Lime Down
Solar Park

Environmental Statement

Volume 1, Chapter 6: Environmental Impact Assessment Methodology

September 2025

Revision 1

Planning Inspectorate Reference: EN010168

Document Reference: APP/6.1

APFP Regulation 5(2)(a)

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6 EIA Methodology

6.1 Introduction

6.1.1 This chapter of the Environmental Statement (ES) sets out the process and methodology followed in the Environmental Impact Assessment (EIA) for the Scheme.

EIA Process

6.1.2 The EIA is the process undertaken to identify and evaluate the likely significant effects of a proposed development on the environment and to identify measures to mitigate or manage any significant negative effects. The EIA should be informed by consultation with statutory consultees, other interested bodies and members of the public. The purpose of identifying significant effects is to ensure decision makers are able to make an informed judgement on the environmental impacts of a proposal.

6.1.3 The key elements in EIA for a Nationally Significant Infrastructure Project (NSIP) are:

- Iterative project design, taking feedback from consultation and applying it to the development design process on an ongoing basis throughout the EIA process;
- Scoping and ongoing consultation, including consideration of responses and how these should be addressed as part of the EIA;
- Technical environmental impact assessments, including baseline studies, input to the design process, and identification of potential significant environmental effects;
- Consultation on the Preliminary Environmental Information Report (PEIR) which was published as part of the statutory consultation process; and
- Preparation and submission of the ES. Mitigation to be proposed where available and appropriate to reduce or prevent likely significant adverse effects.

6.1.4 Each of the technical assessments follows a systematic approach with the principal steps being:

- Description of baseline conditions;
- Identification of appropriate embedded mitigation measures, including design changes;
- Assessment of likely significant effects;

- Identification of appropriate additional mitigation and enhancement measures where likely significant effects are identified;
- Assessment of residual environmental effects that remain following application of additional mitigation and enhancement measures; and
- Assessment of cumulative effects (in-combination effects and cumulative effects) when considering the Scheme along with the potential effects of the Scheme and other identified developments.

Assessment Approach

6.1.5 The ES has been prepared to identify and evaluate the likely significant effects of the Scheme on the environment and to identify measures to mitigate or manage any significant negative effects. In turn this will help to ensure decision makers are able to make an informed judgement on the environmental impacts of the Scheme.

6.1.6 In preparing the ES, reference has been made to the following guidance:

- Nationally Significant Infrastructure Projects: Advice for Local Authorities (Ref 6-2);
- Nationally Significant Infrastructure Projects: Advice on EIA Notification and Consultation (Ref 6-3);
- Nationally Significant Infrastructure Projects - Advice Note Seven: Environmental Impact Assessment: process, preliminary environmental information and environmental statements (Ref 6-4);
- Nationally Significant Infrastructure Projects - Advice Note Nine: Rochdale Envelope (Ref 6-5);
- Nationally Significant Infrastructure Projects: Advice on Habitats Regulations Assessments (Ref 6-6);
- Nationally Significant Infrastructure Projects: Advice on working with public bodies in the infrastructure planning process (Ref 6-7);
- Nationally Significant Infrastructure Projects: Advice on Cumulative Effects Assessment (Ref 6-8);
- Nationally Significant Infrastructure Projects: Advice on the Water Framework Directive (Ref 6-9); and
- Guidelines for the Assessment of Indirect and Cumulative Impacts as well as Impact Interactions (Ref 6-10).

EIA Scoping

6.1.7 The aim of the scoping process is to identify key expected environmental issues at an early stage, to determine which elements of the Scheme are likely to result in likely significant effects on the environment and to establish the extent of survey and assessment requirements for the EIA.

6.1.8 The issues to be addressed within the ES were identified in the EIA Scoping Report (Ref 6-11) submitted to the Planning Inspectorate on 16 July 2024. The Planning Inspectorate reviewed and consulted on the EIA Scoping Report and adopted (on behalf of the Secretary of State) a Scoping Opinion (Ref 6-12) on 22 August 2024 which included formal responses received from consultees.

6.1.9 In response to the Scoping Opinion, the EIA and ES include assessments for the following environmental topics in **ES Volume 1 [EN010168/APP/6.1]**:

- **Chapter 7: Climate Change**;
- **Chapter 8: Landscape and Visual**;
- **Chapter 9: Ecology and Biodiversity**;
- **Chapter 10: Arboriculture**;
- **Chapter 11: Hydrology, Flood Risk and Drainage**;
- **Chapter 12: Cultural Heritage**;
- **Chapter 13: Transport and Access**;
- **Chapter 14: Noise and Vibration**;
- **Chapter 15: Air Quality**;
- **Chapter 16: Socio-Economics, Tourism and Recreation**;
- **Chapter 17: Soils and Agriculture**;
- **Chapter 18: Human Health**; and
- **Chapter 19: Ground Conditions**.

6.1.10 The EIA Scoping Report (Ref 6-11) concluded that several topics did not require a full chapter within the ES and, for most topics, this proportional approach was accepted by the Planning Inspectorate in their Scoping Opinion (Ref 6-12). These topics are not scoped out but rather the assessment undertaken is presented within a single chapter. These topics and information on potential impacts and effects are described in **ES Volume 1, Chapter 20: Other Environmental Matters [EN010168/APP/6.1]** which includes:

- Minerals;
- Materials and Waste;
- Telecommunications, Utilities and Television;
- Glint and Glare;
- Electromagnetic Fields; and
- Major Accidents and Disasters.

6.1.11 Paragraph 4 within Schedule 4 of the EIA Regulations (Ref 6-1) states that the ES should include *"a description of the factors […] likely to be significantly affected by the development: population, human health, biodiversity (for example fauna and flora), land (for example land take), soil (for example organic matter, erosion, compaction, sealing), water (for example hydromorphological changes, quantity and quality), air, climate (for example greenhouse gas emissions, impacts relevant to adaptation), material assets, cultural heritage, including architectural and archaeological aspects, and landscape".* These factors are addressed within the relevant chapters listed above.

Environmental Statement

6.1.12 The ES presents the outcomes of the following EIA activities:

- Establishing baseline conditions;
- Consultation with statutory and non-statutory consultees;
- Consideration of relevant local, regional and national planning policies, guidelines, and legislation relevant to the EIA;
- Consideration of technical standards for the development of effect significance criteria and specialist assessment methodologies;
- Identification of effects, design review and design change to reduce environmental effects;
- Review of secondary information, previous environmental studies, publicly available information and databases;
- Physical surveys and monitoring;
- Desk-top studies;
- Modelling and calculations, where the design is suitably well developed and/or sufficient data are available;
- Reporting of effects following implementation of mitigation;

- Production of construction, operation and decommissioning phase outline plans to secure the mitigation; and
- Reference to current guidance.

6.1.13 For ease of reference, each technical chapter (**ES Volume 1, Chapter 7** to **Chapter 19 [EN010168/APP/6.1]**) herein follows the same structure as outlined in **Table 6-1**, where practicable. Notable exceptions are the topic areas considered in **ES Volume 1, Chapter 20: Other Environmental Matters [EN010168/APP/6.1]**. Where required, technical chapters may also use additional headings to improve the clarity of reporting.

Table 6-1: Sections within each Technical Chapter in the ES and their Function

Section Heading	Section Function
Introduction	Outlines the content of the chapter and identifies chapters which should be read in conjunction, along with supporting figures and appendices.
Consultation	Sets out details of the Scoping Opinion (Ref 6-12) received from the Planning Inspectorate and consultation with consultees (which may be ongoing).
Legislation, Planning Policy and Guidance	Outlines legislation, policy and guidance relevant to the technical chapter. As required, cross-refers to topic-specific appendices which provide further information.
Assessment Assumptions and Limitations	Outlines the assumptions and limitations adopted (e.g. the information available at the time of writing).
Study Area	Defines the study area used in the assessment.
Assessment Methodology	Describes the methodology used in the assessment of the Scheme, in accordance with the latest and applicable technical guidance and consultant expertise.
Baseline Conditions	Describes the relevant baseline characteristics of the Order Limits and relevant Study Area i.e. existing conditions prior to the Scheme.
Potential Impacts	Provides a summary of the relevant potential impacts during the construction, operation and maintenance, and decommissioning phases.
Embedded Mitigation	Outlines relevant mitigation measures which have been identified and implemented as part of the design of the Scheme as well as standard industry practice. This is based on predicted impacts, through iterative assessment with the aim to reduce or prevent potential adverse impacts from the outset.
Assessment of Likely Impacts and Effects	Provides a summary of the likely effects during construction, operation and maintenance, and decommissioning of the Scheme, taking account of the embedded mitigation measures.
Additional Mitigation	Outlines any additional mitigation measures which may be required based on the outcome of the assessment.

Section Heading	Section Function
	These measures are only required if significant effects are identified in the assessment. These additional mitigations may include measures beyond industry standard controls, such as bespoke/site specific measures. Enhancement is described if additional measures are proposed that are not required to mitigate effects and benefit the Scheme. Alternatively, an explanation is provided if no additional mitigation or enhancement measures are proposed. Where relevant, proposed monitoring is also described.
Residual Effects and Conclusions	Provides a summary of the remaining likely effects taking account of the embedded mitigation, additional mitigation, and enhancement measures, where applicable.
Cumulative Assessment	Presents an assessment of the potential for cumulative effects between the Scheme and other proposed and identified developments (cumulative effects); along with the interaction and combination of different environmental discipline residual (post-additional mitigation) effects from within the Scheme affecting a single receptor (in-combination effects).
Summary and Conclusions	Describes the main findings of the chapter and may include any subsequent steps that follow.
References	Provides a list of sources of information referred to throughout the chapter.

6.2 Rochdale Envelope

6.2.1 As discussed in **ES Volume 1, Chapter 3: The Scheme [EN010168/APP/6.1]**, not all technical details have been determined at this stage and will not be until after the granting of the Development Consent Order (DCO). This is important as the technology for solar Photovoltaic (PV) and Battery Energy Storage Systems (BESS) continues to evolve. Therefore, maintaining flexibility to meet the changing demands of the UK market prior to Scheme construction enables the Applicant to adopt the most up to date technology at the point of commencement of development.

6.2.2 The 'Rochdale Envelope' approach has been applied within the ES to ensure a robust assessment of the likely significant environmental effects of the Scheme, in accordance with the Planning Inspectorate's Advice Note Nine: Using the Rochdale Envelope (Ref 6-5).

6.2.3 Additionally, Paragraph 4.3.18 of National Policy Statement EN-1 (Ref 6-13) states *"the Secretary of State should consider the worst-case impacts in its consideration of the application and consent, providing some flexibility in the consent to account for uncertainties in specific project details".*

6.2.4 Therefore, as is relevant for each technical discipline, the maximum (and where relevant, minimum) parameters for the elements where flexibility needs to be retained have been assessed under the Rochdale Envelope approach. The approach also recognises that the worst-case parameter for one technical assessment may differ from another, ensuring that worst case overall impacts are predicted. Each technical chapter (**ES Volume 1, Chapter 7** to **Chapter 20 [EN010168/APP/6.1]**) describes the parameters applied in relation to the relevant assessment.

6.3 Spatial Scope

6.3.1 The technical chapters (**ES Volume 1, Chapter 7** to **Chapter 20 [EN010168/APP/6.1]**) describe the spatial scope, including the rationale for determining the specific area within which the assessment is focussed. The Study Areas are a function of the nature of the impacts and the locations of potentially affected environmental resources or receptors. Justification for the spatial scope considered appropriate is documented in each technical chapter with figures for each Study Area presented in **ES Volume 2 [EN010168/APP/6.2]**, as appropriate.

6.4 Temporal Scope: Timescales and Assessment Years

Construction Phase Effects

6.4.1 For the purposes of the assessment, the construction phase effects are those effects that may result from activities during site preparation, enabling works, construction, and commissioning activities. This covers sources of effects such as construction traffic, noise and vibration from construction activities, dust generation, site runoff, mud on roads, risk of fuel/oil spillage, and the visual intrusion of plant and machinery on site. Some aspects of construction-related effects will last for longer than others. For example, impacts related to earth moving are likely to be relatively short in duration compared with the construction of energy infrastructure and landscaping activities.

Operation and Maintenance Phase Effects

6.4.2 Operation and maintenance effects are those that are associated with operation and maintenance activities during the generating lifetime of the Scheme. This includes the effects of the physical presence of the solar PV infrastructure, and its operation, use and maintenance. Timescales associated with these enduring effects are as follows:

- Short term – endures for up to 12 months;
- Medium term – endures for 1 to 5 years;
- Long term – endures for more than 5 years;

- Reversible Long-Term Effects – long-term effects, which endure throughout the 60 year operational lifetime of the Scheme, but which cease once the Scheme has been decommissioned; and
- Permanent Effects – effects which cannot be reversed following decommissioning.

6.4.3 Where the timescale of an enduring effect deviates from the above for topics, such as **ES Volume 1, Chapter 8: Landscape and Visual [EN010168/APP/6.1]**, this is discussed in the relevant technical chapter with the timescales for the effects for that topic clearly defined.

Decommissioning Phase Effects

6.4.4 Decommissioning effects are changes resulting from activities beginning and ending during the decommissioning phase. This covers sources of effects such as decommissioning site traffic, noise and vibration from decommissioning activities, dust generation, mud on roads, risk of fuel/oil spillage, and the visual intrusion of plant and machinery on site. Typically, decommissioning phase effects are similar in nature to the construction phase, although may be of shorter duration and of a lesser intensity.

Assessment Years

6.4.5 The assessment considers the environmental impacts of the Scheme at key stages in its construction and operation and maintenance phases and, as far as practicable, its decommissioning phase.

6.4.6 The 'existing baseline' date is 2023 to 2025 since this is the period in which the baseline studies for the EIA has been undertaken. Where relevant, ‘future baseline’ conditions are also predicted for each assessment scenario, whereby the conditions anticipated to prevail at a certain point in the future (assuming the Scheme does not progress) are identified for comparison with the predicted conditions with the Scheme. This can include the introduction of new receptors and resources into an area, or new development schemes that have the potential to change the baseline.

6.4.7 The assessment scenarios that are being considered for the purposes of the EIA and considered in the ES are as follows:

- Existing Baseline of 2023 to 2025. This is the principal baseline against which environmental effects will be assessed;
- Future Baseline (no development) in 2027-2029, which are the expected Scheme construction years;
- Construction in 2027-2029. The peak construction year for the purpose of the EIA is anticipated to be 2028. This assumes commencement of

construction in 2027 and that the Scheme is built out over a 24-month period. This is a likely worst case for traffic generation because it compresses the trip numbers into a shorter duration and represents the greatest impact on the highway network. A lengthened construction phase would spread out the trip numbers over a longer duration, likely resulting in lower traffic at any one point in time, and consequently lower air quality and noise impacts and, therefore, the likely worst-case scenario has been assessed within the ES. Where a compressed construction phase does not represent the worst case for some topics, this is discussed in the relevant technical chapter to ensure that worst-case effects scenarios for those topics have been determined;

- Operation and maintenance in 2029. This is expected to be the earliest date that the Scheme can be fully built out and operational; and
- Decommissioning in 2089. This would be the earliest year that decommissioning would commence based on the anticipated 60 year design life of the Scheme. Decommissioning is expected to take between 12 and 24 months and would be undertaken in phases.

6.4.8 A future year of 2044 is also considered for some specific topics to take account of the maturation of vegetation (i.e. 15 years after the operational assessment year), such as in the landscape and visual assessment. This is a requirement of the Landscape Institute guidelines (Ref 6-13) which are discussed further in **ES Volume 1, Chapter 8: Landscape and Visual [EN010168/APP/6.1]**. Other topics, such as **ES Volume 1, Chapter 16: Socio-Economics, Tourism and Recreation [EN010168/APP/6.1]**, present data for alternative future years as per their assessment methodologies.

6.5 Determining the Baseline Conditions

6.5.1 In order to predict the potential environmental effects of the Scheme, it is necessary to determine the environmental conditions that currently exist within the Order Limits and the surrounding area, in the absence of the Scheme. These are known as ‘baseline conditions’.

6.5.2 Detailed environmental baseline information has been collected and the methodology for the collection process is detailed within each technical chapter (**ES Volume 1, Chapter 7** to **Chapter 20 [EN010168/APP/6.1]**). Baseline information has been gathered from various sources, including:

- Online/digital resources;
- Data searches, for example EnviroCheck, Historic Environment Records (HER), Wiltshire and Swindon Biological Records Centre (WSBRC);

- Baseline site surveys;
- Environmental information submitted in support of other planning applications for developments in the vicinity of the Scheme; and
- Stakeholder engagement.

6.6 Design Development, Impact Avoidance and Mitigation

6.6.1 Regulation 14, Paragraph (2)(c) of the EIA Regulations (Ref 6-1) requires the ES to provide *"a description of any features of the proposed development, or measures envisaged in order to avoid, prevent or reduce and, if possible, offset likely significant adverse effects on the environment".* These are commonly referred to as mitigation measures.

6.6.2 Mitigation has been developed in accordance with the mitigation hierarchy as set out below:

- **Avoid or prevent**: in the first instance, mitigation will seek to avoid or prevent the adverse effect at source, for example, by routeing the Cable Route Corridor or siting the Solar PV Panels away from sensitive receptors;
- **Reduce**: if the effect is unavoidable, mitigation measures will be implemented which seek to reduce the significance of the effect, for example, the use of a noise barriers to reduce construction noise at nearby noise sensitive receptors; and
- **Offset**: if the effect can neither be avoided nor reduced, mitigation will seek to offset the effect through the implementation of compensatory mitigation, for example, habitat creation to replace any habitat losses.

6.6.3 The design process has been heavily influenced by the findings of early environmental appraisals and the EIA process. The Scheme has had several measures incorporated into the design to avoid or minimise environmental impacts, for example, through the appropriate routing and siting of infrastructure to avoid designated sensitive areas. The key aspects where the design has evolved are described in **ES Volume 1, Chapter 4: Alternatives and Design Evolution [EN010168/APP/6.1]**. These elements of design evolution include measures needed for legal compliance, as well as measures that implement the requirements of good practice guidance documents.

6.6.4 Once these measures are incorporated into the design, they are termed 'embedded mitigation'. Embedded mitigation relevant to the construction phase are described within each technical chapter (**ES Volume 1, Chapter 7** to **Chapter 20 [EN010168/APP/6.1]**). For the operation and

maintenance phase, such embedded mitigation will be represented primarily in the design but are also described in each technical chapter (**ES Volume 1, Chapter 7** to **Chapter 20 [EN010168/APP/6.1]**), where required/relevant. Embedded mitigation has therefore either been incorporated into the design from the outset or identified through the assessment process.

6.6.5 The embedded mitigation also includes good industry practices which are standard control measures that will be implemented during construction, operation and decommissioning, such as segregating waste materials to maximise recycling. These good industry practices are outlined along with design measures in-built into the design as part of the description of embedded mitigation in each technical chapter (**ES Volume 1, Chapter 7** to **Chapter 20 [EN010168/APP/6.1]**).

6.6.6 The assessment presented in the ES been undertaken on the basis that these embedded mitigations are incorporated into the design and construction, operation and maintenance, and decommissioning practices.

6.6.7 The below outline management plans have been produced and include the environmental management, mitigation and monitoring requirements for the construction, operation and maintenance, and decommissioning phases. These are secured through DCO requirements and will be developed into detailed plans by the appointed Contractor and agreed with the local planning authority following grant of the DCO and prior to the start of each phase of the Scheme. They will be 'live' documents and will be updated to reflect changes such as new legislation being issued or additional information becoming available.

6.6.8 Implementation of embedded mitigation relied upon in the assessment is secured in the DCO, including by ensuring the works described in the DCO are restricted to their corresponding works areas shown on the **Works Plan [EN010168/APP/2.3]**, DCO requirements requiring compliance of detailed design with the **Design Principles and Parameters [EN010168/APP/7.4]**, or through DCO requirements requiring compliance with a management strategy, plan, or requirement document.

6.6.9 Where likely significant effects are identified as part of the assessment, consideration has been given to any 'additional mitigation' over and above the embedded mitigation that may be required to mitigate any significant adverse effects. Additional mitigation is presented within each technical chapter (**ES Volume 1, Chapter 7** to **Chapter 20 [EN010168/APP/6.1]**), where required, and may include measures beyond industry standard controls such as bespoke/site specific measures like temporary fencing to prevent glint and glare until the vegetation planting has properly established, or monitoring measures which may trigger additional

remedial action to be implemented. The technical chapter also explains how the additional mitigation will be secured, for example via a specific DCO requirement or via a management plan, or document secured by a DCO requirement.

6.6.10 The residual effects (i.e. effects after the implementation of mitigation) have been identified and are presented in each technical chapter (**ES Volume 1, Chapter 7** to **Chapter 20 [EN010168/APP/6.1]**). Significant residual effects are also set out in **ES Volume 1, Chapter 22: Summary of Residual Effects [EN010168/APP/6.1]**.

6.6.11 Where relevant, enhancement measures have also been identified. Enhancement measures are not required to mitigate significant effects and are not factored into the determination of residual effects. They are further measures which would have additional beneficial outcomes should they be implemented.

Outline Construction Environmental Management Plan

6.6.12 The **Outline Construction Environmental Management Plan (CEMP) [EN010168/APP/7.11]** provides an outline within which the appointed Contractor(s) (including any sub-contractors or suppliers involved in the works) will plan, implement and deliver environmental management, mitigation and monitoring requirements (and implement any subsequent remedial actions required) during the construction phase. This will be developed into a detailed (or construction issue) CEMP by the appointed Contractor(s) and agreed with the local planning authority following grant of the DCO and prior to the start of construction.

Outline Operational Environmental Management Plan

6.6.13 The **Outline Operational Environmental Management Plan (OEMP) [EN010168/APP/7.12]** provides an outline within which the Applicant or Operator will plan, implement and deliver environmental management, mitigation and monitoring requirements (and implement any subsequent remedial actions required) during the operation and maintenance phase. This will be developed into a detailed OEMP by the appointed Contractor and agreed with the local planning authority following grant of the DCO and prior to the start of the operation and maintenance phase.

Outline Decommissioning Strategy

6.6.14 The **Outline Decommissioning Strategy [EN010168/APP/7.13]** provides an outline within which the appointed Contractor(s) (including any sub-contractors or suppliers involved in the works) will plan, implement and deliver environmental management, mitigation and monitoring requirements (and implement any subsequent remedial actions

required) during the decommissioning phase. This will be developed into a detailed Decommissioning Strategy by the appointed Contractor(s) and agreed with the local planning authority following grant of the DCO and prior to the start of the decommissioning phase.

6.7 Effect Significance Criteria

6.7.1 The evaluation of the significance of an effect is important as it is the significance that determines the resources that should be deployed in avoiding or mitigating a significant adverse effect, or conversely, the actual value of a beneficial effect. The overall environmental acceptability of the Scheme is a matter for the Secretary of State to determine, having considered, amongst other matters, the environmental information that is set out in the ES, including all likely beneficial and adverse environmental effects. Where it has not been possible to quantify effects, qualitative assessments will be undertaken, based on available knowledge and professional judgment. Where uncertainty exists, this will be noted in the relevant technical chapter (**ES Volume 1, Chapter 7** to **Chapter 20 [EN010168/APP/6.1]**) with valid assumptions made and/or a worst-case approach taken as appropriate.

6.7.2 The significance of residual effects will be determined by reference to criteria for each assessment. Specific effect significance criteria for each technical chapter (**ES Volume 1, Chapter 7** to **Chapter 20 [EN010168/APP/6.1]**) have been developed, giving due regard to the following:

- Extent and magnitude of the impact (i.e. the magnitude of change from the baseline condition) (described as High, Medium, Low, Negligible, Neutral);
- Effect duration (see Paragraph 6.4.2) and whether effects are temporary, reversible or permanent;
- Effect nature (whether direct or indirect, reversible or irreversible, beneficial or adverse);
- Whether the effect occurs in isolation, is cumulative or interacts with other effects;
- Performance against any relevant environmental quality standards;
- Sensitivity of the receptor (described as High, Medium, Low, Negligible); and
- Compatibility with environmental policies.

6.7.3 In order to provide for a consistent approach to the description of significance, a standard methodology is applied in instances where no specific criteria are required by technical guidance.

6.7.4 The methodology for determining sensitivity is assessed using the criteria set out in **Table 6-2**.

Table 6-2: Sensitivity Criteria

Sensitivity	Definition
High	The receptor or resource has little ability to absorb the change without fundamentally altering its present character or it is of international or national importance.
Medium	The receptor or resource has moderate capacity to absorb the change without significantly altering its present character or is of high and more than local (but not national or international) importance.
Low	The receptor or resource is tolerant of change without detrimental effect and is of low or local importance.
Negligible	The receptor or resource can accommodate change without material effect and is of limited importance.

6.7.5 The methodology for determining magnitude is assessed using the criteria set out in **Table 6-3**.

Table 6-3: Magnitude Criteria

Magnitude	Definition
High	The total loss or major change/substantial alteration to key elements/features of the baseline (pre-development) conditions, such that the post development character/composition/attributes will be fundamentally changed.
Medium	Loss or alteration to one or more key elements/features of the baseline conditions, such that post development character/composition/attributes of the baseline will be materially changed.
Low	A minor shift away from baseline condition. As change arising from the loss/alteration will be discernible/detectable but not material. The underlying character/composition/attributes of the baseline condition will be similar to the pre-development circumstances/situation.
Negligible	Very little change from baseline conditions. The change will be barely distinguishable and approximating to a non-change situation.
Neutral	No change from baseline conditions.

6.7.6 Each technical chapter (**ES Volume 1, Chapter 7** to **Chapter 20 [EN010168/APP/6.1]**) provides the criteria, including sources and

justifications, for quantifying the different categories of effect. Where practicable, this will be based upon quantitative and accepted criteria (for example, noise assessment guidelines), together with the use of value judgment and expert interpretation to establish to what extent an effect is environmentally significant. The general matrix to determine effects is shown in **Table 6-4**.

Table 6-4: Degrees of Significance

Magnitude of Impact	Sensitivity of Receptor			
	High	**Medium**	**Low**	**Negligible**
High	Major	Major/Moderate	Moderate	Minor
Medium	Major/Moderate	Moderate	Moderate/Minor	Negligible
Low	Moderate	Moderate/Minor	Negligible	Negligible
Negligible	Moderate/Minor	Negligible	Negligible	Negligible
Neutral	Neutral	Neutral	Neutral	Neutral

6.7.7 Following the classification of an effect, clear statements will be made within the technical chapters (**ES Volume 1, Chapter 7** to **Chapter 20 [EN010168/APP/6.1]**) as to whether that effect is significant or not significant. As a general rule, moderate effects or greater are considered to be significant (as shown by the shaded cells in **Table 6-4** above), whilst Moderate/Minor and below are considered to be not significant. However, professional judgement will be applied, including taking account of whether the effect is permanent or temporary, its duration/frequency, whether it is reversible, and/or its likelihood of occurrence.

6.7.8 Generic definitions for the classification of effects are provided in **Table 6-5**.

Table 6-5: Classification of Effects

Magnitude	Definition
Major	Major effects represent key factors in the decision-making process. Potentially associated with sites and features of national importance or likely to be important considerations at a regional or district scale. Major effects may relate to resources or features which are unique and which, if lost, cannot be replaced or relocated.
Moderate	Moderate effects, if adverse, are likely to be important at a local scale and on their own or in combination of other effects. Moderate effects could have a material influence in the decision-making process.
Minor	Minor effects may be raised as local issues and may be of relevance in the detailed design of the project but are unlikely to be critical in the decision-making process.

Magnitude	Definition
Negligible	Negligible effects are beneath levels of perception within normal bounds of variation or within the margin of forecasting error. Negligible effects are unlikely to influence the decision-making process, irrespective of other effects.
Neutral	Neutral effects are imperceptible and neither positively nor negatively affect the environment in a noticeable way. Neutral effects are unlikely to influence the decision-making process, irrespective of other effects.

6.7.9 Where mitigation measures are identified to eliminate, mitigate or reduce adverse impacts, these have either been incorporated into the design, translated into construction commitments, and/or operational or managerial standards/procedures. The ES identifies 'residual' effects which remain following the implementation of suitable mitigation measures and classify these in accordance with the effect classification terminology in **Table 6-5**.

6.7.10 It should be noted that some technical chapters (**ES Volume 1, Chapter 7** to **Chapter 20 [EN010168/APP/6.1]**) may utilise different criteria when undertaking assessments due to differences in industry accepted guidelines and specifications. Where this is the case, the technical chapter will discuss how the assessment methodology or classification of effects differs for the general EIA methodology as described in this section and provide justification.

Assessment of Construction and Decommissioning Effects

6.7.11 The assessment of construction and decommissioning effects have been undertaken based on existing knowledge, techniques and equipment. A 'reasonable worst-case' scenario has been used with respect to the construction and decommissioning methods, location (proximity to sensitive receptors), phasing and timing of activities as defined in **ES Volume 1 Chapter 3 The Scheme [EN010168/APP/6.1].**

6.7.12 As described above, the assessment of construction and decommissioning effects assumes the implementation of standard good practice measures, for example, the use of dust suppression measures on haul roads and using containers with 110% capacity to store fuel and other chemicals onsite. The purpose of this is to focus on the Scheme-specific effects. Construction and decommissioning assumptions, including what has been assumed in terms of good practice measures, are set out within each technical chapter (**ES Volume 1, Chapter 7** to **Chapter 20 [EN010168/APP/6.1]**), the **Outline CEMP [EN010168/APP/7.11]** and **Outline Decommissioning Strategy [EN010168/APP/7.13]**. Each technical chapter identifies and assesses

construction and decommissioning effects that are likely to remain after these mitigation measures are in place.

6.8 Interaction and Accumulation

6.8.1 In accordance with the Schedule 4, Paragraph 5 of the EIA Regulations (Ref 6-1) an assessment of 'cumulative effects' has been considered in the ES. These are effects result from incremental changes caused by other past, present, or reasonably foreseeable actions cumulatively with the Scheme.

6.8.2 For the cumulative impact assessment presented in the ES, two types of effect are considered:

- In-Combination effects: the combined effect of individual impacts from the Scheme, for example, where a single receptor is affected by noise and traffic disruption during the construction of the Scheme; and
- Cumulative Effects: the combined effects of other development scheme(s) which may interact cumulatively with the Scheme. The effects of these schemes may be insignificant on an individual basis, but cumulatively with the Scheme have a new or different likely significant effect (these are referred to as 'cumulative effects').

6.8.3 The assessment is based on the data available from other proposed and committed developments and associated information which is currently in the public domain.

6.8.4 **Volume 2, Figure 21-1: Location of Short List Cumulative Developments [EN010168/APP/6.2]** illustrates the location of other developments (cumulative developments) in the local area that have the potential to have cumulative effects with the Scheme.

6.8.5 Each of the technical chapters (**ES Volume 1, Chapter 7** to **Chapter 20 [EN010168/APP/6.1]**) contain an assessment of relevant cumulative effects. The identified residual cumulative effects for all topics are then summarised and presented in **ES Volume 1, Chapter 21: Cumulative and In-Combination Effects [EN010168/APP/6.1]**.

In-Combination Effects

6.8.6 A range of public sector and industry-led guidance is available on the approach to assessing and quantifying in-combination effects that lead to combined effects on sensitive receptors, but at present there is no single, agreed industry standard method. The European Commission (EC) has produced guidelines for assessing in-combination effects which *"are not intended to be formal or prescriptive but are designed to assist EIA*

practitioners in developing an approach which is appropriate to a project […]" (Ref 6-10).

6.8.7 The Applicant has reviewed these guidelines and has developed an approach which uses the defined residual effects of the Scheme to determine the potential for effect interactions to lead to combined effects.

6.8.8 The EIA assesses beneficial and adverse effects during construction, operation and maintenance, and decommissioning phases of the Scheme which are classified as being minor, moderate or major. Several effects on one receptor or receptor group could theoretically interact or combine to produce a combined significant overall effect.

6.8.9 Effects on receptors or receptor groups have been tabulated to identify the potential for in-combination effects and therefore any combined effects as presented in **ES Volume 1, Chapter 21: Cumulative and In-Combination Effects [EN010168/APP/6.1]**. Only adverse or beneficial residual effects classified as minor, moderate, or major have been considered in relation to potential in-combination effects. Residual effects classified as negligible are excluded from the assessment of the in-combination effects as, by virtue of their definition, are considered to be imperceptible effects to an environmental/socio-economic resource or receptor which would not have the potential to lead to in-combination effects.

Cumulative Effects

6.8.10 The Planning Inspectorate's Advice Note (Ref 6-8) on the assessment of cumulative effects identifies a four-stage approach. Adopting that approach, as appropriate, the Applicant's methodology for the assessment of cumulative effects is as follows.

Stage 1: Establish the NSIP's Zone of Influence and Identify Long List of 'Other Development'

6.8.11 A review of other developments has been undertaken, initially encompassing a Zone of Influence (ZoI) defined by relevant technical specialists in order to prepare a long list of 'other development' or 'cumulative developments'. The ZoI for each discipline is described in Table 21-4 of **ES Volume 1, Chapter 21: Cumulative and In-Combination Effects [EN010168/APP/6.1]**.

6.8.12 The list of other developments included in the assessment of cumulative effects (**ES Volume 3, Appendix 21-1: Long List of In-Combination Effects and Cumulative Developments [EN010168/APP/6.3]**) were reviewed and developed in consultation with Wiltshire Council.

6.8.13 Developments included in the long list have been identified using the following criteria. The criteria have been developed from Town and Country Planning (Development Management Procedure) (England) Order 2015 (Ref 6-14) definition of 'Major Development' and Planning Inspectorate Advice Note (Ref 6-8). Development involving any one or more of the following:

- The winning and working of minerals or the use of land for mineral working deposits;
- Waste development;
- The provision of dwellinghouses where:
  - The number of dwellinghouses to be provided is 10 or more; or
  - The development is to be carried out on a site having an area of 0.5 hectare (ha) or more and it is not known whether the development falls within Sub-paragraph (c)(i).
- The provision of a building or buildings where the floor space to be created by the development is 1,000 square metres or more;
- Development carried out on a site having an area of 1 ha or more; or
- Solar and battery storage development within the last 10 years.

6.8.14 The maximum ZoI for other developments meeting the above criteria was 10 km from the Order Limits. However, other Solar and BESS projects within Wiltshire, particularly those connecting to the Existing National Grid Melksham Substation have also been included. Further developments meeting the criteria in Potterne and Whitley have also been included.

Stage 2: Identify Shortlist of 'Other Development' for Cumulative Effects Assessment

6.8.15 At Stage 2, any developments of a nature or scale without the potential to result in likely significant cumulative effects were excluded.

6.8.16 The shortlist of cumulative developments is then identified based on the nature, scale and proximity of the proposed developments to the Scheme. The short-list comprises 41 schemes which are listed in **ES Volume 1, Chapter 21: Cumulative and In-Combination Effects [EN0101068/APP/6.1**] and shown on Figure 21-1.

Stage 3: Information Gathering

6.8.17 To inform the assessment, information relating to the other developments has been collected from appropriate sources (which may include the Local

Planning Authorities, the Planning Inspectorate or directly from the applicant/developer) and include, but are not limited to:

- Proposed design and location information;
- Proposed programme of demolition, construction, operation and maintenance, and/or decommissioning; and
- Environmental assessments that set out baseline data and effects arising from 'other developments'.

Stage 4: Assessment

6.8.18 The assessment of cumulative effects is contained within the technical chapters (**ES Volume 1, Chapter 7** to **Chapter 20 [EN0101068/APP/6.1]**) and a summary is presented in **ES Volume 1, Chapter 21: Cumulative and In-Combination Effects [EN0101068/APP/6.1]** which includes a list of developments considered to have the potential to generate a cumulative effect together with the Scheme.

6.8.19 The criteria for determining the significance of any cumulative effect is based upon:

- The duration of effect i.e. will it be temporary or permanent;
- The extent of effect e.g. the geographical area of an effect;
- The type of effect e.g. whether additive or synergistic;
- The frequency of the effect;
- The 'value' and resilience of the receptor affected; and
- The likely success of mitigation.

6.8.20 In reporting the overall significance of cumulative effects, it is appropriate to also acknowledge the relative contributions different developments make to a cumulative effect and carefully consider whether the cumulative effect is significant. For example, where a large-scale development is predicted to result in significant effects in its own right and a smaller proposed development would not have significant effects, the cumulative assessment should only conclude that there is a significant cumulative effect if the effect of both developments together is of greater significance than the larger development in isolation. Consequently, care has been taken not to simply propagate such effects as being cumulative, but rather to focus on the nature and scale to which genuine cumulative effects might result.

6.8.21 Full details regarding the likely significant cumulative effects is provided in each technical chapter (**ES Volume 1, Chapter 7** to **Chapter 20**

[EN0101068/APP/6.1]) and summarised in **ES Volume 1, Chapter 21: Cumulative and In-Combination Effects [EN0101068/APP/6.1]**.

6.9 References

Ref 6-1 The Infrastructure Planning (Environmental Impact Assessment) Regulations 2017 (as amended). Available at: https://www.legislation.gov.uk/uksi/2018/695/contents/made [Accessed 19 August 2025]

Ref 6-2 Planning Inspectorate (2024) Nationally Significant Infrastructure Projects: Advice for Local Authorities. Available at: https://www.gov.uk/guidance/nationally-significant-infrastructure-projects-advice-for-local-authorities [Accessed 19 August 2025]

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Ref 6-4 Planning Inspectorate (2020) Nationally Significant Infrastructure Projects - Advice Note Seven: Environmental Impact Assessment: process, preliminary environmental information and environmental statements. Available at: https://www.gov.uk/government/publications/nationally-significant-infrastructure-projects-advice-note-seven-environmental-impact-assessment-process-preliminary-environmental-information-an [Accessed 19 August 2025]

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Ref 6-6 Planning Inspectorate (2024) Nationally Significant Infrastructure Projects: Advice on Habitats Regulations Assessments. Available at: https://www.gov.uk/guidance/nationally-significant-infrastructure-projects-advice-on-habitats-regulations-assessments [Accessed 19 August 2025]

Ref 6-7 Planning Inspectorate (2024) Nationally Significant Infrastructure Projects: Advice on working with public bodies in the infrastructure planning process. Available at: https://www.gov.uk/guidance/nationally-significant-infrastructure-projects-advice-on-working-with-public-bodies-in-the-infrastructure-planning-process [Accessed 19 August 2025]

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https://www.gov.uk/guidance/nationally-significant-infrastructure-projects-advice-on-the-water-framework-directive [Accessed 19 August 2025]

Ref 6-10 European Commission (1999) Guidelines for the Assessment of Indirect and Cumulative Impacts as well as Impact Interactions. Available at: https://wayback.archive-it.org/12090/20151221014945/http://ec.europa.eu/environment/archives/eia/eia-studies-and-reports/pdf/guidel.pdf [Accessed 19 August 2025]

Ref 6-11 Lime Down Solar Park Limited (2024) Lime Down Solar Park EIA Scoping Report. Available at: https://infrastructure.planninginspectorate.gov.uk/wp-content/ipc/uploads/projects/EN010168/EN010168-000007-EN010168_LDSP_Scoping%20Main%20Report.pdf [Accessed 19 August 2025]

Ref 6-12 Planning Inspectorate (2024) Scoping Opinion: Proposed Lime Down Solar Park. Available at: https://infrastructure.planninginspectorate.gov.uk/wp-content/ipc/uploads/projects/EN010168/EN010168-000048-EN010168_Scoping%20Opinion%202017%20EIA%20Regs.pdf

Ref 6-13 Department for Energy Security and Net Zero (November 2023) Overarching National Policy Statement (EN-1). Available at: https://assets.publishing.service.gov.uk/media/65bbfbdc709fe1000f637052/overarching-nps-for-energy-en1.pdf

Ref 6-14 Landscape Institute and Institute of Environmental Management and Assessment (2013) Guidelines for Landscape and Visual Impact Assessment, 3rd Edition, Routledge, London.

Ref 6-15 HMSO (2015) Town and Country Planning (Development Management Procedure) (England) Order 2015. Available at: https://www.legislation.gov.uk/uksi/2015/595/contents