs are integrated into the evolving design.

5.6.4. Consultation has been undertaken with the following stakeholders:

- Buckinghamshire Council;
- Host Parish Councils;
- The Planning Inspectorate;
- Historic England;
- National Trust;
- Natural England;
- Environment Agency;
- National Highways;
- Berks, Bucks and Oxon Wildlife Trust;
- Butterfly Conservation Trust Buckinghamshire;
- Ministry of Defence; and
- Buckinghamshire Fire and Rescue.

5.6.5. The response to consultation is included within the **Consultation Report [EN010158/APP/5.1]** and the stages of the development of the design to take into account consultation feedback are detailed within **ES Volume 1, Chapter 4: Reasonable Alternatives Considered [EN010158/APP/6.1]** and in the **Design Approach Document [EN010158/APP/5.8]** which is submitted in support of the DCO Application.

5.6.6. Details of specific consultation and engagement undertaken for each of the environmental factor assessments are presented in **ES Volume 2, Chapters 6 - 17 [EN010158/APP/6.2]**.

5.7. The EIA process

5.7.1. The method behind the EIA process generally considers the existing conditions of the area into which the development is being introduced (**the baseline**), providing a future baseline context for assessments where relevant, and makes reasonable worst case predictions of the likely change (**the impact – in terms of magnitude**) that may occur during construction, operation (including maintenance) and decommissioning. The predicted impact is considered in terms of key environmental and social aspects (**receptors**) present within the Site and surrounding area, and based on their sensitivity to change, the scale of the resulting change experienced by the receptor/resource (**the effect**) is then determined.

5.7.2. Any mitigation measures required to avoid, prevent, reduce or, if possible, offset adverse effects are then considered and assessed, with the resulting residual effect scale being determined as significant or not.

5.7.3. Effects resulting from the interaction and combination of different environmental residual (post-additional mitigation) effects from within the Proposed Development affecting a receptor (intra-project combined effects) and the combined residual (post-mitigation) effects of the Proposed Development and another project or projects on a single receptor/resource (inter-project cumulative effects) are also assessed.

5.7.4. All the likely effects of the Proposed Development are reported within an **Environmental Statement** – this document (**ES Volume 2 [EN010158/APP/6.2]**) in addition to **ES Volume 1 [EN010158/APP/6.1]**, **ES Volume 3 [EN010158/APP/6.3]** and **ES Volume 4 [EN010158/APP/6.4]**.

5.7.5. Each of the environmental factor assessment chapters (**ES Volume 2, Chapters 6 - 16 [EN010158/APP/6.2]**) follow the same structure for ease of reference, as outlined below:

- Introduction;
- Legislative framework, planning policy and guidance;
- Stakeholder engagement;
- Approach to identifying the scope of the assessment;
- Environmental baseline;
- Approach to the assessment;
- Mitigation embedded into the design;
- Assessment of likely effects (without additional mitigation);
- Additional mitigation;
- Assessment of residual effects (with additional mitigation);
- Opportunities for enhancement;
- Monitoring requirements;
- Difficulties and uncertainties;
- Summary; and
- References

Rochdale envelope and approach to flexibility

5.7.6. As outlined in **ES Volume 1, Chapter 3: Proposed Development Description [EN010158/APP/6.1]**, a Rochdale Envelope approach with minimum or maximum parameters is being used for the purposes of this EIA. This approach has been taken to allow for flexibility to accommodate changes in technological advancements at the time of construction.

5.7.7. Establishing the minimum/maximum parameters enables a robust and cautious assessment of likely significant effects, based on reasonable worst case scenarios, to be undertaken within this ES for environmental factors where the nature of the assessment requires a specific level of detail, such as minimum or maximum heights, massing, or noise levels. Thus, the assessment parameters form the basis of the assessment. The assessment parameters are detailed in the works descriptions detailed within **ES Volume 1, Chapter 3: Proposed Development Description [EN010158/APP/6.1]** and presented in full in the **Works Plans [EN010158/APP/2.3]**, **Design Commitments [EN010158/APP/5.9]**, **Streets, Rights of Way and Access Plans [EN010158/APP/2.4],** and **Outline Landscape and Ecological Management Plan [EN010158/APP/7.6]**. The following figures located in **ES Volume 3 [EN010158/APP/6.3]** have been produced to aid the reader in understanding the **Works Plans [EN010158/APP/2.3]** and support the EIA:

- **Figure 3.1: Height Parameters**;
- **Figure 3.5: Zonal Masterplan**;
- **Figure 3.8: Indicative Location of Primary and Secondary Construction Compounds**; and
- **Figure 3.9: Indicative Construction and Operational Access Parameters**.

5.7.8. The Proposed Development is packaged into numbered works, set out in **Schedule 1** of the **Draft DCO [EN010158/APP/3.1]** and explained in more detail in **ES Volume 1, Chapter 3: Proposed Development Description [EN010158/APP/6.1]**. The **Works Plans [EN010158/APP/2.3]** and **Figure 3.2: Height Parameters [EN010158/APP/6.3]** show the spatial extent to which each element of the Proposed Development can be located. Each environmental factor has assessed the minimum or maximum parameters (as appropriate) within the Rochdale Envelope as outlined in **ES Volume 3, Figure 3.5: Zonal Masterplan [EN010158/APP/6.3]** which aligns with the **Works Plans [EN010158/APP/2.3]** to determine the potential for significant effects. For some assessments contained within this ES, the worst case location for the element (for example, the closest point to the sensitive receptor), has been assessed. Further detail on the reasonable worst case approach for each environmental factor assessment is presented in **ES Volume 2, Chapters 6 - 16 [EN010158/APP/6.2]**.

5.7.9. The Applicant has sought a degree of flexibility in the DCO Application. How this has been approached for the assessment within this ES is set out in **Table 5.3** below.

Table 5.3: Flexibility retained in the DCO Application

Project element	Optionality
Solar PV modules	The area for Solar PV development is shown in light blue in **ES Volume 3, Figure 3.5: Zonal Masterplan [EN010158/APP/6.3]** and secured in the **Works Plans [EN010158/APP/2.3]**. Some of these areas overlap with Proposed Siting Areas for the Battery Energy Storage System (BESS), Collector Compounds and Rosefield Substation hence there is optionality within these areas; Solar PV modules may or may not occur within these areas depending on the exact location of the BESS, Collector Compounds and Rosefield Substation. The worst case extent of Solar PV development has been assessed and stated within the relevant environmental factor assessment chapters (**ES Volume 2, Chapters 6 – 16 [EN010158/APP/6.2]**).
Balance of Solar System	The location of the BoSS has not yet been defined. The BoSS will comprise locating the Inverter, Transformer and Switchgear equipment, independently outdoors, or within an enclosed Inverter and Transformer Station (ITS) located throughout the fields shown in light blue in **ES Volume 3, Figure 3.5: Zonal Masterplan [EN010158/APP/6.3]** and secured in the **Works Plans [EN010158/APP/2.3]**. Some of these areas overlap with Proposed Siting Areas for the BESS, Collector Compounds and Rosefield Substation - hence there is optionality within these areas; BoSS may or may not occur within these areas depending on the location of the BESS, Collector Compounds and Rosefield Substation. This ES assumes the BoSS to be located independently outdoors and that central inverters would be used, as this is considered to be the worst case scenario, unless outlined in the environmental factor assessment chapters (**ES Volume 2, Chapters 6 – 16 [EN010158/APP/6.2]**).
Satellite Collector Compounds	There are four fields that are considered suitable for the two Satellite Collector Compounds, as shown on **ES Volume 3, Figure 3.5: Zonal Masterplan [EN010158/APP/6.3]** and secured in the **Works Plans [EN010158/APP/2.3]**. However, it is anticipated that one Collector Compound would be required in both Parcel 1 and Parcel 2.

Project element	Optionality
	There is overlap between the Satellite Collector Compound in Parcel 2 and the BESS Proposed Siting Zone in the same location. It is assumed that the two Satellite Collector Compounds could be sited anywhere within the Proposed Siting Zone. One Satellite Collector Compound would be located in Field B23 (South) in Parcel 1 within the extent shown. One Satellite Collector Compound would be located in one of the below fields in Parcel 2: • Field D8 • Field D9 • Field D17 The reasonable worst-case location for each environmental factor assessment is outlined in **ES Volume 2, Chapters 6 – 16 [EN010158/APP/6.2]**.
Main Collector Compound	There are four fields that are considered suitable for the Main Collector Compound, which are located in Parcel 3, as outlined in **ES Volume 3, Figure 3.5: Zonal Masterplan** [**EN010158/APP/6.3]** and secured in the **Works Plans [EN010158/APP/2.3]**. • Field E11 • Field E22 • Field E21 • Field E20 The reasonable worst-case location for each environmental factor assessment is outlined in **ES Volume 2, Chapters 6 – 16 [EN010158/APP/6.2]**.
BESS	There are two fields (B8 and B9) that are considered suitable for the siting of the BESS, as outlined within **ES Volume 3, Figure 3.5: Zonal Masterplan** [**EN010158/APP/6.3]** and secured in the **Works Plans [EN010158/APP/2.3]**. The BESS is to be consolidated at a single location in Parcel 2 encompassing Fields D8 and/or D9. Since the final location of the BESS compound has not been fixed, both Fields D8 and D9 are being considered for the siting of the BESS.

Project element	Optionality
	The reasonable worst-case location for each environmental factor assessment is outlined in **ES Volume 2, Chapters 6 – 16 [EN010158/APP/6.2]**.
Rosefield Substation	A new single Rosefield Substation would be located within Parcel 3 across Fields E11 and E20 as indicated as 'Proposed siting zone for Rosefield Substation' (marked as S) on the **ES Volume 3, Figure 3.5: Zonal Masterplan** [**EN010158/APP/6.3]** and secured in the **Works Plans [EN010158/APP/2.3]**. There is overlap between the Main Collector Compound and Rosefield Substation in Parcel 3. The reasonable worst-case location for each environmental factor assessment is outlined in **ES Volume 2, Chapters 6 – 16 [EN010158/APP/6.2]**.
Main Construction Compounds	Eight fields are being considered for the locations of the three Main Construction Compounds, as indicated on the **ES Volume 3, Figure 3.8: Indicative Location of Primary and Secondary Construction Compounds [EN010158/APP/6.3]** and secured in the **Works Plans [EN010158/APP/2.3]**. It is anticipated that only one would be required within each Parcel. It is assumed that the three Main Construction Compounds could be sited anywhere within the Indicative Siting Zone. One Main Construction Compound would be located in either of the below fields in Parcel 1: • Field B23 (South) • Field B20 One Main Construction Compound would be located in either of the below fields in Parcel 2: • Field D7 • Field D8 • Field D9 One Main Construction Compound would be located in either of the below fields in Parcel 3: • Field E21 • Field E22

Project element	Optionality
	• Field E23 The reasonable worst-case location for each environmental factor assessment is outlined in **ES Volume 2, Chapters 6 – 16 [EN010158/APP/6.2]**.
Satellite Construction Compounds	Eight fields are currently being considered for the locations of the three Satellite Construction Compounds, as indicated on **ES Volume 3, Figure 3.8: Indicative Location of Primary and Secondary Construction Compounds** [**EN010158/APP/6.3]** and secured in the **Works Plans [EN010158/APP/2.3]**. It is anticipated that only one would be required in each Parcel. It is assumed that the three Satellite Construction Compounds could be sited anywhere within the Indicative Siting Zone. One Satellite Construction Compound would be located in either of the below fields in Parcel 1: • Field B3 • Field B6 • Field B7 • Field B10 One Satellite Construction Compound would be located in the below field in Parcel 2: • Field D27 One Satellite Construction Compound would be located in either of the below fields in Parcel 3: • Field E10 • Field E11 • Field E20 The reasonable worst-case field within each parcel for the Satellite Construction Compound and closest location within that field to the sensitive receptor has been assessed. The reasonable worst-case location for each environmental factor assessment is outlined in **ES Volume 2, Chapters 6 – 16 [EN010158/APP/6.2]**.

5.8. Defining the study area

5.8.1. Study areas have been defined individually for each environmental factor assessment, taking into account the geographic scope of the potential impacts relevant to that environmental factor and the information required to assess those impacts.

5.8.2. The proposed study areas for each environmental factor are described within **ES Volume 2, Chapters 6 - 16 [EN010158/APP/6.2]**.

5.8.3. These study areas have also been used to inform the zone of influence for the purposes of assessing cumulative effects, as detailed in **ES Volume 2, Chapter 17: Cumulative effects [EN010158/APP/6.2]**.

5.9. Establishing existing baseline conditions

5.9.1. The purpose of the EIA is to predict how environmental conditions may change as a result of the Proposed Development. The assessment of the magnitude of impact and then the resulting scale and nature of effect is undertaken against a reference condition, known as the baseline. The baseline represents the environmental condition of the Site and the surrounding area at the time of the assessment.

5.9.2. Baseline information (environmental characteristics and conditions) utilises desk-based existing information available at the time of the assessment, as well as new information either collected through surveys undertaken during the EIA process or additional information provided as part of the EIA Scoping and the consultation process. **ES Volume 2, Chapters 6 - 16 [EN010158/APP/6.2]** provide details of the current baseline conditions of the Site and surrounding area for each of the individual environmental factors.

5.9.3. For most environmental factor assessments, the baseline has been taken as the current conditions within the Site and the surrounding area, at the time of assessment (i.e. in the assessment year of 2025), although in defining the baseline conditions, data from preceding years may be used where the data remains relevant.

5.9.4. A summary of the baseline information is provided in **ES Volume 1, Chapter 2: Location of the Proposed Development [EN010158/APP/6.1]**. The reports detailing the results of baseline studies or surveys are provided within **ES Volume 4 [EN010158/APP/6.4]**.

5.10. Establishing future baseline conditions in the absence of the Proposed Development

5.10.1. Schedule 4(3) of the EIA Regulations **[Ref. 5-1]** requires consideration of the likely evolution of the current state of the environment (baseline

scenario) in the absence of the Proposed Development, as far as natural changes from the baseline scenario can be assessed with reasonable effort on the basis of the availability of environmental information and scientific knowledge (the 'future baseline'). Whilst there are limitations to the predictions that can be made about natural baseline conditions at a future point in time, reasonable effort has been made to characterise the future baseline in the absence of the Proposed Development in the assessment for each environmental factor. In addition, some assessments require projections to account for future change, such as traffic growth within the assessment of likely significant effects associated with the Proposed Development.

5.10.2. **ES Volume 2, Chapters 6 - 16 [EN010158/APP/6.2]** provide a description of the future baseline scenario and the data sources that have informed it (where relevant) for each environmental factor.

Assessment scenarios

5.10.3. The assessment scenarios considered for the Proposed Development are as follows:

- **Existing baseline (without Proposed Development)** - Reported at the time that the baseline data has been collected.
- **Future baseline (without the Proposed Development)** – For comparison with the construction phase, operation (including maintenance) phase, and decommissioning phase. It should be noted that without the Proposed Development, the Site would continue to be occupied for agricultural use.
- **Construction of the Proposed Development** – As presented in **ES Volume 1, Chapter 3: Proposed Development Description [EN010158/APP/6.1]**, construction is scheduled to commence in 2029 and run until 2031. Where relevant, environmental factor assessments have assessed the relevant 'worst case' construction scenario and where necessary, the relevant period or 'peak' of activity within the construction programme.
- **Operation (including maintenance) of the Proposed Development** – As presented in **ES Volume 1, Chapter 3: Proposed Development Description [EN010158/APP/6.1]**, it is assumed that the Proposed Development would be operational and maintained for a duration of 40 years from 2032 until 2072.
- **Decommissioning of the Proposed Development (where appropriate)** - As presented in **ES Volume 1, Chapter 3: Proposed Development Description [EN010158/APP/6.1]**, decommissioning activities would begin following the cessation of the operational

Proposed Development in 2073 and would take approximately 24 months and may be undertaken in phases.

5.10.4. The ES assumes that there would be a need to repair or replace components of the Proposed Development that fail or break during the operation (including maintenance) phase. It is anticipated that maintenance and servicing would include the inspection, removal, reconstruction, refurbishment or replacement of faulty or broken equipment, and adjusting and altering the components of the Proposed Development. These measures are set out in further detail within **ES Volume 1, Chapter 3: Proposed Development Description [EN010158/APP/6.1]**.

Assessment assumptions

5.10.5. Assumptions adopted in the evaluation of impacts for each environmental factor are reported in each of the environmental factor assessment chapters (**ES Volume 2, Chapters 6 - 16 [EN010158/APP/6.2]**). However, these assumptions are often implicit and rely on expert judgement. The principal assumptions that have been made, and any limitations that have been identified, in undertaking the EIA are set out below:

- Baseline conditions have been established from a variety of sources, including historical data and are accurate at the time of writing;
- It is assumed that information received from third parties is accurate, complete and up to date;
- Where detailed information has not been available, reasonable assumptions have been made, and have been clearly set out, based on experience of developments of similar type and scale to enable assessment of likely significant effects; and
- Other existing development and/or approved developments would be implemented substantially in accordance with information that is publicly available and subject to the same regulatory regimes and good practice management controls as this Proposed Development.

5.11. Embedded (primary) mitigation measures

5.11.1. Mitigation can be relied on to reduce potential significant environmental effects from the construction, operation (including maintenance) and/or the decommissioning of the Proposed Development. The sequential steps of the mitigation hierarchy are as follows:

- Avoidance: Measures taken to avoid creating impacts from the outset;
- Prevent: Measures taken to prevent impacts;

- Reduce: Measures taken to reduce the duration, intensity and extent of the impact if they cannot be avoided;
- Restoration: Measures taken to improve the environment following exposure to unavoidable impacts; and
- Offset: Measures taken to compensate for any residual impacts.

5.11.2. As part of the EIA, an iterative approach has been adopted where significant environmental effects have been avoided where possible through design refinements and iterations as detailed further within **ES Volume 1, Chapter 4: Reasonable Alternatives Considered [EN010158/APP/6.1]** and the **Design Approach Document [EN010158/APP/5.8]**. This approach also informed the initial selection process of the Order Limits as detailed in the **Site Selection Report** which forms **Appendix 1** to the **Planning Statement [EN010158/APP/5.7]**. Where adverse environmental effects were identified through early assessment work, opportunities to reduce or control impacts and effects have been identified and incorporated into the Proposed Development. In accordance with the Institute of Environmental Management and Assessment's (IEMA) 'Environmental Impact Assessment Guide to Shaping Quality Development' **[Ref. 5-14]**, this is known as 'primary' mitigation (hereafter referred to as 'embedded' mitigation). In addition, opportunities to enhance the beneficial environmental effects of the Proposed Development have also been sought and incorporated into the Proposed Development.

5.11.3. The Proposed Development has been through three stages of design development which has resulted in the identification of mitigation measures that have been embedded into the design and layout of the Proposed Development.

5.11.4. Project Principles have been developed through consultation and the various stages of masterplan iteration to provide the design narrative and design policy response, as detailed in the **Design Approach Document [EN010158/APP/5.8]**.

5.11.5. The Project Principles have informed the **Design Commitments [EN010158/APP/5.9]**, which will secure design mitigation and account for embedded mitigation identified through the EIA process.

5.11.6. For the purposes of this ES, embedded (primary) mitigation measures form part of the design of the Proposed Development.

5.11.7. The embedded (primary) mitigation measures relevant to each environmental factor are detailed in **ES Volume 2, Chapters 6 - 16 [EN010158/APP/6.2]**. The mechanism by which the measures are to be secured and implemented and the party responsible for their delivery is outlined within the **Design Commitments [EN010158/APP/5.9]**.

5.12. Assessment of likely effects (without additional mitigation)

5.12.1. The assessment of likely effects (without additional mitigation) presented in **ES Volume 2, Chapters 6 - 16 [EN010158/APP/6.2]** is a general commentary of the likely effects that could occur as a result of the construction, operation (including maintenance), and decommissioning of the Proposed Development, taking account of the embedded (primary) mitigation that forms part of the Proposed Development being assessed, but in the absence of any additional mitigation measures. This general commentary sets the scene for the potential need (or otherwise) for additional mitigation measures to be considered.

5.12.2. The assessment criteria discussed below has not been applied to the assessment of likely effects (without additional mitigation).

5.13. Additional (secondary and tertiary) mitigation measures and monitoring

5.13.1. In accordance with the IEMA 'Environmental Impact Assessment Guide to Shaping Quality Development' **[Ref. 5-14]**, additional (secondary and tertiary) mitigation describes actions that will require further activity in order to achieve the anticipated outcome, and measures that will be required regardless of any EIA, as it is imposed, for example, as a result of legislative requirements and/or standard sectoral practices. Examples of secondary mitigation include additional detailed design, for example to comply with proposed lighting limits or developing a travel plan for the Proposed Development. Examples of tertiary mitigation include considerate contractor's practices that manage activities which have potential nuisance effect (i.e. through the implementation of a Construction Environmental Management Plan).

5.13.2. Additional mitigation measures include the implementation of management plans as outlined below:

- Construction Environmental Management Plan;
- Operational Environmental Management Plan;
- Decommissioning Environmental Management Plan;
- Landscape and Ecological Management Plan;
- Construction Traffic Management Plan;
- Soil Management Plan;
- Public Rights of Way and Access Strategy;
- Battery Safety Management Plan; and
- Employment, Skills and Supply Chain Plan.

5.13.3. The above management plans are submitted in outline in support of the DCO Application.

5.13.4. Where likely significant adverse effects have been identified in the assessment, measures to avoid, prevent or reduce and, if possible, offset likely significant adverse effects on the environment are described. In accordance with the EIA Regulations **[Ref. 5-1]**, monitoring should be proposed (where appropriate) where significant adverse residual effects remain. In some cases, for instance where there is uncertainty over a residual effect, it may also be appropriate to implement monitoring.

5.13.5. Additional (secondary and tertiary) mitigation and monitoring measures are set out within **ES Volume 2, Chapters 6 - 16 [EN010158/APP/6.2]**. The mechanism by which the measures are to be secured and implemented and the party responsible for their delivery is outlined within the **Design Commitments [EN010158/APP/5.9]**.

5.14. Assessment of residual effects (with additional mitigation)

5.14.1. The EIA process requires the identification of the likely significant environmental effects of the Proposed Development. The general approach to the determining the assessment of likely significant effects is detailed further below.

5.14.2. However, it should be noted that not all environmental factor assessments follow this approach. Where this is the case, that is explained within the relevant environmental factor assessment chapter (**ES Volume 2, Chapters 6 - 16 [EN010158/APP/6.2]**).

Assessment criteria

5.14.3. The following criteria have been taken into account when determining significance for the purposes of the ES:

- The receptors/resources (natural and human) that would be affected and the pathways for such effects;
- The geographic importance, sensitivity or value of receptors/resources;
- The duration (short-term, medium-term or long-term); permanence (permanent or temporary) and changes in significance (increase or decrease);
- Reversibility - e.g. is the change reversible or irreversible, permanent or temporary;
- Environmental and health standards (e.g. local air quality standards) being threatened; and

- Feasibility and mechanisms for delivering mitigating measures, e.g. is there evidence of the ability to legally deliver the environmental assumptions which are the basis for the assessment.

5.14.4. The method for assessing the significance of effects varies between environmental factors and is derived from a variety of legislative requirements, technical guidance and the EIA Regulations **[Ref. 5-1]**, but in principle, this is based on the environmental sensitivity (or value/importance) of a receptor/resource that could be affected by the Proposed Development and the magnitude of change from the baseline conditions in order to derive the resultant effect.

Sensitivity/value/importance of receptors

5.14.5. Within **ES Volume 2, Chapters 6 - 16 [EN010158/APP/6.2]**, the ES has addressed the sensitive receptors associated with each environmental factor, considering their respective sensitivity/value/importance. This assessment is based on industry standards and guidance, quantifiable data, existing designations, and professional judgement where applicable and available.

Magnitude of impact (change)

5.14.6. The magnitude of impact or change is predicted as a deviation from the established baseline conditions, as a result of the construction, operation (including maintenance) and/or decommissioning of the Proposed Development. The magnitude of these impacts/changes is defined within **ES Volume 2, Chapters 6 - 16 [EN010158/APP/6.2]**, and has been determined, where available and appropriate, using quantifiable data, applicable national and international standards or limits and professional judgement.

5.14.7. The magnitude of impact/change identified is based on the peak potential magnitude of impact/change, representing the greatest likely magnitude of impact/change anticipated for a sensitive receptor (existing or proposed).

Significance of effects

5.14.8. The approach to assessing and assigning significance to an environmental effect is derived from a variety of sources including legislative requirements, topic-specific guidance, standards and codes of practice, the EIA Regulations **[Ref. 5-1]**, advice from statutory consultees and other stakeholders and the expert judgement of the team undertaking the EIA.

5.14.9. Determining the significance of effects has been undertaken using accepted industry standards and guidance and professional judgements that underpin the attribution of significance. Each effect has been assessed against the sensitivity/value/importance of the receptor and the

magnitude of impact/change. For most environmental factor assessments, where more than one effect classification exists for any given scenario (i.e. slight or moderate), professional judgement is used to assign a single effect classification.

5.14.10. Unless otherwise stated in the environmental factor assessment chapters (**ES Volume 2, Chapters 6 - 16 [EN010158/APP/6.2]**), effects that are classified as moderate or above are considered to be significant. Effects classified as slight or below are considered to be not significant.

5.14.11. Tables summarising the potential effects associated with each environmental factor, required mitigation measures and residual effects are provided at the end of each environmental factor assessment chapter (**ES Volume 2, Chapter 6 - 16 [EN010158/APP/6.2]**). The tables provide a clear distinction of the type of effect:

- Beneficial or adverse;
- Permanent or temporary;
- Direct or indirect;
- Short, medium or long-term;
- Secondary, cumulative or transboundary; and
- Significant or not significant.

5.15. Opportunities for environmental enhancement

5.15.1. Where the Applicant considers that opportunities for environmental enhancement exist, these are detailed within **ES Volume 2, Chapters 6 - 16 [EN010158/APP/6.2]**. However, in accordance with the EIA Regulations **[Ref. 5-1]**, any enhancement opportunities proposed have not been taken account of within the respective environmental factor assessments.

5.15.2. Opportunities for environmental enhancement are also detailed in the **Design Approach Document [EN010158/APP/5.8]** and **Planning Statement [EN010158/APP/5.7]**.

5.16. Cumulative effects

5.16.1. The approach taken to the assessment of cumulative effects is reported in **ES Volume 2, Chapter 17: Cumulative Effects [EN010158/APP/6.2]**.

5.16.2. Cumulative effects occur as a result of several actions on an environmental receptor which may overlap or act in combination. The following types of cumulative effects have been considered in accordance with the EIA Regulations **[Ref. 5-1]** and best practice guidance:

- **Intra-project combined effects** – the interaction and combination of different environmental residual (post-additional mitigation) effects from within the Proposed Development affecting a receptor; and
- **Inter-project cumulative effects** – the combined residual (post-mitigation) effects of the Proposed Development and 'other existing development and/or approved development' on a single receptor/resource.

5.17. Coordinated assessment with habitat regulations assessment and water framework directive

5.17.1. Whilst the over-arching objectives of EIA and Habitats Regulations Assessment are similar, the scope, level of detail and terminology used varies. As such, these processes have been undertaken separately. However, the scope presented within this ES has been developed to ensure that the needs of these processes have been considered to ensure a coordinated assessment compliant with Regulation 26 of the EIA Regulations **[Ref. 5-1]**.

5.17.2. The Conservation of Habitats and Species Regulations 2017 **[Ref. 5-16]** requires consenting authorities to decide whether or not a project may have a significant effect on a European designated site. This process is known as Habitats Regulations Assessment. The overarching aim of Habitats Regulations Assessment is to determine, in view of a site's conservation objectives and qualifying interests, whether a plan, either in isolation and/or in-combination with other plans or projects, is likely to have a significant effect on the integrity of a European designated site. A **HRA No Significant Effects Report [EN010158/APP/5.3]** has been produced which supports the DCO Application.

5.17.3. The Water Environment (Water Framework Directive) (England and Wales) Regulations 2017 **[Ref. 5-17]** aims to protect and enhance the quality of water in England and Wales. It has been agreed with the Environment Agency that a Water Framework Directive Assessment is not required for the Proposed Development as the Proposed Development would not have a significant effect on the Claydon Brook Water Framework Directive classified waterbody.

5.17.4. Further detail is included within **ES Volume 2, Chapter 16: Water [EN010158/APP/6.2]**.

5.18. References

- **Ref. 5-1:** UK Government. (2017a). The Infrastructure Planning (Environmental Impact Assessment) Regulations 2017. Available online: The Infrastructure Planning (Environmental Impact Assessment) Regulations 2017 (legislation.gov.uk)

- **Ref. 5-2:** Nationally Significant Infrastructure Projects: Advice on the Preparation and Submission of Application Documents (9 July 2025). Available online: https://www.gov.uk/guidance/nationally-significant-infrastructure-projects-advice-on-the-preparation-and-submission-of-application-documents
- **Ref. 5-3:** Nationally Significant Infrastructure Projects: Advice on working with public bodies in the infrastructure planning process (24 March 2025). Available online: https://www.gov.uk/guidance/nationally-significant-infrastructure-projects-advice-on-working-with-public-bodies-in-the-infrastructure-planning-process
- **Ref. 5-4:** Nationally Significant Infrastructure Projects - Advice Note Seven: Environmental Impact Assessment: process, preliminary environmental information and environmental statements (25 March 2025)Available online: https://www.gov.uk/government/publications/nationally-significant-infrastructure-projects-advice-note-seven-environmental-impact-assessment-process-preliminary-environmental-information-an
- **Ref. 5-5:** Nationally Significant Infrastructure Projects - Advice Note Nine: Rochdale Envelope (25 March 2025). Available online: https://www.gov.uk/government/publications/nationally-significant-infrastructure-projects-advice-note-nine-rochdale-envelope
- **Ref. 5-6:** Nationally Significant Infrastructure Projects: Advice on Cumulative Effects Assessment (25 March 2025). Available online: https://www.gov.uk/guidance/nationally-significant-infrastructure-projects-advice-on-cumulative-effects-assessment
- **Ref. 5-7:** Nationally Significant Infrastructure Projects – Advice on Transboundary Impacts and Process (25 March 2025). Available online: https://www.gov.uk/guidance/nationally-significant-infrastructure-projects-advice-on-transboundary-impacts-and-process
- **Ref. 5-8:** Nationally Significant Infrastructure Projects: Advice on Habitats Regulations Assessments (25 March 2025). Available online: https://www.gov.uk/guidance/nationally-significant-infrastructure-projects-advice-on-habitats-regulations-assessments
- **Ref. 5-9:** Nationally Significant Infrastructure Projects: Advice on the Water Framework Directive (25 March 2025). Available online: https://www.gov.uk/guidance/nationally-significant-infrastructure-projects-advice-on-the-water-framework-directive
- **Ref. 5-10:** Nationally Significant Infrastructure Projects: Advice on EIA Notification and Consultation (25 March 2025). Available online: https://www.gov.uk/guidance/nationally-significant-infrastructure-projects-advice-on-eia-notification-and-consultation

- **Ref. 5-11:** Nationally Significant Infrastructure Projects - Commitments Register (27 March 2025). Available online: https://www.gov.uk/guidance/nationally-significant-infrastructure-projects-commitments-register
- **Ref. 5-12:** Nationally Significant Infrastructure Projects - Technical Advice Page for Scoping Solar Development (27 March 2025). Available online: https://www.gov.uk/guidance/nationally-significant-infrastructure-projects-commitments-register
- **Ref. 5-13:** Ministry of Housing, Communities and Local Government. Planning Act 2008: Pre-application stage for Nationally Significant Infrastructure Projects (30 April 2024). Available online: https://www.gov.uk/guidance/planning-act-2008-pre-application-stage-for-nationally-significant-infrastructure-projects
- **Ref. 5-14:** Institute of Environmental Management and Assessment (IEMA) 'Environmental Impact Assessment Guide to Shaping Quality Development'. (2015). Available online: https://s3.eu-west-2.amazonaws.com/iema.net/documents/knowledge/policy/impact-assessment/iema_guidance_documents_eia_guide_to_shaping_quality_development_v7.pdf
- **Ref. 5-15:** Department of Energy and Climate Change. (2012). Demonstrating compliance with EMF public exposure guidelines: voluntary code of practice. Available online: https://www.gov.uk/government/publications/demonstrating-compliance-with-emf-public-exposure-guidelines-voluntary-code-of-practice
- **Ref. 5-16:** UK Government. (2017b). The Conservation of Habitats and Species Regulations 2017. Available online: https://www.legislation.gov.uk/uksi/2017/1012/contents/made
- **Ref. 5-17:** UK Government. (2017c). The Water Environment (Water Framework Directive) (England and Wales) Regulations 2017. Available online: https://www.legislation.gov.uk/uksi/2017/407/contents/made

Rosefield
Solar Farm

rosefieldsolarfarm.co.uk

Application Document Ref: EN010158/APP/6.1
Planning Inspectorate Scheme Ref: EN010158