WHITESTONE SOLAR FARM

Volume 6: Environmental Statement

6.2 Chapter 2: EIA Methodology

Application Document ref. EN0110020/APP.6.2
Revision 01
June 2026

Planning Act (2008)
Infrastructure Planning (Applications: Prescribed Forms and Procedure) Regulations 2009
Regulations 5(2)(a)

whitestonesolarfarm.co.uk

Document Status					
Version	**Purpose of Document**	**Authored by**	**Reviewed by**	**Approved by**	**Review Date**
Rev01	DCO Submission	ERM	TLT, Pershing, DWD, Whitestone Net Zero Ltd	Whitestone Net Zero Ltd	1 June 2026

Approval for Issue		
Whitestone Net Zero Ltd	[redacted]	1 June 2026

The following report and supporting infographics have been produced by human authors. Artificial Intelligence (AI) has not been used to create or alter the technical meaning of these materials. ERM is technology-enabled and may use technology including AI in service delivery, in compliance with all laws applicable to it. Where AI has been used as an administrative support function, this has been appropriately validated by human authors.

ERM take full ownership and responsibility for the report, notwithstanding that ancillary technology (including AI tools) may have been used in service provision.

Prepared by:

ERM

Prepared for:

Whitestone Net Zero Ltd

Contents

Tables

Appendices (See ES Appendices [EN0110020/APP/6.20])

Appendix Number	Appendix Title
2.1	EIA Scoping Report
2.2	EIA Scoping Opinion
2.3	Commitments Register

Glossary

Term	Meaning
Cable Corridors	Corridors within which the high voltage cables would be constructed.
Draft Environmental Statement (ES)	The Draft Environmental Statement which presented the preliminary environmental information relating to the Proposed Development. The Draft ES was prepared to present information for statutory consultation in accordance with current EIA regulation.
EIA	A process, undertaken by the Applicant, of identifying and assessing the significant effects likely to arise from a project.
Environmental Statement (ES)	The Environmental Statement which presents the environmental information relating to the Proposed Development. The ES has been prepared to present information for formal consultation in accordance with current EIA regulation.
Rochdale Envelope Approach	An approach often used to accommodate flexibility in design for large scale infrastructure projects. This allows the assessments to address uncertainties for details which may not yet be known.
Scoping Opinion	The opinion in response from the relevant consenting authority to an EIA Scoping Report adopted by the Secretary of State on 3 June 2025 which sets out the aspects to be assessed within an EIA. Informed by consultation with relevant statutory bodies.

Term	Meaning
Study Area	The spatial extent within which environmental receptors may experience likely significant effects from the Proposed Development.
The Applicant	Whitestone Net Zero Ltd.
The Application	The Application submitted to the Secretary of State for Energy Security and Net Zero for a Development Consent Order.
The Proposed Development	The proposed Whitestone Solar Farm.
The Site	The land planned to be used for solar PV array and associated infrastructure, BESS, substations, and landscaping and habitat enhancement. The Site is split into W1, W2, and W3.
Whitestone 1	The northern parcels of the Whitestone Solar Farm.
Whitestone 2	The middle parcels of the Whitestone Solar Farm.
Whitestone 3	The southern parcels of the Whitestone Solar Farm.

Acronyms

Acronym	Meaning
BSMP	Battery Safety Management Plan
CDC	City of Doncaster Council
CEA	Cumulative Effects Assessment
CEMP	Construction Environmental Management Plan
CTMP	Construction Traffic Management Plan
DCC	Derbyshire County Council
DCO	Development Consent Order
DEMP	Decommissioning Environmental Management Plan
Draft ES	Draft Environmental Statement
EIA	Environmental Impact Assessment
EMS	Environmental Management System
ERM	Environmental Resources Management Ltd
ERP	Emergency Response Plan
ES	Environmental Statement
LEMP	Landscape and Ecology Management Plan
LPA	Local Planning Authority
LSE	Likely Significant Effects
NEDDC	North East Derbyshire District Council
NSIP	Nationally Significant Infrastructure Project
OEMP	Operational Environmental Management Plan
PRoW	Public Rights of Way
PRoWMP	Public Rights of Way Management Plan
RMBC	Rotherham Metropolitan Borough Council

Acronym	Meaning
SWDS	Surface Water Drainage Strategy
SYAS	South Yorkshire Archaeology Service
WSI	Written Scheme of Investigation
ZoI	Zone of Influence
W1	Whitestone 1
W2	Whitestone 2
W3	Whitestone 3

Units

Units	Meaning
km	Kilometres

2 EIA METHODOLOGY

2.1 Introduction

2.1.1 This Chapter of the Environmental Statement (ES) has been prepared by Environmental Resources Management Ltd (ERM) on behalf of Whitestone Net Zero Ltd (the Applicant) in relation to the proposed Whitestone Solar Farm (the Proposed Development). This Chapter describes the methodology that will be followed in undertaking the Environmental Impact Assessment (EIA) and the approach used to identify and assess environmental effects of the Proposed Development. It also sets out how the technical, spatial, and temporal scopes have been developed. Further details of individual topic specific methodologies are provided in **Chapters 6** to **17 [EN0110020/APP/6.6-6.17]** of this ES.

2.1.2 This Chapter is supported by the following documents in **ES Technical Appendices [EN0110020/APP/6.20]**:

- **Appendix 2.1: EIA Scoping Report**;
- **Appendix 2.2: EIA Scoping Opinion**; and
- **Appendix 2.3: Commitments Register**.

2.2 Overview of the Environmental Impact Assessment Process

Process

2.2.1 The EIA is a structured and systematic process used to identify, evaluate, and communicate the likely significant environmental effects of a development. Its core purpose is to ensure that these effects (both adverse and beneficial) are properly understood and considered by decision-makers before granting development consent. The EIA process supports informed decision-making and integrates environmental considerations into the planning and design of projects.

2.2.2 Consultation should occur throughout the EIA process and focus on receiving feedback, particularly from the decision-maker and statutory consultees, however, it can also include non-statutory consultees. The consultation process undertaken for this ES is detailed in Section 2.5 and broader Proposed Development consultation details are provided in the **Consultation Report [EN0110020/APP/5.1]** submitted with the Application.

2.2.3 EIA must be impartial and provide relevant information to decision-makers without promoting the project. It should also be used to facilitate, as far as possible, sustainable development. This is best done by using it as a tool to help inform the project evolution including its design, construction, operation, maintenance, and where relevant, decommissioning.

Legal and Regulatory Framework

2.2.4 The requirement for EIA is established under the European Council Directive 2011/92/EU (as amended by 2014/52/EU)[1], which has been transposed into

English law through the Infrastructure Planning (Environmental Impact Assessment) Regulations 2017[2] (as amended) (EIA Regulations). Under these regulations:

- Schedule 1 developments require a mandatory EIA; and
- Schedule 2 developments, such as the Proposed Development, require EIA if they are likely to have significant environmental effects as a result of their nature, size, or location.

2.2.5 The Proposed Development is a Schedule 2 development under paragraph 3(a) of the EIA Regulations – "*Industrial installations for the production of electricity, steam and hot water*". Given its potential for significant environmental effects, an EIA is required and has been undertaken accordingly.

Purpose and Scope of the EIA

2.2.6 The EIA is a structured process used to identify, predict, and assess the potential effects of the Proposed Development on the environment: beneficial and adverse; permanent and temporary; direct and indirect and short/medium/long term; Significant or Not Significant, before the project is approved and implemented. It also plays a critical role in determining suitable measures to avoid, reduce, or offset any adverse impacts. Selecting appropriate mitigation measures involves a careful analysis of the nature, scale, and likelihood of potential effects, as well as the feasibility and effectiveness of different mitigation options.

2.2.7 This process is informed by consultations with statutory consultees, relevant stakeholders, and the public, ensuring that a wide range of perspectives and local knowledge is considered. The aim of this ES is to equip decision makers with comprehensive, evidence-based insights so they can make informed judgments about the potential beneficial and / or adverse environmental impacts presented by the Proposed Development.

2.2.8 The key elements of the EIA process for a Nationally Significant Infrastructure Project (NSIP), such as the Proposed Development, include:

- Iterative project design, incorporating feedback from consultation into the evolving design throughout the EIA process;
- Scoping and ongoing consultation, considering consultation responses and addressing them as part of the assessment;
- Technical environmental assessments, including baseline studies, input into the design process, and identification of potentially significant environmental effects;
- Preparation and submission of a Draft ES (preliminary environmental information), followed by a period of Statutory Consultation; and
- Preparation and submission of the ES, including the proposal of mitigation measures, where appropriate, to avoid or reduce likely significant adverse effects.

Iterative Design and the Rochdale Envelope

2.2.9 A key feature of the EIA process is its iterative nature, where environmental findings inform the ongoing design of the Proposed Development. This approach

allows for the integration of mitigation measures early in the design process, helping to reduce or eliminate potential impacts.

2.2.10 Large scale developments often undergo significant design changes during the pre-application stage. Consequently, development design must remain adaptable to economic and technological shifts. The Planning Inspectorate acknowledges the importance of design evolution and flexibility, especially considering how pre-application and EIA consultations can positively influence the Proposed Development's design[3]. To maintain flexibility, the EIA has adopted the 'Rochdale Envelope' approach as described in **ES Volume 1, Chapter 5: The Proposed Development [EN0110020/APP/6.5].** This allows the Proposed Development to be assessed using a range of parameter values (e.g. worst-case scenarios), rather than fixed specifications. This ensures that the full range of potential environmental impacts is considered, even when some design details are not yet finalised. The Applicant has sought a degree of flexibility in the Application.

2.2.11 The **Works Plans [EN0110020/APP/2.3]** and the **Outline Design Parameters [EN0110020/APP/7.3]** show and describe the spatial extent within which each element of the Proposed Development could be located. Each environmental factor has assessed the minimum or maximum parameters (as appropriate) within the Rochdale Envelope to determine the potential for significant effects and identify suitable mitigation measures. For some assessments contained within this ES, the worst-case location for the element (for example, the closest point to the sensitive receptor[i]), has been assessed, unless stated otherwise in topic specific methodology.

Consultation and Engagement

2.2.12 The EIA process is informed by consultations with multiple stakeholders. It occurs at various stages and involves:

- Statutory consultees (e.g. local planning authorities, environmental agencies, etc.);
- Non-statutory bodies; and
- Members of the public.

Details of consultation undertaken in relation to the Proposed Development are provided in Section 2.5 and in the **Consultation Report [EN0110020/APP/5.1],** submitted as part of the Application.

2.3 EIA Scoping

2.3.1 The EIA Regulations allow an applicant to submit a request for a formal 'Scoping Opinion' from the relevant consenting authority. Having consulted with statutory environmental stakeholders, the consenting authority must issue a Scoping Opinion detailing what should be assessed in the ES. This should include the scope of environmental assessment to be undertaken and the methods that should be used.

[i] A sensitive receptor is a receptor that could be subject to significant effects as a result of the construction, operation (including maintenance) and/or decommissioning of the Proposed Development.

2.3.2 An EIA Scoping Report was submitted to the Planning Inspectorate on 23 April 2025. The Scoping Report (**ES Volume 3, Appendix 2.1: EIA Scoping Report [EN0110020/APP/6.20]**) set out the likely significant environmental effects of the Proposed Development and the aspects on which the ES would focus, including the proposed assessment methodology.

2.3.3 On 3 June 2025, the Planning Inspectorate (on behalf of the Secretary of State) issued their EIA Scoping Opinion, along with the responses from statutory consultees. The EIA Scoping Opinion from the Planning Inspectorate is included as **ES Volume 3, Appendix 2.2: EIA Scoping Opinion [EN0110020/APP/6.20]**. The Scoping Opinion has been considered within the ES, particularly the technical assessments in **ES Volume 2, Chapters 6-17 [EN0110020/APP/6.6]** to **[EN0110020/APP/6.17]**.

2.3.4 Where the consultation comments have resulted in inclusions to the technical assessment methodologies, these specific consultation details have also been included within the relevant sections in **ES Volume 2, Chapters 6 to 17 [EN0110020/APP/6.6]** to **[EN0110020/APP/6.17]**.

2.3.5 There are a number of environmental aspects which have been scoped out of the EIA, as agreed in the EIA Scoping Opinion. This is because it is considered that there can be no likely significant effects occurring to any receptor as a result of effects arising. The aspects scoped out of technical assessment are described in **ES Volume 2, Chapters 6-17 [EN0110020/APP/6.6]** to **[EN0110020/APP/6.17]**.

2.3.6 The consultee responses within the Scoping Opinion which are considered relevant to the overall EIA approach, methods, and content are provided in **Table 2.1**, which also sets out how they are addressed in this ES.

Table 2.1: Planning Inspectorate's Scoping Opinion

Consultee	Issue Raised	How This is Addressed	Where This is Addressed in the ES
The Planning Inspectorate (2.1.2)	*"The Inspectorate notes that some of the study areas presented in the Scoping Report have been determined in relation to the array areas only and do not account for impacts from the cable route corridors e.g. Biodiversity and Nature Conservation. The ES should present the study areas in relation to potential impacts for the whole of the development."*	The Study Areas for each technical assessment have been described in the relevant chapter and consider the Cable Corridors where appropriate.	**ES Volume 2, Chapters 6-17 [EN0110020/APP/6.6-6.17]**.
The Planning Inspectorate (2.1.3)	*"The ES should appropriately characterise the baseline environment of the cable corridors and their associated study areas and identify sensitive receptors, providing any agreement on the scope of surveys with consultees where relevant. An assessment of likely significant effects (LSE) from construction, operation and decommissioning of the cable corridors should be provided for the relevant aspect chapters in the ES, accompanied by appropriate figures."*	The Cable Corridors are described in **ES Volume 1, Chapter 3: The Site and Surrounding Area [EN0110020/APP/6.3]** where a summary of the characteristics of the area is provided. Technical chapters provide a description of the environmental baseline, sensitive receptors and assessment of the likely significant effects from construction, operation, maintenance, and decommissioning where this lies within the scope of the EIA.	**ES Volume 1, Chapter 3: The Site and Surrounding Area [EN0110020/APP/6.3];** and **ES Volume 2, Chapters 6-17 [EN0110020/APP/6.6-6.17].**
The Planning Inspectorate (2.1.10)	*"The ES should describe the potential scope and duration of the operation and maintenance works of the proposed development, including predicted vehicle movements and staffing numbers. The proposals for ongoing management and maintenance of the land around and under the solar array should be confirmed in the ES, including any vegetation*	The operation and maintenance activities are described in **ES Volume 1, Chapter 5: The Proposed Development [EN0110020/APP/6.5]**. The assessment of likely significant effects of these activities can be found in the technical chapters of this ES.	**ES Volume 1, Chapter 5: The Proposed Development [EN0110020/APP/6.5];** and **ES Volume 2, Chapters 6-17**

Consultee	Issue Raised	How This is Addressed	Where This is Addressed in the ES
	management and animal grazing. Any potential adverse effects of operation and maintenance activities should also be assessed in the ES where they are likely to be significant. Proposals for maintaining vegetation around easements and the Public Rights of Way (PRoW) within the application site should also be described."		**[EN0110020/APP/6.6-6.17]**.
The Planning Inspectorate (2.1.11)	*"The Inspectorate notes the applicant's intention to apply a 'Rochdale Envelope' approach to maintain flexibility within the design of the proposed development. The Inspectorate expects that at the point an application is made, the description of the proposed development will be sufficiently detailed to include the design, size, capacity, technology, and locations of the different elements of the proposed development, supported by figures, or where details are not yet known, will set out the assumptions applied to the assessment in relation to these aspects. This should include the footprint and heights of the structures (relevant to existing ground levels), as well as land-use requirements for all elements and phases of the development. The description should be supported (as necessary) by figures, cross sections, and drawings which should be clearly and appropriately referenced. Where flexibility is sought, the ES should clearly set out and justify the maximum design parameters that would apply for each option assessed and*	A description of the current Site and the Proposed Development are presented in **ES Volume 1, Chapter 3: The Site and Surrounding Area [EN0110020/APP/6.3]** and **ES Volume 1, Chapter 5: The Proposed Development [EN0110020/APP/6.5]** respectively.	**ES Volume 1, Chapter 3: The Site and Surrounding Area [EN0110020/APP/6.3];** and **ES Volume 1, Chapter 5: The Proposed Development [EN0110020/APP/6.5]**.

Consultee	Issue Raised	How This is Addressed	Where This is Addressed in the ES
	how these have been used to inform an adequate assessment in the ES."		
The Planning Inspectorate (2.2.1)	*"The ES should provide evidence to support conclusions or clearly identify where professional judgement has been relied upon to determine the level of significance of effects. Any use of professional judgement to assess significance should be fully justified within the ES."*	This ES outlines where professional judgement has been applied to determine the level of significance of effects. The following chapters of this ES have used professional judgement to determine the level of significance or effect: - **ES Volume 2, Chapter 7: Landscape and Visual [EN0110020/APP/6.7]**; and - **ES Volume 2, Chapter 8: Cultural Heritage and Archaeology [EN0110020/APP/6.8]**.	**ES Volume 2, Chapter 7: Landscape and Visual [EN0110020/APP/6.7]**; and **ES Volume 2, Chapter 8: Cultural Heritage and Archaeology [EN0110020/APP/6.8]**.

2.4 Purpose and Scope of the ES

2.4.0 The Scope of the ES has been determined through the EIA Scoping process as described in Section 2.3. The elements of each technical assessment which has been scoped out are detailed in **ES Volume 2, Chapters 6-16 [EN0110020/APP/6.6] to [EN0110020/APP/6.16]**.

2.4.1 The EIA Scoping Report (**ES Volume 3, Appendix 2.1 [EN0110020/APP/6.20]**) concluded that several topics did not require dedicated chapters within the ES and ES. This proportionate approach was accepted by the Planning Inspectorate in their Scoping Opinion (**ES Volume 3, Appendix 2.2 [EN0110020/APP/6.20]**). These topics have not been scoped out, rather their assessments are consolidated within a single chapter. These topics are included in **ES Volume 2, Chapter 16: Other Environmental Topics [EN0110020/APP/6.16]** which comprises:

- 16.2: Waste;
- 16.3: Glint and Glare;
- 16.4: Telecommunications and Utilities;
- 16.5: Major Accidents and Disasters; and
- 16.6: Electromagnetic Fields.

2.4.2 As agreed with the Planning Inspectorate, the Glint and Glare Assessment is provided as **ES Volume 3, Appendix 16.2: Glint and Glare Assessment [EN0110020/APP/6.20]**) and is referenced, where relevant, in technical chapters such as **ES Volume 2, Chapter 7: Landscape and Visual [EN0110020/APP/6.7]**.

2.4.3 As described in the EIA Scoping Report (**ES Volume 3, Appendix 2.1: EIA Scoping Report [EN011020/APP/6.20]**) and accepted in the EIA Scoping Opinion (**ES Volume 3, Appendix: EIA Scoping Opinion [EN0110020/APP/6.20]**), potential effects to Human Health and Population **Table 2.2** shows the technical topics scoped out of the EIA following the scoping exercise and the rationale behind this decision.

Table 2.2 Topics Scoped out of the EIA

Potential Effect / Topic	Proposal for Assessment within EIA	Development Phase	Rationale
Human Health	Effects on human health are to be assessed within: - **ES Volume 2, Chapter 7: Landscape and Visual Impact Assessment [EN0110020/APP/6.7]**; - **ES Volume 2, Chapter 12: Air Quality [EN0110020/APP/6.12]**; - **ES Volume 2, Chapter 13: Traffic and Transport [EN0110020/APP/6.13]**;	All phases	A separate chapter on human health is not necessary as this issue is assessed in other technical chapters

Potential Effect / Topic	Proposal for Assessment within EIA	Development Phase	Rationale
	- **ES Volume 2, Chapter 14: Noise and Vibration [EN0110020/APP/6.14] ; and** - **ES Volume 2, Chapter 15: Socio-Economics, Tourism, and Land Use [EN0110020/APP/6.15]; and** - **ES Volume 2, Chapter 17: Cumulative Effects [EN0110020/APP/6.17].**		
Population	Effects on Population are assessed in **ES Volume 2, Chapter 15: Socio-Economics, Tourism, and Land-Use [EN0110020/APP/6.15]**.	All phases	A separate chapter on population has been scoped out as this issue is assessed within **ES Volume 2, Chapter 15: Socio-Economics, Tourism, and Land-Use [EN0110020/APP/6.15]**.

2.4.4 The assessment of the Proposed Development's potential cumulative effects is included within **ES Volume 2, Chapter 17: Cumulative Effects [EN0110020/APP/6.17]**.

2.4.1 This ES has been prepared following formal consultation pursuant to Sections 42 and 47 Planning Act 2008 and based on a final design which has been refined following feedback from consultees.

2.4.2 The ES is the primary output of the EIA. It includes:

- A description of the Proposed Development and reasonable alternatives;
- Baseline environmental data;
- Assessment of likely significant effects;
- Mitigation and monitoring measures; and
- Consideration of consultation feedback.

2.5 EIA Stages

Existing and Future Baseline Conditions

2.5.1 Baseline data (i.e. existing conditions of the Order Limits and surrounding area to an appropriately considered distance in the absence of the Proposed Development) was collected through field surveys, desk-based research, and

consultation. This data establishes the environmental context against which potential impacts are assessed. Both existing and future baseline scenarios are considered, including changes due to other planned developments.

2.5.2 Existing baseline information has been gathered through a combination of fieldwork and desk-based research. Sources of baseline data include:

- Publicly available datasets;
- Local biological and historic environment records;
- Site-specific surveys (e.g. archaeological, ecological, traffic and noise); and
- Stakeholder input.

2.5.3 The future baseline considers natural environmental changes over time (i.e. how the existing baseline will evolve in future without the Proposed Development) and the influence of existing and committed developments. The future baseline scenarios include:

- The anticipated construction period for the Proposed Development;
- A year 15 post-construction scenario for landscape, visual, and cultural heritage setting assessments, in line with industry best practice; and
- Where relevant and where possible, a further future baseline around 2090 (approximately 60 years after the start of operation) will be considered to assess potential impacts associated with decommissioning of the Proposed Development.

EIA Assessment Scenarios

Spatial Scope

2.5.4 The spatial scope of technical assessments will consider the following factors:

- The physical extent of the proposed works, as defined by the Proposed Development design;
- The nature of the baseline environment and the manner in which particular impacts are likely to be propagated from their source; and
- The pattern of governmental administrative boundaries, which provide the planning and policy context for the Proposed Development.

Temporal Scope

2.5.5 The EIA assesses impacts during the construction, operation, maintenance, and decommissioning phases of the Proposed Development. The maximum development parameters (or parameters that represent worst case for likely significant environmental effects should that be different) are assessed in each of these phases.

Construction

2.5.6 For assessment throughout the EIA, construction effects are defined as those of which the source begins and ends during the construction phase, and do not extend beyond the completion of the construction phase.

2.5.7 Different construction activities vary in duration; as such, construction activities associated with electrical infrastructure would likely have a longer duration and

would span the full construction period, whereas works associated with potential land preparation would be shorter in duration and be part of more discrete construction phases.

Operation and Maintenance

2.5.8 For the EIA, operational effects are those impacts that occur during the operational period. They may emerge during the construction phase. These effects can be permanent and can last significantly beyond construction.

2.5.9 Timescales associated with the enduring effects are as follows:

- Short term – endures for up to 12 months after construction or decommissioning;
- Medium term – endures for 1-5 years;
- Long term – endures for more than 5 years;
- Reversible long-term effects – long-term effects, which endure throughout the lifetime of the Proposed Development, but which cease once the Proposed Development has been decommissioned; and
- Permanent effects – effects which would not be reversed following decommissioning (e.g. biodiversity net gain).

Decommissioning

2.5.10 For the purposes of the EIA, decommissioning effects are identified as those impacts that originate and conclude during the decommissioning stage, with no lasting effects beyond the completion of this phase.

2.5.11 As with construction phase effects, some aspects of decommissioning would endure for longer than others. The design life of the Proposed Development is 60 years with decommissioning to commence 60 years after final commissioning. The technical assessments presented in this ES (**ES Volume 2, Chapters 6-17 [EN0110020/APP/6.6]** to **[EN0110020/APP/6.17]**) therefore assume a design / operational life of 60 years.

2.5.12 As a reasonable worst-case, the decommissioning activities are expected to be broadly similar to those proposed during the construction phase of the Proposed Development and would be carried out in accordance with management and mitigation measures. An **outline Decommissioning Environmental Management Plan [EN0110020/APP/5.11]** is submitted alongside the Application. It is generally assumed that the environmental effects associated with decommissioning would be of equal (or lesser) significance than those expected to occur during construction, unless otherwise stated.

Prediction of Likely Effects

2.5.13 Each phase of development is assessed using a reasonable worst-case scenario. For example:

- Peak construction traffic is used to assess transport and air quality impacts;
- The most visually prominent infrastructure is used for landscape and visual impact assessments; and
- Decommissioning is assumed to have impacts that are no worse than construction, given the long-term nature and uncertainty of future conditions.

2.5.14 Following the collection of baseline data and the development of the design of the Proposed Development, the environmental impacts are assessed. The assessment considers:

- Direct, indirect, secondary, and cumulative;
- Short-, medium-, and long-term impacts;
- Temporary vs. permanent and reversible vs. irreversible effects; and
- Beneficial and adverse impacts.

Determining Significance

2.5.15 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, advice from statutory consultees and other stakeholders, and the expert judgement of the team undertaking the EIA. The evaluation of the significance of an effect is important; 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. Where it has not been possible to quantify effects, qualitative assessments have been undertaken, based on available knowledge and professional judgment. Where uncertainty exists, this is noted in the relevant technical chapter (**ES Volume 2, Chapters 6 to 17 [EN0110020/APP/6.6-6.17]** to) and valid assumptions made and / or a worst-case scenario assessed.

2.5.16 The significance of an environmental effect is determined by assessing the:

- Sensitivity of the receptor (e.g. ecological value, population vulnerability, etc.); and
- Magnitude of the impact (e.g. scale, duration, reversibility).

2.5.17 In practice, the approaches and criteria applied to assessing sensitivity of receptors and magnitudes of impact vary by topic. **ES Volume 2, Chapters 6 to 17 [EN0110020/APP/6.6-6.17]** describe the specific approaches to the technical assessments that have been used in the EIA.

2.5.18 To maintain consistency throughout the EIA and to ensure effects are comparable, the following terminology and definitions are used in the ES to define residual effects:

- Adverse – detrimental or negative effects to an environmental / socio-economic resource or receptor;
- No change - no loss or alteration of characteristics, features or elements; no observable impact in either direction; or
- Beneficial – advantageous or positive effect to an environmental / socio-economic resource or receptor.

2.5.19 Where adverse or beneficial effects are identified, the following scale based on best practice will be used:

- Negligible - no detectable or material change to a location, environment or species;
- Minor – a detectable but non-material change to a location, environment or species;

- Moderate – a material, but non-fundamental change to a location, environment or species; or
- Major – a fundamental change to a location, environment or species.

2.5.20 Each technical topic outlines the criteria and rationales for measuring the various types of effects. Where possible, this has been based upon quantitative and accepted criteria, together with the use of expert interpretation to establish the extent to which the effect is environmentally significant. **Table 2.3** presents a generic matrix for determining the significance of likely effects. Effects that would be 'Significant' in terms of the EIA Regulations are shaded.

Table 2.3: Generic Matrix for Determining the Significance of Likely Effects

Sensitivity of Receptor	Magnitude of Change			
	Negligible	**Low**	**Medium**	**High**
Negligible	Negligible	Negligible	Negligible	Negligible
Low	Negligible	Minor	Minor	Moderate
Medium	Negligible	Minor	Moderate	Major
High	Negligible	Moderate	Major	Major

2.5.21 Following the classification of an effect, clear statements will be made within the technical chapters as to whether that effect is Significant or Not Significant. Generally, Major and Moderate effects are considered to be Significant, whilst Minor and Negligible effects are considered to be Not Significant. However, professional judgment has been applied, taking into account whether the effect is permanent or temporary, its duration / frequency, whether it is reversible, and / or its likelihood of occurrence.

2.5.22 Initial design proposals (embedded mitigation) may be sufficient to avoid or mitigate Significant effects. In other instances, further additional mitigation may be required, followed by reassessment with the objective, wherever practicable, to achieve a resultant residual effect which is Not Significant.

2.5.23 The significance of residual effects will be evaluated with reference to available definitive standards, accepted criteria and legislation. For issues where definitive quality standards do not exist, significance will be based on:

- Local, district, regional or national scale or value of the resource affected;
- Number of receptors affected;
- Sensitivity of these receptors; and
- Duration of the effect.

Consideration of Alternatives

2.5.24 Regulation 14(2)(d) of the EIA Regulations**Error! Bookmark not defined.** requires an ES to include *"a description of the reasonable alternatives studied by the applicant, which are relevant to the proposed development and its specific characteristics, and an indication of the main reasons for the options chosen, taking into account the effects of the development on the environment"*.

2.5.25 **ES Volume 1, Chapter 4, Alternatives and Design Evolution [EN0110020/APP/6.4]** includes a description of reasonable alternatives considered during design development, including:

- Site selection;
- Site layout and design options;
- Site infrastructure configurations; and
- Cable Corridors.

2.5.26 The rationale for the chosen approach is provided in **ES Volume 1, Chapter 4: Alternatives and Design Evolution [EN0110020/APP/6.4]**, taking into account environmental effects and technical feasibility.

Stakeholder Engagement and Public Consultation

2.5.27 Proposed amendments to the Planning Act 2008[4] via the Planning and Infrastructure Act 2025 will remove certain requirements relating to consultation during the pre-application process for NSIPs. However, these amendments are not in force (at the time this ES is written) and it is unclear when the new regulations will come into effect and the precise details of what those regulations will include. Therefore, the Applicant consulted on the Draft ES through a Statutory Consultation process under the Planning Act 2008 in force place at the time this ES was written.

2.5.28 The Proposed Development has a wide range of stakeholders (including landowners, statutory consultees, local communities and specialist interest groups) with differing interests that will require varied levels of information. Specific communication activities, therefore, need to be focussed to meet the needs of individuals and groups.

2.5.29 Consultation and engagement for the Proposed Development are based on the following principles:

- Early and ongoing engagement to inform and influence the Proposed Development's design and assessment process;
- Seeking an appropriate level of feedback at each stage in the iterative design process and ensuring that comments received are taken into consideration;
- Building long-term relationships with key stakeholders throughout the different stages of the Proposed Development to help better understand their views;
- Where possible and practicable ensuring concerns are addressed; and
- Ensuring appropriate Statutory Consultation is undertaken in compliance with requirements of the Planning Act 2008[4] and associated guidance.

Non- Statutory Consultation

2.5.30 A Non-Statutory Consultation was held between 18 November 2024 to 31 January 2025. This period was extended from an initial deadline of 17 January 2025 at the request of a number of stakeholders.

2.5.31 The Non-Statutory Consultation included:

- Issuing a leaflet to more than 30,000 addresses in parishes which include a part of the Site;

- Door-knocking / private visits of the project team to near-neighbours of the Proposed Development;
- Emailing all Local Planning Authorities (LPAs), statutory consultees, and host and neighbouring parish councils;
- Advertising in local newspapers and on social media;
- Publishing consultation materials including a consultation booklet;
- Launching a consultation website and Facebook page;
- Holding seven in-person public consultation events (five of which were held in December 2024 and two of which were held in January 2025) and one webinar in December 2024; and
- Arranging and attending 16 individual meetings with residents who live near the Site.

2.5.32 Ongoing engagement outside of the Non-Statutory Consultation period included:

- Parish and town councils;
- Officers and members from City of Doncaster Council (CDC), Derbyshire County Council (DCC), North East Derbyshire District Council (NEDDC), and Rotherham Metropolitan Borough Council (RMBC);
- The Members of Parliament for Rother Valley and Conisbrough and Rawmarsh;
- The Environment Agency;
- South Yorkshire Archaeology Service (SYAS); and
- Members of the public.

2.5.33 Feedback from these activities has informed the design and scope of the assessment. Record of consultation activities and responses regarding technical assessments is included in the relevant chapter, see **ES Volume 2, Chapters 6-17 [EN0110020/APP/6.6-6.17]**.

Statutory Consultation

2.5.34 A Statutory Consultation was held between 16 September and 28 October 2025 in accordance with sections 42, 47 and 48 of the Planning Act 2008[4]. Feedback was sought from the local community and prescribed consultees based on the preliminary environmental information presented in the Draft ES. Feedback from statutory consultees has been carefully considered and addressed within each technical chapter (**ES Volume 2, Chapters 6-17 [EN0110020/APP/6.6-6.17]**.

2.5.35 Details of the Public Consultation events are presented in the **Consultation Report [EN0110020/APP/5.1]**, which has been submitted as part of the Application.

Targeted Consultation

2.5.36 A Targeted Consultation period was held between 4 March and 3 April 2026 on proposed changes to the Order Limits. This included notifying relevant prescribed consultees. Feedback from this Targeted Consultation and the Applicant's response is included the **Consultation Report [EN0110020/APP/5.1]**.

2.5.37 A second Targeted Consultation was held for any individuals that had been identified as land interests after the Statutory Consultation.

Environmental Measures and Mitigation Hierarchy

2.5.38 Regulation 14(2)(c) of the EIA Regulations requires *"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 impacts on the environment"*, commonly referred to as mitigation measures.

2.5.39 Mitigation follows a hierarchical approach:

- **Avoid**: through site selection and design (e.g. buffer zones, exclusion of sensitive areas);
- **Prevent/Reduce**: via embedded controls and design refinements (e.g. noise barriers, drainage design); and
- **Offset / Compensate**: for residual impacts (e.g. habitat creation, heritage enhancement).

2.5.40 Mitigation measures include design provisions and construction practices, as well as management actions. In some instances, mitigation alone may not be sufficient to reduce an impact or effect to a level that is Not Significant, in which case other measures such as offsets (which can also deliver enhancement) are then considered. Although an offset may provide enhancement, enhancement in itself is different, typically adding something positive in accordance with local or national policy. Enhancement is, therefore, not mitigation as such.

2.5.41 In some instances, initial design proposals (embedded mitigation) may be sufficient to avoid or mitigate Significant effects. In other instances, further additional mitigation may be required, followed by reassessment with the objective, wherever practicable, to achieve a resultant residual effect which is Not Significant. Typical measures include:

- Changes to the Proposed Development during the design process (e.g. location of components, size of structures, emissions controls);
- Construction working practices (e.g. location of laydown areas, routing of construction traffic, noise management); and
- Those that will be contained in management plans and procedures (e.g. Environmental Management Systems (EMSs) and Emergency Response Plans (ERPs)).

2.5.42 Where the EIA identifies likely significant effects, consideration can be given to additional mitigation measures beyond those already incorporated in the design. Where applicable, these additional mitigation measures are outlined in the relevant technical chapters (**ES Volume 2, Chapters 6 to 17 [EN0110020/APP/6.6-6.17]**). They may include actions that exceed standard industry practices, such as bespoke or site-specific solutions.

2.5.43 Additional mitigation measures are included within the relevant outline management plans. Following the application of all mitigation measures, an assessment of the anticipated residual effects has been completed, and recorded in **ES Volume 2, Chapters 6 to 17 [EN0110020/APP/6.6-6.17]**.

2.5.44 Proposed mitigation measures are integrated into the Proposed Development and secured through full management plans and **ES Volume 3, Appendix 2.3: Commitments Register [EN0110020/APP/6.20]**) These include:

- Construction Environmental Management Plan (CEMP);
- Operational Environmental Management Plan (OEMP);
- Decommissioning Environmental Management Plan (DEMP);
- Construction Traffic Management Plan (CTMP);
- Landscape and Ecology Management Plan (LEMP);
- Public Rights of Way Management Plan (PRoWMP);
- Battery Safety Management Plan (BSMP);
- Written Scheme of Investigation (WSI);
- Surface Water Drainage Strategy (SWDS); and
- Skills and Supply Chain Management Plan.

These management plans are submitted in outline form as part of the Application, to be updated prior to construction activities should the Application be approved.

Cumulative and Interactive Effects

Cumulative Effects with Other Developments

2.5.45 The assessment considers other cumulative effects with existing or approved projects within an agreed Zone of Influence (ZoI). These are known as inter-cumulative effects. The ZoI is different for each technical aspect and extends up to 10 kilometres (km) for this EIA. Only those developments with potential for cumulative interaction are included. Criteria for inclusion include:

- Planning status;
- Proximity; and
- Type and scale of development.

2.5.46 In accordance with the Schedule 4, paragraph 5 of the EIA Regulations**Error! Bookmark not defined.** an assessment of cumulative effects has been undertaken for this ES. The methodology for the assessment has been developed based on the Planning Inspectorate's advice on Cumulative Effects Assessment[5] (CEA) which emphasises the importance of considering cumulative effects in the context of the EIA Regulations**Error! Bookmark not defined.** and National Policy Statement EN-1[6].

2.5.47 The CEA for the Proposed Development has been undertaken in line with the four-staged approach set out in the Advice Note on Cumulative Effects Assessment[5], as follows:

- Stage 1: Establish the ZoI and identify a long list of other existing and/or approved developments within it, see **ES Volume 3, Appendix 17.2: Cumulative Long List [EN0110020/APP/6.20]**;
- Stage 2: Identify a shortlist of other existing and/or approved developments for cumulative effects assessment based on their potential to have similar effects to those of the Proposed Development on the same receptors;
- Stage 3: Information gathering; and
- Stage 4: Cumulative Effects Assessment.

2.5.48 A detailed breakdown of the approach adopted in this ES for CEA Stages 1-2 can be viewed in **ES Volume 2, Chapter 17: Cumulative Effects [EN0110020/APP/6.17]**. Details of Stage 3-4 are presented in each technical chapter, see **ES Volume 2, Chapters 6-16 [EN0110020/APP/6.6-6.16]**.

Effect Interactions

2.5.49 The ES evaluates combined and interactive effects on individual receptors (e.g. noise and air quality on human health). These are known as intra-project cumulative effects. These are addressed in **ES Volume 2, Chapters 6-16 [EN0110020/APP/6.6-6.16]**.

2.5.50 Types of interactions include:

- Combined effects – multiple effects of the same type combine to impact a single receptor (e.g. multiple noise sources); and
- Interactive effects – multiple separate effects interact to impact a single receptor (e.g. air quality and noise).

2.5.51 A matrix-based approach is used to identify and assess these interactions.

2.5.52 The EIA considers intra-project effects in several ways as follows:

- In general terms the EIA follows a 'receptor-led approach'. As such, addressing intra project effects is integral to the assessments, especially the ecological assessments, as they consider all the impacts (e.g. light and habitat disturbance) on a receptor (e.g. bats); and
- Some EIA topics are focused on the effects of specific impacts on people and communities or distinct groups (air quality, noise, traffic, visual, economy, employment, social infrastructure).

2.5.53 In the absence of a formal approach for the assessment of cumulative effects, professional judgement has been used to develop an appropriate methodology in line with Planning Inspectorate guidance. The full methodology is described in **ES Volume 2, Chapter 17: Cumulative Effects Assessment [EN0110020/APP/6.17]**.

Dealing with Uncertainty

2.5.54 Even with a final project description and an unchanging environment, predictions of impacts and their effects on resources and receptors can, by definition, be uncertain. Predictions can be made using varying means ranging from qualitative assessment and expert judgement (including reference to the evidence base) through to quantitative techniques (e.g. modelling). The accuracy of predictions depends on the methods used and the quality of the input data for the Proposed Development and the environment.

2.5.55 A number of assumptions have been made during the preparation of this ES. Where relevant to technical assessments these have been detailed in **ES Volume 2, Chapters 6** to **17 [EN0110020/APP/6.6-6.17]**.

2.5.56 The EIA has been subject to certain limitations due to uncertainty. Where these apply to technical assessments, they have been described in **ES Volume 2, Chapters 6** to **17 [EN0110020/APP/6.6-6.17]**.

WHITESTONE
solar farm

Contact

Whitestone Net Zero Ltd

info@whitestonesolarfarm.co.uk

0800 688 9936

References

[1] European Parliament and Council (2014) *Directive 2011/92/EU of the European Parliament and of the Council as amended by Directive 2014/52/EU*. Available at https://www.legislation.gov.uk/eudr/2011/92# [Accessed April 2026].

[2] His Majesty's Office (HMSO) (2017) *Infrastructure Planning (Environmental Impact Assessment) Regulations 2017*. Available at https://www.legislation.gov.uk/uksi/2017/572 [Accessed April 2026]

[3] Nationally Significant Infrastructure Projects: *Advice on Good Design*. Available at: https://www.gov.uk/guidance/nationally-significant-infrastructure-projects-advice-on-good-design [Accessed: February 2026].

[4] UK Government., (2008)., *Planning Act 2008*. (Online). Available at: https://www.legislation.gov.uk/ukpga/2008/29/contents [Accessed February 2026].

[5] The Planning Inspectorate (2024) *Nationally Significant Infrastructure Projects: Advice on Cumulative Effects Assessment*. Available at https://www.gov.uk/guidance/nationally-significant-infrastructure-projects-advice-on-cumulative-effects-assessment#:~:text=The%20applicant%20should%20assess%20the,or%20gaps%20in%20the%20information [Accessed February 2026]

[6] Department for Energy Security and Net Zero., (2025). *Overarching National Policy Statement for energy (EN-1)*. Available at: National Policy Statements for energy infrastructure - GOV.UK [Accessed February 2026]