Fosse Green Energy

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EN010154

6.1 Environmental Statement

Chapter 5: Environmental Impact Assessment Methodology

Planning Act 2008 (as amended)

Regulation 5(2)(a)

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

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The Infrastructure Planning (Applications: Prescribed Forms and Procedure) Regulation 2009 (as amended)

Fosse Green Energy

Development Consent Order 202[ ]

6.1 Environmental Statement

Chapter 5: Environmental Impact Assessment Methodology

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Table of Contents

Tables

5. Environmental Impact Assessment Methodology

5.1 Introduction

EIA Process

5.1.1 This chapter of the Environmental Statement (ES) presents the approach and methodology applied to the Environmental Impact Assessment (EIA), which has been prepared in accordance with the Infrastructure Planning (Environmental Impact Assessment) Regulations 2017 (hereafter referred to as 'the EIA Regulations') (Ref 5-1).

5.1.2 The Proposed Development is defined as a Nationally Significant Infrastructure Project (NSIP) under Section 14(1)(a) and 15(2) of the Planning Act 2008 (PA 2008) (Ref 5-2) as an onshore generating station in England with a capacity exceeding 50MW. As it is an NSIP, the Applicant is required under the PA 2008 to apply for a Development Consent Order (DCO) to develop the Proposed Development.

5.1.3 The key elements in EIA for an NSIP are:

a. Iterative project design, taking feedback from consultation and environmental studies and applying it to the design development process on an ongoing basis throughout the EIA;

b. Scoping and ongoing consultation, including consideration of responses and how these are addressed as part of the EIA;

c. Technical environmental impact assessments, including baseline studies, input to the design process, refinement of the design, and identification and reporting of residual environmental effects;

d. Consultation on the Preliminary Environmental Information (PEI) Report; and

e. Preparation and submission of the ES.

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

a. Planning Inspectorate Guidance: *Nationally Significant Infrastructure Projects: Advice on EIA Notification and Consultation* (Ref 5-3);

b. Planning Inspectorate Guidance: *Nationally Significant Infrastructure Projects: Advice on the Preparation and submission of Application Documents* (Ref 5-4);

c. Planning Inspectorate Guidance: *Nationally Significant Infrastructure Projects - Advice Note Seven: Environmental Impact Assessment:*

process, preliminary environmental information and environmental statements (Ref 5-5);

d. Planning Inspectorate Guidance: *Nationally Significant Infrastructure Projects - Advice Note Nine: Rochdale Envelope* (Ref 5-6);

e. Planning Inspectorate Guidance: *Nationally Significant Infrastructure Projects: Advice on working with public bodies in the infrastructure planning process* (Ref 5-7); and

f. Planning Inspectorate Guidance: *Nationally Significant Infrastructure Projects: Advice on Cumulative Effects Assessment* (Ref 5-8).

EIA Scoping

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

5.1.6 The issues to be addressed within this ES were identified in the EIA Scoping Report (**Appendix 1-A: EIA Scoping Report** of this ES **[EN010154/APP/6.3]**), which was submitted to the Planning Inspectorate on 19 June 2023. The Planning Inspectorate reviewed and consulted on the EIA Scoping Report and adopted (on behalf of the Secretary of State for Energy Security and Net Zero (SoS)) a Scoping Opinion on 25 July 2023 (**Appendix 1-B: EIA Scoping Opinion** of this ES **[EN010154/APP/6.3]**).

5.1.7 In preparing this ES, reference has been made to the EIA Scoping Opinion received from the SoS on 25 July 2023 (**Appendix 1-B: EIA Scoping Opinion** of this ES **[EN010154/APP/6.3]**) and the ES has been based on the advice contained within it regarding assessment methodology, topics and presentation of the ES, together with responses received through statutory consultation and non-statutory consultation.

5.1.8 A table has been included within each technical chapter (**Chapters 6** to **14** of this ES **[EN010154/APP/6.1]**) to show how and where comments from the Scoping Opinion and statutory consultation have been addressed within the ES.

5.1.9 In response to the EIA Scoping Opinion, this ES includes assessments of the following environmental topics:

a. Chapter 6: Climate Change;

b. Chapter 7: Cultural Heritage;

c. Chapter 8: Ecology and Nature Conservation;

d. Chapter 9: Water Environment;

e. Chapter 10: Landscape and Visual Amenity;

f. Chapter 11: Noise and Vibration;

g. Chapter 12: Socio-Economics and Land Use; and

h. Chapter 13: Traffic and Transport.

5.1.10 The EIA Scoping Report (**Appendix 1-A: EIA Scoping Report** of this ES **[EN010154/APP/6.3]**) concluded that several topics, whilst not 'scoped out' of the EIA, did not require a full chapter within the ES, proposing that **Chapter 14: Other Environmental Topics** of this ES **[EN010154/APP/6.1]** addressed the likelihood for significant effects proportionately within the ES. This includes a brief assessment of each of the topics identified below, including a summary of the relevant effects and mitigation, supported by a technical note appended to the ES, where relevant, containing further information that evidences the ES section conclusion. This approach was accepted by the Planning Inspectorate in the Scoping Opinion (**Appendix 1-B: EIA Scoping Opinion** of this ES **[EN010154/APP/6.3]**). The assessments related to these environmental topics are described in **Chapter 14: Other Environmental Topics** which includes:

a. Air Quality;

b. Glint and Glare;

c. Ground Conditions;

d. Materials and Waste;

e. Major Accidents and Disasters;

f. Telecommunications, Television Reception and Utilities; and

g. Electric and Electromagnetic Fields.

5.1.11 As described in the EIA Scoping Report (**Appendix 1-A: EIA Scoping Report** of this ES **[EN010154/APP/6.3]**) and accepted in the Scoping Opinion (**Appendix 1-B: EIA Scoping Opinion** of this ES **[EN010154/APP/6.3]**), potential effects to human health are considered in the ES technical chapters with a standalone assessment scoped out of the EIA. For clarity, potential effects to human health are set out in the following technical assessments of this ES (**[EN010154/APP/6.1]**):

a. Chapter 9: Water Environment;

b. Chapter 10: Landscape and Visual Amenity;

c. Chapter 11: Noise and Vibration;

d. Chapter 13: Traffic and Transport; and

e. Chapter 14: Other Environmental Topics, Section 14.2: Air Quality.

5.1.12 Paragraph 4 within Schedule 4 of the EIA Regulations (Ref 5-1) 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 of this ES **[EN010154/APP/6.1]**.

Environmental Statement

5.1.13 This ES summarises the outcomes of the following EIA activities:

a. Consideration of relevant local, regional, and national planning policies, guidelines, technical standards and legislation relevant to the EIA;

b. Development of significance criteria and specialist assessment methodologies;

c. Consultation with statutory and non-statutory consultees and the contents of the Scoping Opinion;

d. Establishing baseline conditions, including a review of secondary information, previous environmental studies, publicly available information and databases, desktop studies, and physical surveys and monitoring;

e. Input into the development of design including embedded mitigation;

f. Assessment of likely impacts and effects, including modelling and calculations and professional judgement;

g. Identification of any necessary additional mitigation or monitoring required;

h. Determination of residual effects; and

i. Assessment of Effect Interactions and Cumulative Effects with other schemes, plans and projects.

5.1.14 Each technical chapter follows the same structure for ease of reference, as outlined below:

a. Introduction;

b. Legislation and Planning Policy;

c. Consultation;

d. Assessment Methodology;

e. Baseline Conditions;

f. Embedded Mitigation Measures;

g. Preliminary Assessment of Effects;

h. Additional Mitigation and Enhancement;

i. Residual Effects and Conclusions;

j. Cumulative Assessment; and

k. References.

5.1.15 **Chapter 14: Other Environmental Topics** of this ES **[EN010154/APP/6.1]** is presented in a different format, however within each technical section details of the above are provided as relevant.

5.1.16 Effect Interactions and Cumulative Effects with nearby relevant schemes, plans and projects are set out within **Chapter 15: Cumulative Effects and Effect Interactions** of this ES **[EN010154/APP/6.1]**.

5.2 Consultation

Introduction

5.2.1 Consultation is integral to the preparation of DCO applications and to the EIA process. The views of public bodies (statutory consultees) and the local community serve to focus the environmental assessments and to identify specific issues that require further investigation, as well as to inform aspects of the design of the Proposed Development. Consultation is an ongoing process, which enables mitigation measures to be identified and, where appropriate, incorporated into the design of the Proposed Development thereby limiting adverse effects. Consultation also provides a platform for exploring and, where possible, incorporating environmental enhancements and benefits.

DCO Consultation Requirements

5.2.2 The DCO process sets out several statutory requirements regarding consultation. The PA 2008 (Ref 5-12) requires applicants for DCOs to carry out formal (statutory) pre-application consultation on their proposals with certain stakeholder groups and the community. Further requirements set out how the Proposed Development must be publicised, and specific documents produced, including a Statement of Community Consultation (SoCC), PEI Report, and a **Consultation Report [EN010154/APP/5.1]**.

5.2.3 There are several requirements as to how this consultation must be undertaken that are set out in the PA 2008 (Ref 5-12) and related regulations, which this ES adheres with.

Consultation to Date

5.2.4 Details of all consultation undertaken with respect to the Proposed Development is provided in the **Consultation Report [EN010154/APP/5.1]**.

5.2.5 Details of the correspondence and meetings held with public bodies to date, for example to discuss and agree assessment methodologies, are contained in the relevant technical chapters of this ES (**Chapters 6** to **14 [EN010154/APP/6.1]**).

5.2.6 The project website was regularly updated to provide up to date information on the project: www.fossegreenenergy.co.uk and information about

consultation events and methods of communication was provided by direct mail to all addresses within a defined consultation zone.

5.2.7 Engagement with stakeholders following statutory consultation continued throughout the preparation of this ES and is summarised as relevant in the technical chapters of this ES (**Chapters 6** to **14 [EN010154/APP/6.1]**).

Scoping Consultation

5.2.8 The EIA Scoping Report was submitted to the Planning Inspectorate on 19 June 2023. The Planning Inspectorate reviewed and consulted on the EIA Scoping Report (**Appendix 1-A: EIA Scoping Report** of this ES **[EN010154/APP/6.3]**) and adopted a Scoping Opinion (on behalf of the SoS) on 25 July 2023 which included the formal responses received by the Planning Inspectorate from consultees **(Appendix 1-B: EIA Scoping Opinion** of this ES **[EN010154/APP/6.3]**).

5.2.9 Following the adoption of the Scoping Opinion, consultation was undertaken with relevant statutory consultees in the preparation of the PEI Report produced for statutory consultation, and continued as part of the preparation of this ES (including where recommended by the Scoping Opinion). Responses to the Scoping Opinion are provided in the Technical Chapters of this ES (**Chapters 6-14 [EN010154/APP/6.1]**), and these set out how the comments raised have been addressed in this ES.

5.2.10 The pre-application consultation undertaken by the Applicant is documented within the **Consultation Report [EN010154/APP/5.1]**, which includes a separate section on EIA-related consultation as recommended within the Planning Inspectorate Guidance *Nationally Significant Infrastructure Projects: Advice on the Consultation Report* (Ref 5-13).

Non-statutory Consultation

5.2.11 The Applicant held an initial round of non-statutory public consultation on its proposals between 11 September and 20 October 2023. Through the non-statutory consultation, feedback was sought on early proposals for the Proposed Development, the approach to EIA, and the Applicant's approach to consultation.

5.2.12 Responses were received from a range of consultees and stakeholder groups, as set out in **Consultation Report Appendices [EN010154/APP/5.2]**, including:

a. Local communities;

b. Elected representatives (including MPs, ward councillors and parish councillors);

c. Landowners; and

d. Special and local interest groups.

5.2.13 Key themes raised in responses to the consultation included:

a. Impact on local wildlife and biodiversity;
b. The choice / location of the site;
c. Use of arable farmland and food production security;
d. Interest in how the local community would benefit;
e. Questions about the proximity of solar PV panels to homes;
f. Potential for contamination and hazardous waste from solar PV panels;
g. Safety and fire hazards from battery and energy storage systems;
h. Impact of the Proposed Development on local house prices;
i. Length of construction period and scale of construction;
j. Impacts of the site on the flood risk to the area;
k. The location of the proposed National Grid substation near Navenby and the proposed substation planning process;
l. Health concerns associated with solar PV panels;
m. The number of solar developments proposed in Lincolnshire;
n. Access to Public Rights of Way and permissive paths;
o. Preferences expressed toward alternative developments, for instance rooftop solar and offshore wind; and
p. Noise disruption and visibility impacts to the views of the countryside.

5.2.14 Comments from the non-statutory consultation influenced the design evolution of the Proposed Development for statutory consultation. The iterative process of designing the Proposed Development is set out in detail in **Chapter 4: Alternatives and Design Evolution** of this ES **[EN010154/APP/6.1]**.

Statutory Consultation

5.2.15 In accordance with Section 47(1) of the PA 2008 (Ref 5-12), the PEI Report was consulted upon as part of the statutory consultation. As part of this statutory consultation, members of the public were invited to comment on the Proposed Development, including its likely significant environmental effects and proposed mitigation measures as presented within the PEI Report.

5.2.16 In addition to consultation with the local community, consultation was also undertaken with prescribed public bodies as well as affected landowners, in accordance with Sections 42 and 48 of the PA 2008 (Ref 5-12) and Regulation 13 of the EIA Regulations (Ref 5-14).

5.2.17 Comments from the statutory consultation were taken into account when finalising the Proposed Development proposals sought via the DCO application. The iterative process of designing the Proposed Development is set out in detail in **Chapter 4: Alternatives and Design Evolution** of this ES **[EN010154/APP/6.1]**.

5.2.18 All responses received during statutory consultation have been carefully considered and the Applicant has had due regard to them in the development of the Proposed Development in accordance with Section 49 of the PA 2008 (Ref 5-12). Details of responses received during consultation and the regard taken of those responses is included in **Chapters 6-15** of this ES **[EN010154/APP/6.1]**, the **Consultation Report [EN010154/APP/5.1]**, **Consultation Report Appendices [EN010154/APP/5.2]** and the **Potential Main Issues for Examination [EN010154/APP/7.11]**.

5.2.19 The **Consultation Report [EN010154/APP/5.1]** demonstrates how the Applicant has complied with the consultation requirements of the PA 2008 (Ref 5-12) and EIA Regulations (Ref 5-14) and will be considered by the SoS when determining whether to accept the DCO application, and then in examining the DCO application.

5.3 Rochdale Envelope

5.3.1 As discussed in **Chapter 3: The Proposed Development** of this ES **[EN010154/APP/6.1]**, the detailed design for construction has yet to be carried out for the Proposed Development and is undertaken following consent, when the technology selection is made. This is important as the technology for solar photovoltaic (PV) and Battery Energy Storage Systems (BESS) is continuing to evolve and advance, and as such there is a need for the Applicant to maintain commercial flexibility to meet the changing demands of the UK market prior to construction and to enable the Applicant to adopt the most up to date technology at the point of commencement of development. The 'Rochdale Envelope' approach has therefore been applied within the EIA to ensure a robust assessment of the likely significant environmental effects of the Proposed Development, in accordance with the Planning Inspectorate's Advice Note Nine: The Rochdale Envelope (Ref 5-6). This involves assessing the maximum (and where relevant, minimum) parameters, including for limits of deviation (e.g., development extents or specific maximum heights) as relevant, for the elements of the Proposed Development where flexibility needs to be retained, recognising that the worst-case parameter for one technical assessment may differ from another. Where this approach is applied, this has been confirmed within the relevant chapters of this ES (**Chapters 6** to **14 [EN010154/APP/6.1]**).

5.3.2 Additionally, paragraph 4.3.18 of the Overarching National Policy Statement (NPS) for Energy EN-1 (2023) (Ref 5-9) provides that *"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"*.

5.3.3 As is relevant for each technical discipline, the worst-case parameters for the Proposed Development, under the Rochdale Envelope approach described above, have been assessed in order to predict likely worst-case overall impacts for that topic. These have been used in the assessment of significance of effects for the Proposed Development. Each of the technical assessments

(**Chapters 6** to **14** of this ES **[EN010142/APP/6.1]**) describe the parameters applied in relation to the respective assessment. As the Proposed Development design has evolved, key elements of the design have been fixed (e.g. the setting back of the DCO Site Boundary from residential properties, where feasible). However, flexibility has been maintained for some aspects of the Proposed Development within the Application. Where flexibility has been retained in the Application, any subsequent changes to design details post consent will remain within the likely worst-case parameters assessed in this ES. Further justification for the need to retain flexibility in certain parameters is outlined in **Chapter 3: The Proposed Development** of this ES **[EN010154/APP/6.1]**.

5.4 Spatial Scope

5.4.1 The technical chapters of this ES (**Chapters 6** to **14, [EN010154/APP/6.1]**) describe their spatial scope, including their rationale for determining the specific area within which the assessment is focussed (the 'Study Area'). The Study Areas are a function of the nature of the potential impacts and the locations of potentially affected environmental resources or receptors. Justification for the spatial scope considered appropriate for each topic is documented in each respective technical chapter (**Chapters 6** to **14, [EN010154/APP/6.1]**).

Transboundary Effects

5.4.2 Schedule 4, Part 5 of the EIA Regulations requires a description of likely significant transboundary effects on any other European Economic Area (EEA) State to be provided. Guidance for the consideration of transboundary effects is provided in the Planning Inspectorate's Guidance *Nationally Significant Infrastructure Projects: Advice on Transboundary Impacts and Process* (Ref 5-10).

5.4.3 At Scoping stage, a Transboundary Effects Screening Matrix was produced, which assessed the likelihood of transboundary effects. The original assessment is provided in Appendix A of **Appendix 1-A: Scoping Report** of this ES **[EN010154/APP/6.3]**. The assessment at Scoping stage concluded that the Proposed Development is not likely to have significant effects beyond the jurisdiction of the United Kingdom. Within the Scoping Opinion (**Appendix 1-B: EIA Scoping Opinion [EN010154/APP/6.3]**) the Planning Inspectorate confirmed that *"the likelihood of transboundary effects resulting from the Proposed Development is so low that it does not warrant the issue of a detailed transboundary screening."*

5.4.4 Since the Scoping stage, the design of the Proposed Development has been refined in line with the description provided in **Chapter 4: Alternatives and Design Evolution** of this ES **[EN010154/APP/6.1]**. Other than the size of the Proposed Development, which has been reduced, the characteristics and potential impacts of the Proposed Development have not changed from those

previously assessed at Scoping stage. Therefore, transboundary effects have not been considered further in this ES.

5.5 Determining the Baseline Conditions

5.5.1 In order to predict the potential environmental effects of the Proposed Development, it is necessary to determine the environmental conditions that currently exist within the DCO Site and surrounding area, in the absence of the Proposed Development. These are known as the 'baseline conditions'.

5.5.2 Detailed environmental baseline information has been collected and the methodology for the collection process is detailed within each technical chapter of this ES as relevant (**Chapters 6** to **14, [EN010154/APP/6.1]**). The baseline information has been gathered from various sources, including:

a. Online/digital resources;

b. Data searches, for example GroundSure, Historic Environment Record, Lincolnshire Environmental Records Centre;

c. Baseline site surveys; and

d. Environmental information submitted in support of other planning applications for developments in the vicinity of the DCO Site.

5.5.3 Consideration has also been given to how the baseline conditions would evolve in the absence of the Proposed Development, known as the 'future baseline', in respect of both natural changes and any planned developments.

5.6 Development Design, Impact Avoidance and Mitigation

5.6.1 Regulation 14, paragraph (2)(c) of the EIA Regulations (Ref 5-1) requires an 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.

5.6.2 NPS EN-1 confirms at paragraph 4.2.5 that "*there is a critical national priority (CNP) for the provision of nationally significant low carbon infrastructure.*" This sets out a policy presumption in favour of CNP infrastructure, such as solar, to achieve energy objectives to decarbonise the energy sector by 2035 and to achieve net zero by 2050. Paragraphs 4.2.10 to 4.2.14 of NPS EN-1 explain that the CNP presumptions apply where it can be demonstrated that applications meet the requirements in NPS EN-1, have applied the mitigation hierarchy, and compensated residual impacts as far as possible.

5.6.3 The Proposed Development adopted a standard mitigation hierarchical approach to identifying mitigation measure requirements as follows:

a. **Avoid or Prevent**: In the first instance, mitigation was sought to avoid or prevent the adverse effect at source, for example by routeing the Cable Corridor or siting solar PV panels away from sensitive receptors;

b. **Reduce**: If the effect is unavoidable, mitigation measures have been implemented to reduce the significance of the effect. For example, the use of targeted landscaping to reduce visual impact at nearby sensitive receptors; and

c. **Offset**: If the effect can neither be avoided nor reduced, mitigation to offset the effect through the implementation of compensatory mitigation has been sought, for example habitat creation to replace any habitat losses.

5.6.4 Mitigation measures fall into two categories:

a. 'Embedded mitigation measures' (also referred to sometimes as 'in-built mitigation measures'), which are built into the design of the Proposed Development; and

b. 'Additional mitigation measures', which are implemented alongside embedded mitigation measures to address an identified likely significant environmental effect.

5.6.5 The design process for the Proposed Development has been heavily influenced by the findings of early environmental appraisals and the EIA process. The Proposed Development has had several measures incorporated into the design to avoid or minimise environmental impacts, for example through the appropriate routeing and siting of infrastructure. The key aspects where the design has evolved are described in **Chapter 4: Alternatives and Design Evolution** of this ES **[EN010154/APP/6.1]**. These include measures needed for legal and policy compliance, as well as measures that implement the requirements of good practice guidance documents. The assessments presented in this ES have been undertaken on the basis that these measures are incorporated in the design and construction practices (i.e., they are embedded mitigation).

5.6.6 Embedded mitigation is detailed within the technical chapters of the ES (**Chapters 6** to **14**, **[EN010154/APP/6.1]**) as relevant, and, if relevant for the construction phase, included in the **Framework Construction Environmental Management Plan (CEMP) [EN010154/APP/7.7]** submitted alongside the DCO application.

5.6.7 The **Framework CEMP [EN010154/APP/7.7]** submitted with the DCO application includes measures such as construction and exclusion zones in relation to retained vegetation, ensuring a tidy and neat working area, and the sustainable management and handling of soil resources in accordance with best practice measures. The **Framework CEMP [EN010154/APP/7.7]** will be developed into a detailed (or construction issue) CEMP by the appointed Contractor prior to the start of construction and will provide the framework within which the appointed Contractor (including any sub-contractors or suppliers involved in the works) will plan, implement and deliver environmental management, mitigation and monitoring requirements during the construction

phase of the Proposed Development. The detailed CEMP will be agreed with the local planning authorities following grant of the DCO and prior to the start of construction. Production of the detailed CEMP will be secured through a Requirement attached to the DCO.

5.6.8 It is intended that the detailed CEMP will be a 'live' document and will be updated to reflect changes such as new legislation being issued or additional information becoming available.

5.6.9 The implementation of embedded mitigation relied upon in the assessments is secured through the Requirements of the DCO, as set out in the **Draft DCO [EN010154/APP/3.1]**, **Proposed Development Parameters [EN010154/APP/7.4]** and the **Design Approach Document, Appendix A - Design Commitments [EN010154/APP/7.3]**, either through the setting of limits of deviation (e.g., development extents or specific maximum heights) or specifying mitigation measures via a Requirement attached to the DCO.

5.6.10 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. The residual effects (after the implementation of additional mitigation) have then been assessed and are presented in each topic chapter (**Chapters 6** to **14, [EN010154/APP/6.1]**). These measures are also discussed within the relevant framework environmental management plan(s) submitted alongside the DCO application. Likely significant residual effects are also summarised in **Chapter 16: Summary of Environmental Effects** of this ES **[EN010154/APP/6.1]**.

5.6.11 Where a likely significant effect has been identified, requirements for monitoring are proposed, as relevant, within the relevant technical chapter (**Chapters 6** to **14 [EN010154/APP/6.1]**) in line with the EIA Regulations, where practicable. In addition, where feasible, environmental enhancements – which are improvements to the environment that are not required to reduce or mitigate adverse effects – have been embedded in the Proposed Development design.

5.6.12 In accordance with the Planning Inspectorate's Guidance *Nationally Significant Infrastructure Projects: Commitments Register* (Ref 5-15), mechanisms for securing all environmental mitigation and monitoring measures are set out within the standalone **Environmental Commitments Register [EN010154/APP/6.5]** submitted with the DCO application.

5.7 Assessment of Construction and Decommissioning Effects

5.7.1 The assessment of construction and decommissioning effects has been undertaken based on existing knowledge, techniques and equipment, including extensive knowledge regarding the delivery of solar and BESS schemes by the Applicant and project team. A 'reasonable worst-case'

scenario has been used with respect to the envisaged construction methods, location (proximity to sensitive receptors), phasing and timing of construction activities. Detailed assumptions for the purpose of assessments, where relevant, are outlined within the respective technical ES chapters (**Chapters 6** to **14** of this ES **[EN010154/APP/6.1]**). Typically, decommissioning phase effects are similar in nature to the construction phase, although may be of shorter duration and of less intensity.

5.7.2 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, using containers with 110% capacity to store fuel and other chemicals onsite, etc. The purpose of this is to focus on Proposed Development-specific effects, rather than generic construction effects that can be easily addressed using standard good practice mitigation measures. Construction and decommissioning assumptions, including what has been assumed in terms of good practice measures, have been set out within the ES, the **Framework CEMP [EN010154/APP/7.7]**, and the **Framework Decommissioning Environmental Management Plan (DEMP) [EN010154/APP/7.9]** submitted alongside the DCO application, respectively. The ES identifies and assesses construction and decommissioning effects that are likely to remain after these mitigation measures are in place.

5.8 Temporal Scope: Timescales and Assessment Years

Construction Phase Effects

5.8.1 For the purposes of the assessment, the construction phase effects are those effects that result from activities during 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, which are likely to persist throughout the entire construction period (although the intensity and location of these activities will vary over the course of construction).

Operational Phase Effects

5.8.2 Operational effects are the effects that are associated with operational and maintenance activities during the generating lifetime of the Proposed Development. This includes the effects of the physical presence of the solar PV infrastructure, and its operation, use and maintenance, including ad hoc refurbishment/replacement of components that have malfunctioned or ceased

to be effective. Timescales associated with these enduring effects are as follows:

a. **Short term** – endures for up to 12 months after construction or decommissioning;

b. **Medium term** – endures for one to five years after construction or decommissioning;

c. **Long term** – endures for more than five years after construction or decommissioning;

d. **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

e. **Permanent effects** – effects which cannot be reversed following decommissioning.

5.8.3 Environmental management and mitigation measures for the operational phase of the Proposed Development will be planned, implemented, and delivered through an Operational Environmental Management Plan (OEMP) to be prepared following grant of the DCO and secured via a Requirement of the **Draft DCO [EN010154/APP/3.1]**. A **Framework OEMP [EN010154/APP/7.8]** has been prepared and submitted with the DCO application.

Decommissioning Period Effects

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

5.8.5 Decommissioning phase effects are set out and assessed in each of the technical chapters of this ES (**Chapters 6** to **14, [EN010154/APP/6.1]**).

Assessment Years

5.8.6 The assessment considers the environmental impacts of the Proposed Development at key stages in its construction, operation and decommissioning.

5.8.7 The 'existing baseline' reflects the period in which the baseline studies for the EIA have been undertaken (i.e. based on survey data undertaken across 2023 to 2025), and as such is representative of this time-period. As described in paragraph 5.5.3, ‘future baseline’ conditions are also predicted for each assessment as relevant, whereby the conditions anticipated to prevail at a certain point in the future (assuming the Proposed Development does not progress) are identified for comparison with the predicted conditions with the

Proposed Development. 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 – i.e. Tier 1, 2 or 3 schemes as per the Planning Inspectorate's Guidance *Nationally Significant Infrastructure Projects: Advice on Cumulative Effects Assessmen*t (Ref 5-8).

5.8.8 The assessment scenarios that are being considered for the purposes of the EIA (and considered in this ES) are as follows:

a. Existing Baseline (2023-2025): this is the existing conditions;

b. Future Baseline (in the absence of the Proposed Development) in 2031–2033: this is the principal baseline against which each phase is assessed, taking into account any changes between the existing baseline and the years when construction is expected if the Proposed Development was not developed. It is common for the future baseline to be the same as the existing baseline if there are no planned changes to the land management or surrounding area, in which case the assessment is based on changes relative to the existing conditions. A future baseline scenario in 2048 is also included for landscape, visual and heritage setting only, reflecting Year 15 (post construction), in accordance with industry good practice to consider impacts once sufficient time has passed for vegetation screening to have matured;

c. Construction (anticipated 2031–2033): the peak construction year for the purpose of the EIA is anticipated to be 2032; this assumes commencement of construction in 2031 and that the Proposed Development is built out rapidly over a 24-month period (with construction of the Cable Corridor requiring approximately 12-months and commencing in 2031). This is a likely worst case from a traffic generation point of view because it compresses the trip numbers into a shorter duration and represents the greatest impact on the highway network. The assumed 2031 construction start date for the purposes of assessment within this ES is based upon information currently available, including the construction of the proposed National Grid substation near Navenby which allows for the connection of the Proposed Development to the national electricity transmission network. If construction of the proposed National Grid substation near Navenby is progressed quicker than anticipated, the Proposed Development construction may commence sooner. In this instance, it is considered that the scale/nature of effects identified through the assessments presented in this ES (**Chapters 6** to **14, [EN010154/APP/6.1]**) will remain the same (i.e. a negligible change to established likely significant effects), although the timing of the effect would be realised sooner as relevant. Should the timings of construction affect the significance of effects this is noted in the relevant technical chapter (**Chapters 6** to **14, [EN010154/APP/6.1]**). A lengthened construction phase would likely result in lower traffic, air quality and noise impacts; therefore, the likely worst-case scenario has been assessed within this ES (**Chapters 6** to **14, [EN010154/APP/6.1]**). Where a longer duration of the construction period is, however, deemed to represent a

worse effect, this is stated in the relevant technical ES chapters (**Chapters 6** to **14, [EN010154/APP/6.1]**) and the assessment presented in those chapters assumes a longer duration (as appropriate). The construction period may be up to 30 months if a less rapid build-out programme is implemented.

d. Operation (anticipated 2033) – this is the expected first year of exporting electricity by the Proposed Development. However, due to the sequential nature of construction activities it is possible that some solar PV panels may be generating and exporting energy whilst others are still being built. Any impacts associated with overlap of phases will are assessed accordingly in this ES.

e. Decommissioning (after 60 years from anticipated commercial operation start date, approximately 2093) – this would be the earliest year when decommissioning would commence based on the expected operational date and 60-year design life of the Proposed Development. The decommissioning assessment is high level and qualitative.

5.9 General Assessment Methodology

5.9.1 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.

5.9.2 Details relating to the specific assessment methodologies of individual technical topics are provided in the technical chapters of this ES (**Chapters 6** to **14, [EN010154/APP/6.1]**). Generally, each technical chapter of the ES follows a five-stage approach, as set out below. In some cases, technical chapters may deviate from the below approach where specific technical guidance requires a different methodology. Where this is the case, this is clearly identified in relevant technical chapters, as appropriate. For example, **Chapter 6: Climate Change** of this ES **[EN010154/APP/6.1]** has deviated from this approach in that each of the three aspects of the Climate Change Chapter (Greenhouse Gas Assessment, Climate Change Risk Assessment and In-combination Climate Change Impact Assessment) follow the five-stage approach set out below separately, rather than combined. This approach has been taken to make the overall structure of the Climate Change ES chapter clearer to the reader, enabling the logic of each aspect of the assessment to be followed separately.

5.9.3 The overall environmental acceptability of the Proposed Development is a matter for the SoS to determine, having taken into account, amongst other matters, the environmental information that is set out in this ES, including all likely beneficial and adverse environmental effects.

Stage 1: Determining the value / sensitivity of the receptor or environmental resource

5.9.4 The technical chapters of this ES (**Chapters 6** to **14, [EN010154/APP/6.1]**) define the baseline conditions against which the likely significant environmental effects of the Proposed Development are determined and identify receptors and environmental resources that may be impacted. Each receptor and/or environmental resource has been assigned a value on the basis of its importance or sensitivity to potential impacts, according to the methodology set out in the relevant technical chapter of this ES (**Chapters 6** to **14, [EN010154/APP/6.1]**).

5.9.5 The sensitivity, value or importance of a resource or receptor is normally derived from:

a. Designated status within the land use planning system;

b. Reference to standards in environmental assessment guidance;

c. The number of individual receptors, such as residents;

d. An empirical assessment on the basis of characteristics such as rarity or condition; and

e. Its ability to absorb change.

5.9.6 The terminology that has been used to categorise the sensitivity of resources/receptors is as follows:

a. High;

b. Medium;

c. Low; and

d. Very Low.

Stage 2: Determining the magnitude and attributes of impacts

5.9.7 The technical chapters of this ES (**Chapters 6** to **14, [EN010154/APP/6.1]**) have identified the potential impacts of the Proposed Development during the construction, operational, and decommissioning phases. The magnitude of the impact or scale of change in comparison to baseline conditions has been determined in line with the topic specific methodology, while taking into account any embedded mitigation that forms an inherent part of the Proposed Development or is considered as standard practice or a legislative requirement for managing commonly occurring environmental effects (defined as 'tertiary mitigation' by IEMA (Ref 5-16)).

5.9.8 Where it has not been possible to quantify effects, qualitative assessments have been carried out based on available knowledge and professional judgment. Where uncertainty exists, this has been noted in the relevant topic

chapter (**Chapters 6** to **14, [EN010154/APP/6.1]**) where assumptions are stated.

5.9.9 The terminology that has been used to categorise the magnitude of impact is as follows:

a. High;
b. Medium;
c. Low; and
d. Very Low.

Stage 3: Classification of the effect significance

5.9.10 The evaluation of the significance of an effect is an important step in the EIA process, as it is the significance of an effect that, in the case of an adverse effect, determines the extent of avoidance or mitigation required or, for beneficial effects, determines the value of that effect.

5.9.11 In general, the technical chapters of this ES (**Chapters 6** to **14, [EN010154/APP/6.1]**) have classified the effect significance of the Proposed Development by considering the sensitivity/value of the receptor or environmental resource against the magnitude of impact.

5.9.12 The significance of environmental effects has been determined by reference to criteria for each assessment topic. Specific effect significance criteria for each technical discipline have been developed and agreed with the Planning Inspectorate through the EIA Scoping process, giving due regard to the following:

a. Extent and magnitude of the impact (i.e. the magnitude of change from the baseline condition) (described as high, medium, low and very low);
b. Effect duration (see paragraph 5.8.2), and whether effects are temporary, reversible or permanent;
c. Effect nature (whether direct or indirect, reversible or irreversible, beneficial or adverse);
d. Whether the effect occurs in isolation, is cumulative or interacts with other effects;
e. Performance against any relevant environmental quality standards;
f. Sensitivity of the receptor (described as high, medium, low and very low); and
g. Compatibility with environmental policies.

5.9.13 The classifying of effects has been evaluated with reference to available definitive standards, accepted criteria, and legislation, where applicable. For

issues where definitive quality standards do not exist, significance has been based on the following considerations:

a. Local, district, regional or national scale or value of the resource affected;

b. Number of receptors affected;

c. Sensitivity of these receptors; and

d. Duration of the effect.

5.9.14 In order to provide a consistent approach to expressing the outcomes of the various studies undertaken as part of the EIA, and thereby enable comparison between effects upon different environmental topics, the following terminology is used in this ES to characterise effects:

a. **No effect** – where there would be no effects (positive and/or negative) upon the environmental / socio-economic resource or receptor;

b. **Adverse** – detrimental or negative effects to an environmental / socio-economic resource or receptor; or

c. **Beneficial** – advantageous or positive effects to an environmental / socio-economic resource or receptor.

5.9.15 When addressing the duration of an effect, the following terminology has been used:

a. **Temporary** – Short, medium or long-term (see paragraph 5.8.2);

b. **Reversible** – long-term effects, which endure throughout the lifetime of the Proposed Development, but which cease once the Proposed Development has been decommissioned; and

c. **Permanent** – Effects that are non-reversible, generally associated with the complete and operational Proposed Development and which are not reversed during decommissioning.

5.9.16 Where adverse or beneficial effects are identified, these have been assessed against the following scale:

a. **Negligible** – effects which are beneath levels of perception, within normal bounds of variation or within the margin of forecasting error, and are of no significant consequence;

b. **Minor** – slight, very short or highly localised effect of no significant consequence;

c. **Moderate** – noticeable effect (by extent, duration or magnitude) which may be considered significant; or

d. **Major** – considerable effect (by extent, duration or magnitude) of more than local significance or in breach of recognised acceptability, legislation, policy or standards; considered significant.

5.9.17 Each of the technical chapters of this ES (**Chapters 6** to **14, [EN010154/APP/6.1]**) provides the criteria, including sources and

justifications, for quantifying the different categories of effect. Where possible, this is based upon quantitative and accepted criteria (for example, noise assessment guidelines), together with the use of professional judgment and expert interpretation to establish to what extent an effect is environmentally significant.

5.9.18 **Table 5-1** illustrates a generic example of how the classification of effect might be undertaken. Where topic-specific classification of effect significance has been applied, this is set out in the relevant technical chapter (**Chapters 6** to **14 [EN010154/APP/6.1]**).

Table 5-1: Example Matrix to Classify the Significance of Environmental Effects

Sensitivity or value of resource/receptor	Magnitude of impact			
	High	**Medium**	**Low**	**Very Low**
High	Major	Major	Moderate	Minor
Medium	Major	Moderate	Minor	Negligible
Low	Moderate	Minor	Negligible	Negligible
Very Low	Minor	Negligible	Negligible	Negligible

5.9.19 Following the classification of an effect, clear statements are made within the technical chapters (**Chapters 6** to **14, [EN010154/APP/6.1]**) of this ES as to whether an effect is considered to be significant or not significant. As a rule, major and moderate effects are considered to be significant (as shown by the shaded cells in **Table 5-1** above), whilst minor and negligible effects are considered to be not significant. However, professional judgement has been applied, including taking account of whether the effect is permanent or temporary, its duration and frequency, whether it is reversible, and / or its likelihood of occurrence as described in paragraph 5.9.15.

Stage 4: Identifying additional mitigation measures, as necessary

5.9.20 Where possible, mitigation has been incorporated into the Proposed Development as part of the iterative design process (i.e. embedded mitigation, also known as primary and tertiary mitigation as defined by IEMA). Where major or moderate adverse effects are predicted after this mitigation has been taken into account, additional mitigation measures have been identified to avoid, further mitigate, or remedy those effects. As defined by IEMA, these measures are classed as 'secondary mitigation' and may be secured by the DCO for the Proposed Development.

5.9.21 All mitigation measures, whether primary, tertiary or secondary, are described within the relevant technical chapters of this ES (**Chapters 6** to **14, [EN010154/APP/6.1]**). Construction mitigation measures are collated and presented within the **Framework CEMP** submitted alongside this ES as part of the DCO application **[EN010154/APP/7.7]**. Operational and

decommissioning mitigation measures have been presented in a **Framework OEMP [EN010154/APP/7.8]** and the **Framework DEMP [EN010154/APP/7.9]**, which are also submitted as part of the DCO application. Compliance with the CEMP, OEMP and DEMP are secured by Requirements in the **Draft DCO [EN010154/APP/3.1]**.

Stage 5: Identifying residual effects

5.9.22 Following the identification of any additional mitigation measures, if required, the residual effects of the Proposed Development are classified. Residual effects found to be of moderate or major significance are deemed to be likely significant effects, unless stated otherwise. Effects found to be negligible or minor are considered to be not significant. Significance of effects has been considered when applying topic specific guidance. The residual likely significant effects are summarised within **Chapter 16: Summary of Environmental Effects** of this ES **[EN010154/APP/6.1]**.

5.9.23 Generic definitions for the classification of effects are shown in **Table 5-2**.

Table 5-2: Generic Effects Descriptions

Effect	Generic Description
Major	These effects may 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	These effects are likely to be important and could have an important and relevant influence on decision making.
Minor	These effects may be raised as local issues and may be of relevance in the detailed design of the Proposed Development but are unlikely to be critical in the decision-making process.
Negligible	Effects which are beneath levels of perception, within normal bounds of variation or within the margin of forecasting error. These effects are unlikely to influence decision making, irrespective of other effects.

5.9.24 The technical chapters of this ES (**Chapters 6** to **14, [EN010154/APP/6.1]**) highlight 'residual' effects, which are those effects that remain following the implementation of suitable mitigation measures and classify these in accordance with the effect classification terminology set out above.

5.9.25 It should be noted that some technical disciplines may utilise different criteria when undertaking assessments due to differences in industry accepted guidelines and specifications. Where this is the case, the technical topic (**Chapters 6** to **14, [EN010154/APP/6.1]**) discusses how the assessment methodology or classification of effects differs for the general EIA methodology as described in this ES Chapter and provides justification.

5.10 Interaction and Accumulation

5.10.1 In accordance with Schedule 4, paragraph 5 of the EIA Regulations (Ref 5-1) 'Cumulative Effects' associated with the Proposed Development, as relevant, have been considered within this ES. These are effects that result from incremental changes caused by other past, present, or reasonably foreseeable actions in-combination (i.e. cumulatively) with the Proposed Development.

5.10.2 For the cumulative impact assessment, two types of impact will be considered:

a. The combined effect of individual impacts from the Proposed Development, for example where a single receptor is affected by noise and traffic disruption during the construction of the Proposed Development (these will be referred to as 'Effect Interactions'); and

b. The combined effects of several development schemes which may interact cumulatively with the Proposed Development. The effects of these schemes may, on an individual basis be insignificant but, cumulatively with the Proposed Development, have a new or different likely significant effect on the environment (these are referred to as 'Cumulative Effects').

5.10.3 Further detail on the assessment methodology and the outcomes of the Effect Interactions and Cumulative Effects assessment is provided in **Chapter 15: Cumulative Effects and Interactions** of this ES **[EN010154/APP/6.1]**.

Effect Interactions

5.10.4 A range of public sector and industry-led guidance is available on the approach to assessing and quantifying Effect Interactions 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 Effect Interactions "*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 5-11).

5.10.5 AECOM has reviewed these guidelines and has developed an approach based upon professional judgement which uses the defined residual environmental effects of the Proposed Development to determine the potential for Effect Interactions that lead to combined effects. This approach is consistent with that followed on previous NSIPs such as Sunnica Energy Farm, Gate Burton Energy Park, and Longfield Solar Farm, which are all solar NSIPs and have been granted development consent.

5.10.6 Several effects on one receptor or receptor group could theoretically interact or combine to produce a combined significant overall effect.

5.10.7 A preliminary exercise which tabulates the potential for individual environmental effects to combine to create a new environmental effect on a resource, receptor, or receptor group has been undertaken to determine the potential for Effect Interactions and therefore any combined effects, as

presented in **Chapter 15: Cumulative Effects and Interactions** of this ES **[EN010154/APP/6.1]**. It should be noted that the preliminary exercise identifies where these Effect Interactions are inherently considered within the assessments presented within **Chapters 6** to **14** of this ES **[EN010154/APP/6.1]** and where they are not. Therefore, the focus of the preliminary exercise presented in **Chapter 15: Cumulative Effects and Interactions** of this ES **[EN010154/APP/6.1]** is on those interactions that are not assessed elsewhere in the technical chapters of this ES (**Chapters 6** to **14 [EN010154/APP/6.1]**) and provides an appraisal of the likelihood of any significant Effect Interactions.

5.10.8 Only adverse or beneficial residual effects classified as minor, moderate, or major have been considered in relation to potential Effect Interactions. Residual environmental effects classified as negligible have been excluded from the assessment of Effect Interactions as, by virtue of their definition (see **Table 5-2**), they are considered to be imperceptible effects to an environmental / socio-economic resource or receptor.

Cumulative Effects with Other Developments

5.10.9 The Planning Inspectorate's Guidance *Nationally Significant Infrastructure Projects: Advice on Cumulative Effects Assessmen*t (Ref 5-8) 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'

5.10.10 A review of other developments has been undertaken, initially encompassing a 'zone of influence' (ZoI) defined by the environmental topic specialists to prepare a preliminary long list of 'other development'. The justification for each ZoI identified is presented in **Chapters 6** to **14** of this ES **[EN010154/APP/6.1]** and summarised in Table 15-4 of **Chapter 15: Cumulative Effects and Interactions** of this ES **[EN010154/APP/6.1]**.

5.10.11 Developments included in the initial long-list were identified using the criteria below. The criteria have been developed having regard to the Planning Inspectorate's Guidance *Nationally Significant Infrastructure Projects: Advice on Cumulative Effects Assessment* (Ref 5-8) and utilising experience of assessing Cumulative Effects for schemes of a similar nature and scale to the Proposed Development:

a. Development currently under construction, approved applications which have not yet been implemented (covering the past five years and taking account of those that received planning consent over three years ago and are still valid but have not yet been implemented), or developments that have been registered with the council or relevant determining authority, and which meet one of the below criteria (b) to (e);

b. Listed on the National Infrastructure Planning Programme of Projects within 10km of the DCO Site;

c. Applications for EIA development within 5km of the DCO Site Boundary;

d. Other, non-EIA applications for ground based solar and/or BESS development within 5km of the DCO Site Boundary; and

e. Other schemes that do not meet the above criteria but which the Applicant wishes to include or a statutory stakeholder specifically requests is included. This may include development allocations identified in the relevant Development Plan (and emerging Development Plans) for example, which are aspirational but have not yet reached pre-application or application stage.

Stage 2 – Identify Short List of 'Other Development' for Cumulative Effects Assessment

5.10.12 At Stage 2, to ensure a proportionate approach to the assessment, any developments of a nature or scale without the potential to result in likely significant Cumulative Effects were excluded from the list, following consideration of:

a. The likely ZoI for each environmental topic;

b. The nature of the development; and

c. Whether there is likely to be overlap in the timing of the construction or operational phases.

5.10.13 The short list has been developed in liaison with North Kesteven District Council and Lincolnshire County Council. The agreed short list of cumulative developments is provided in **Chapter 15: Cumulative Effects and Interactions** of this ES **[EN010154/APP/6.1]**.

Stage 3 – Information Gathering

5.10.14 To inform the assessment, information relating to the other development(s) has been collected from appropriate sources (which includes the Local Planning Authorities, the Planning Inspectorate or directly from the applicant / developer of the scheme in question) and includes, but is not limited to:

a. Proposed design and location information;

b. Proposed programme of demolition, construction, operation and/or decommissioning; and

c. Environmental assessments that set out baseline data and effects arising from 'other developments'.

Stage 4 – Assessment

5.10.15 The assessment presented in this ES includes a list of those other developments considered to have the potential to generate a significant cumulative effect together with the Proposed Development, and is documented in a matrix, in line with Matrix 2 (Appendix 2) of the Planning

Inspectorate's Guidance *Nationally Significant Infrastructure Projects: Advice on Cumulative Effects Assessment* (Ref 5-8) which includes the following:

a. A brief description of the development;
b. An assessment of the cumulative effect with the Proposed Development;
c. Proposed mitigation applicable to the Proposed Development; and
d. The likely residual cumulative effect.
e. The criteria for determining the significance of any cumulative effect is based upon:
f. The duration of effect, i.e. will it be temporary or permanent;
g. The extent of effect, e.g. the geographical area of an effect;
h. The type of effect, e.g. whether additive or synergistic;
i. The frequency of the effect;
j. The 'value' and resilience of the receptor affected; and
k. The likely success of mitigation.

5.11 References

Ref 5-1 The Infrastructure Planning (Environmental Impact Assessment) Regulations (2017). Available at: https://www.legislation.gov.uk/uksi/2017/572

Ref 5-2 HMSO (2008). The Planning Act 2008.

Ref 5-3 Planning Inspectorate (2024). Nationally Significant Infrastructure Projects: Advice on EIA Notification and Consultation.

Ref 5-4 PINS (2023). Advice Note Six: Preparation and submission of application documents.

Ref 5-5 Planning Inspectorate (2020). Advice Note Seven: Environmental Impact Assessment: process, preliminary environmental information and environmental statements (version 7).

Ref 5-6 Planning Inspectorate (2018). Advice Note Nine: Rochdale Envelope (version 3).

Ref 5-7 Planning Inspectorate (2024). Nationally Significant Infrastructure Projects: Advice on working with public bodies in the infrastructure planning process.

Ref 5-8 Planning Inspectorate (2024). Nationally Significant Infrastructure Projects: Advice on Cumulative Effects Assessment.

Ref 5-9 Department for Energy Security & Net Zero (2023). Overarching National Policy Statement for Energy (EN-1).

Ref 5-10 Planning Inspectorate (2024). Nationally Significant Infrastructure Projects: Advice on Transboundary Impacts and Process.

Ref 5-11 European Commission (1999). Guidelines for the Assessment of Indirect and Cumulative Impacts as well as Impact Interactions.

Ref 5-12 The Planning Act 2008. Available at: https://www.legislation.gov.uk/ukpga/2008/29.

Ref 5-13 Planning Inspectorate (2024). Nationally Significant Infrastructure Projects: Advice on the Consultation Report.

Ref 5-14 The Infrastructure Planning (Environmental Impact Assessment) Regulations 2017 (as amended by The Town and Country Planning and Infrastructure Planning (Environmental Impact Assessment) (Amendment) Regulations 2018). Available at: http://www.legislation.gov.uk/uksi/2017/572/pdfs/uksi_20170572_en.pdf and http://www.legislation.gov.uk/uksi/2018/695/pdfs/uksi_20180695_en.pdf

Ref 5-15 Planning Inspectorate (2024). Nationally Significant Infrastructure Projects: Commitments Register. Available at:

https://www.gov.uk/guidance/nationally-significant-infrastructure-projects-commitments-register

Ref 5-16 IEMA (2016). Environmental Impact Assessment Guide to: Delivering Quality Development.