



# Fosse Green Energy

EN010154

## 7.3 Design Approach Document

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VOLUME

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Planning Act 2008 (as amended)

Regulation 5(2)(q)

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

18 July 2025

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## Planning Act 2008

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

#### Fosse Green Energy Development Consent Order 202[ ]

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#### **7.3 Design Approach Document**

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## Executive Summary

- ES1 This Design Approach Document sets out how the design of the Proposed Development has evolved. It details how the design has been influenced by site selection and site context, how it has addressed the findings of the environmental assessment, how it has evolved through consultation, and how it aligns with the Design Vision and design principles.
- ES2 The design of the Proposed Development has been developed in accordance with a clear design framework, based on the criteria for good design set out in Paragraphs 4.7.5 to 4.7.9 of the Overarching National Policy Statement for Energy (EN-1) (NPS EN-1). The design also carefully considers the advice provided within NPS EN-1, the National Planning Policy Framework, local planning policy and national and local design guidance. This has included the adoption of project level design principles to guide decision making and embed good design outcomes into the Proposed Development.
- ES3 The application of the Design Vision and Principles has resulted in sustainable infrastructure that is sensitive to place, has minimal impacts on heritage assets, efficient use of natural resources, matched by an appearance that demonstrates good aesthetic as far as possible, in accordance with NPS EN-1. This Design Approach Document also sets out the mechanisms that secure good design, including the Design Commitments at Appendix A, and apply post consent along with the approach to maintaining community engagement via the established Community Liaison Group.



# 1. Introduction

## 1.1 Background

- 1.1.1 This Design Approach Document (DAD) has been prepared on behalf of Fosse Green Energy Limited (the Applicant) in relation to an application for a Development Consent Order (DCO) for Fosse Green Energy (the Proposed Development). The DCO application is submitted to the Planning Inspectorate, with the decision whether to grant a DCO being made by the Secretary of State for Energy Security and Net Zero (the Secretary of State) pursuant to the Planning Act 2008 (PA 2008) [Ref 1].
- 1.1.2 The Proposed Development comprises the construction, operation (including maintenance), and decommissioning of a ground-mounted solar photovoltaic (PV) electricity generating station with access provision, battery storage, Onsite Substation, underground cabling and associated infrastructure to generate and export and import electricity, and areas of landscaping and biodiversity enhancement. The Proposed Development will export and import electricity via the national electricity transmission network.
- 1.1.3 The Proposed Development also includes a 400kV underground Cable Route Corridor of approximately 10km in length connecting the Onsite Substation and the proposed National Grid substation near Navenby, which is subject to a separate application and does not form part of the Proposed Development. A full description of the Proposed Development is included in **Chapter 3: The Proposed Development** of the Environmental Statement (ES) [EN010154/APP/6.1].
- 1.1.4 The Proposed Development is classified as a Nationally Significant Infrastructure Project (NSIP) under s14(1)(a), s15(1) and s15(2) of the Planning Act 2008 (as amended) [Ref 1], as it consists of the construction of an onshore generating station in England exceeding 50 megawatts (MW), and requires an application for a Development Consent Order (DCO).
- 1.1.5 The Proposed Development will be located approximately 9km to the south and south west of Lincoln. The Order Limits of the Proposed Development, comprise approximately 1,368 hectares (ha) of land which includes:
- a. The DCO Site (this is the Order Limits) – the maximum extent of land required for the construction, operation (including maintenance), and decommissioning of the Proposed Development. The DCO Site comprises the Principal Site and the Cable Corridor.
  - b. Principal Site – the area of the Site covered by the ground-mounted PV panels, Solar Stations, battery energy storage system (BESS), Onsite Substation, planting and mitigation areas, interconnecting cables between solar PV areas, and associated infrastructure. The total area of the Principal Site is approximately 1,068ha. The Principal Site is located in proximity to the villages of Thorpe on the Hill, Morton Hall and Morton,

Witham St Hughs, Norton Disney, Bassingham, Thurlby, Haddington and Aubourn.

- c. Cable Corridor – the area of the Site in which the 400 kilovolt (kV) and associated cables (the Grid Connection Cables) will be installed between the Onsite Substation and the proposed National Grid substation near Navenby. The proposed National Grid substation near Navenby is subject to a separate planning application under the Town and Country Planning Act 1990 and does not form part of the Proposed Development. The Cable Corridor partially overlaps the Principal Site and is approximately 351ha in size, although once constructed the cable itself will comprise a small fraction of this. The need for flexibility is explained in the Planning Statement [EN010154/APP/7.2]. The Cable Corridor passes largely through agricultural land between the villages of Bassingham, Boothby Graffoe and Coleby, extending to the east of Navenby.
- 1.1.6 A detailed description of the Proposed Development and its components is set out in **Chapter 3: The Proposed Development** of the ES [EN010154/APP/6.1].

## 1.2 Key design terminology

- 1.2.1 Various design terms are referred to in this DAD. To aid understanding of the different terms, an explanation is provided below:
- a. Design Parameters – the potential maximum (and where relevant minimum) parameters of the Proposed Development, including limits of deviation (e.g., the height of solar panels and the width of the Cable Corridor) as relevant. The design parameters form the Rochdale Envelope and ensure a robust assessment of the likely significant environmental effects of the Proposed Development by each topic in the Environmental Statement by allowing for the establishment of reasonable worst-case parameters, recognising that the worst-case parameter for one technical assessment may differ from another, where flexibility needs to be retained. The design parameters are set out in the **Proposed Development Parameters** [EN010154/APP/7.4].
  - b. Design Vision – the overarching strategic ambition for the Proposed Development which articulates the key elements that it will deliver. The Design Vision is set out in Section 3.8 of this DAD.
  - c. Design Principles – the project level objectives that provide a framework for evolution of the design through the pre-application process, informed by national and local planning policy and an understanding of the site context. The Design Principles are set out in Section 3.9 of this DAD.
  - d. Design Commitments - informed by iterative environmental testing and assessment, overlapping in places with the environmental commitments set out in the **Environmental Commitments Register** [EN010154/APP/6.5], the Design Commitments secure the practical implementation of the Design Principles to ensure that post consent they

can be delivered. The Design Commitments are set out in Appendix A of this DAD.

## 1.3 Structure and purpose of this document

- 1.3.1 The purpose of this DAD is to demonstrate how the design of the Proposed Development has evolved as a result of an understanding of the site context, the outcomes of environmental assessment, technical engagement with stakeholders and the feedback received at Non-Statutory and Statutory Consultation, and how it aligns with the Design Vision and Principles. The structure of the DAD reflects the design process set out in the Planning Inspectorate's guidance set out in Nationally Significant Infrastructure Projects: Advice on Good Design [Ref 2].
- 1.3.2 The DAD will assist the Examining Authority in considering how design-related policy requirements set out in the energy National Policy Statements (NPS), have been addressed.
- 1.3.3 This DAD is therefore structured as follows:
  - a. Section 2: Planning Policy context – introduces the context of what is considered to be good design with reference to national and local planning policy and relevant design guidance.
  - b. Section 3: Assemble – explains the project brief, site selection, the design team, programme, site context, the Design Vision and Design Principles.
  - c. Section 4: Research – demonstrates how the design of the Proposed Development has evolved and how design measures have been used to mitigate adverse effects. This section also sets out how the spatial layout of the Proposed Development has been shaped by the Design Principles as well as how the design has delivered positive outcomes.
  - d. Section 5: Co-ordinate – explains further design refinement and the process for post-consent decision-making.
  - e. Section 6: Securing Good Design – sets out how good design is secured and will be delivered, including ongoing design advice and community engagement.
  - f. Section 7: Conclusions.
  - g. Section 8: References.
  - h. Appendix A: Design Commitments.
  - i. Appendix B: Consideration of the Planning Inspectorate's Advice on Good Design.



## 2. Planning Policy Context

### 2.1 Introduction

- 2.1.1 As outlined in the Nationally Significant Infrastructure Projects: Advice on Good Design [Ref 2], *"Good design is crucial for achieving excellent functionality, sustainability, positive place-making, and resilience in NSIPs."* The advice further emphasises that good design should be responsive to its context and consider complex environments. Achieving high-quality design outcomes requires an effective, intentional, transparent, deliverable process to be planned, followed and secured. It is crucial to ensure that project outcomes are well-designed, addressing both sustainability and climate change. As detailed below, the requirement for good design is also set out in both national and local policy and guidance.
- 2.1.2 This section highlights the key policy documents that have been considered and influenced the development of the Design Vision and Principles. It provides an overview of the energy NPSs, national and local planning policy and national and local design guidance.

### 2.2 Policy Context

#### National Policy Statements

- 2.2.1 The requirement to achieve good design is stated in the relevant energy NPSs. NPS EN-1 sets out the requirements for energy infrastructure, whilst the National Policy Statement for Renewable Energy Infrastructure EN-3 (NPS EN-3) relates to renewable energy infrastructure and the National Policy Statement for Electricity Networks Infrastructure EN-5 (NPS EN-5) relates to electricity networks infrastructure. NPS EN-1, NPS EN-3 and NPS EN-5 are complementary to one another and are the primary decision-making policy documents for the Secretary of State in considering whether to grant a DCO for the Proposed Development.

#### Overarching National Policy Statement for Energy EN-1

- 2.2.2 NPS EN-1 [Ref 3] sets out the Government's policy for the delivery of nationally significant low carbon infrastructure. Section 4.2 of the NPS EN-1 introduces the critical national priority (CNP) for low carbon infrastructure. Paragraph 4.2.1 of NPS EN-1 states that:

*"Government has committed to fully decarbonising the power system by 2035, subject to security of supply, to underpin its 2050 net zero ambitions. More than half of final energy demand in 2050 could be met by electricity, as transport and heating in particular shift from fossil fuel to electrical technology."*

- 2.2.3 The Government has concluded that there is a CNP for the provision of nationally significant low carbon infrastructure. Paragraph 4.2.5 of NPS EN-1 confirms that for electricity generation, significant low carbon infrastructure

includes all onshore and offshore generation that does not involve fossil fuel combustion, this therefore defines solar photovoltaic generation as a form of CNP infrastructure.

- 2.2.4 As part of the overarching national policy direction for the provision of energy set out by NPS EN-1, applicants are required to demonstrate how a project achieves good design. Section 4.7 of NPS EN-1 sets out the criteria for good design of energy infrastructure. Paragraph 4.7.1 of NPS EN-1, states:

*“The visual appearance of a building, structure, or piece of infrastructure, and how it relates to the landscape it sits within, is sometimes considered to be the most important factor in good design. But high quality and inclusive design goes far beyond aesthetic considerations. The functionality of an object – be it a building or other type of infrastructure – including fitness for purpose and sustainability, is equally important.”*

- 2.2.5 Further to this, paragraph 4.7.2 of NPS EN-1 states:

*“Applying good design to energy projects should produce sustainable infrastructure sensitive to place, including impacts on heritage, efficient in the use of natural resources, including land-use, and energy used in their construction and operation, matched by an appearance that demonstrates good aesthetic as far as possible. It is acknowledged, however that the nature of energy infrastructure development will often limit the extent to which it can contribute to the enhancement of the quality of the area.”*

- 2.2.6 Paragraph 4.7.3 of NPS EN-1 further explains that good design is a “means by which many policy objectives in the NPSs can be met, for example the impact sections show how good design, in terms of siting and use of appropriate technologies, can help mitigate adverse impacts.”

- 2.2.7 NPS EN-1 clarifies that good design is a means by which the adverse impacts of a project can be mitigated and seeks applicants to demonstrate how good design is embedded into a project at the early stages of its development.

- 2.2.8 Paragraphs 4.7.5 to 4.7.9 of NPS EN-1 set out how the Applicant could consider good design and includes:

- a. Appointment of a design champion and the use of a representative design panel used to maximise the value provided by the infrastructure;
- b. Establishment of Design Principles at the outset of the Proposed Development to guide design evolution;
- c. Consideration of the siting of infrastructure relative to existing landscape character, land form and vegetation;
- d. Sensitive use of materials in any associated development, and
- e. The incorporation of nature inclusive design.

- 2.2.9 Footnote 122 of NPS EN-1 explains that design principles:

*“should take into account any national guidance on infrastructure design, this could include for example the Design Principles for National Infrastructure published by the National Infrastructure Commission, the National Design Guide and National Model Design Code, as well as any local design policies and standards.”*

- 2.2.10 Within the context of decision making, paragraph 4.7.10 of NPS EN-1 states that *“the Secretary of State needs to be satisfied that energy infrastructure developments are sustainable and, having regard to regulatory and other constraints, are as attractive, durable and adaptable (including taking account of natural hazards such as flooding) as they can be.”*
- 2.2.11 Paragraph 4.7.11 of NPS EN-1 states that *“the Secretary of State should be satisfied that the applicant has considered both functionality (including fitness for purpose and sustainability) and aesthetics (including its contribution to the quality of the area in which it would be located, any potential amenity benefits, and visual impacts on the landscape or seascape) as far as possible.”*
- 2.2.12 Paragraph 4.7.12 of NPS EN-1 confirms that in considering applications, the Secretary of State *“should take into account the ultimate purpose of the infrastructure and bear in mind the operational, safety and security requirements which the design has to satisfy”*.
- 2.2.13 In this regard, NPS EN-1 acknowledges the constraints associated with the external appearance of infrastructure confirming that the wider impacts of the development upon design being *“important factors in the design process.”*
- 2.2.14 Adapting to climate change is also identified as a key consideration of design in section 4.10 of NPS EN-1. Specifically, paragraph 4.10.8 states that applicants should:
- “consider the direct (e.g. site flooding, limited water availability, storms, heatwave and wildfire threats to infrastructure and operations) and indirect (e.g. access roads or other critical dependencies impacted by flooding, storms, heatwaves or wildfires) impacts of climate change when planning the locations, design, build, operation and, where appropriate, decommissioning of new energy infrastructure”*.

### **National Policy Statement for renewable energy infrastructure EN-3**

- 2.2.15 NPS EN-3 [Ref 4] sets out national planning policy relative to renewable energy infrastructure, including solar. Paragraph 2.1.8 of NPS EN-3 confirms that whilst solar is CNP infrastructure:
- “Applicants must show how any likely significant negative effects would be avoided, reduced, mitigated or compensated for, following the mitigation hierarchy.”*
- 2.2.16 Paragraph 2.5.2 of NPS EN-3 further states that:
- “Proposals for renewable energy infrastructure should demonstrate good design, particularly in respect of landscape and visual amenity, opportunities*

*for co-existence/co-location with other marine and terrestrial uses, and in the design of the project to mitigate impacts such as noise and effects on ecology and heritage.”*

2.2.17 NPS EN-3 sets out in paragraphs 2.10.18 to 2.10.48 the key considerations and factors that influence site selection and design of solar schemes. These include:

- a. Irradiance and topography – this is a key consideration as the amount of electricity generated on the site is directly linked to the amount of irradiance. Irradiance is affected by ground topography as set out in paragraph 2.10.19 of NPS EN-3.
- b. Network connection – the capacity of the electricity transmission network and/or the presence of supportive infrastructure is critical to the feasibility of a development. Paragraph 2.10.25 of NPS EN-3 states *“To maximise existing grid infrastructure, minimise disruption to existing local community infrastructure or biodiversity and reduce overall costs, applicants may choose a site based on nearby available grid export capacity”*.
- c. Proximity to dwellings – paragraph 2.10.27 of NPS EN-3 provides that large scale solar farms *“are large sites that may have a significant zone of influence”*. Proximity to dwellings (as sensitive receptors) may therefore give rise to visual amenity and glare impacts which need to be considered.
- d. Agricultural Land Classification – paragraph 2.10.29 of NPS EN-3 states that *“land type should not be a predominating factor in determining the suitability of the site location”*. Where possible, previously developed land should be favoured and where agricultural land is necessary, preference should be given to poorer quality land rather than high quality (Best and Most Versatile) land. When siting solar infrastructure on agricultural land paragraph 2.10.32 of NPS EN-3 provides that consideration should be given to whether the design allows for the continued agricultural use.
- e. Accessibility – paragraph 2.10.35 of NPS EN-3 states that *“Applicants will need to consider the suitability of the access routes to the proposed site for both the construction and operation of the solar farm with the former likely to raise more issues”*.
- f. Public Rights of Way (PRoW) – as set out in paragraph 2.10.42 of NPS EN-3, *“applicants are encouraged to design the layout and appearance of the site to ensure continued recreational use of public rights of way”*. The design should also minimise the visual outlook from PRoW and maximise opportunities to enhance PRoW.
- g. Security and Lighting – as set out in paragraphs 2.10.46 to 2.10.48 of NPS EN-3, availability of natural defences such as hedging, and rivers as well as perimeter security measures should be a key consideration in the design of solar infrastructure. Security measures and lighting used should minimise the impact on landscape and visual impact.

2.2.18 Paragraphs 2.10.49 to 2.10.72 of NPS EN-3 set out technical considerations relating to site selection and the design of solar schemes. These paragraphs

relate to the need to maximise the power output of the Site having regard to the type, spacing and aspect of panel arrays.

- 2.2.19 In the context of good design, it is also relevant to note that paragraph 2.10.71 of NPS EN-3 confirms the need for solar schemes to retain flexibility with respect to “*panel numbers, types and layout*”.

#### **National Policy Statement for electricity networks infrastructure (EN-5)**

- 2.2.20 Section 2.4 of NPS EN-5 [Ref 5] sets out policies on the consideration of good design for electricity networks. Paragraph 2.4.1 of NPS EN-5 notes that regard should be given to the desirability of good design in the determination of DCO applications, and Paragraph 2.4.2 of NPS EN-5 signposts applicants to the criteria for good design set out in Section 4.7 of NPS EN-1.
- 2.2.21 Paragraph 2.4.3 of NPS EN-5 states that, “... *the Secretary of State should bear in mind that electricity networks infrastructure must in the first instance be safe and secure, and that the functional design constraints of safety and security may limit an applicant’s ability to influence the aesthetic appearance of that infrastructure.*”
- 2.2.22 Paragraph 2.4.4 of NPS EN-5 sets out that, “*While the above principles should govern the design of an electricity networks infrastructure application to the fullest possible extent – including in its avoidance and/or mitigation of potential adverse impacts... – the functional performance of the infrastructure in respect of security of supply and public and occupational safety must not thereby be threatened.*”

#### **National Planning Policy Framework**

- 2.2.23 The National Planning Policy Framework (NPPF) [Ref 6] adopted in December 2024 and updated in February 2025, includes a section on achieving well-designed places. Paragraph 135 sets out that planning decisions should ensure that developments:
- a. will function well and add to the overall quality of the area;
  - b. are visually attractive as a result of good architecture, layout and appropriate and effective landscaping;
  - c. are sympathetic to local character and history;
  - d. establish or maintain a strong sense of place;
  - e. optimise the potential of the site to accommodate and sustain an appropriate amount and mix of development; and
  - f. create places that are safe, inclusive and accessible and which promote health and well-being, with a high standard of amenity for existing and future users; and where crime and disorder, and the fear of crime, do not undermine the quality of life or community cohesion and resilience.



## Local Planning Policy

- 2.2.24 The Proposed Development lies within the administrative area of North Kesteven District Council and Lincolnshire County Council. The Central Lincolnshire Local Plan (CLLP), (adopted 13 April 2023) contains the planning policies and allocations for the growth and regeneration of Central Lincolnshire over a 20 year period. The CLLP recognises that good design is not only about the aesthetics *“it is also about the way a place functions, how it makes users feel, how it lasts and how it adapts”*. Accordingly, Policy S53: Design and Amenity of the Central Lincolnshire Local Plan [Ref 7] states: *“All development... must achieve high quality sustainable design that contributes positively to local character, landscape and townscape, and supports diversity, equality and access for all. Good design will be at the centre of every development proposal and this will be required to be demonstrated through evidence supporting planning applications to a degree proportionate to the proposal”*. The design criteria in Policy 53 relevant to the Proposed Development are context, identity, built form, movement, nature, uses, and resources.
- 2.2.25 There are also several made Neighbourhood Plans that contain design related policies. Policy 6 of the Thorpe on the Hill Neighbourhood Plan (made March 2018) [Ref 8] sets out that development should take account of views in and out of the village, the setting of the village, the visual impact of materials, the overall form, scale, shape and proportions, the visual importance of defining boundaries, locally distinctive architectural features and sustainable urban drainage. Policy ES1 of the Bassingham Neighbourhood Plan (made November 2017) [Ref 9] states that new development should plan positively for the achievement of high quality and inclusive design which conserves local distinctiveness and the character and aesthetic qualities of Bassingham as a traditional Lincolnshire rural settlement. Policy 3 of the Coleby Parish Neighbourhood Plan (made January 2018) [Ref 10] sets out that proposals should take every opportunity, through design and materials, to reinforce local character and a strong sense of place.

## National and Local Design Guidance

- 2.2.26 The Planning Inspectorate published Nationally Significant Infrastructure: Advice on Good Design [Ref 2] (Advice on Good Design) in October 2024. The Advice on Good Design explains that *“Good design is crucial for achieving excellent functionality, sustainability, positive place-making and resilience in NSIPs”*. The importance of Design Principles is set out including the need for an overarching vision that is *“succinct and ambitious”* and underpinned by a clear analysis of the context for the place, its environment and the opportunities for creating social value, including for the local and wider economy.
- 2.2.27 The Advice on Good Design explains that an iterative design process is critical in order for projects to secure good design outcomes and sets out a good design process diagram which the Planning Inspectorate will expect to see evidence of during the pre-application and examination stages. The steps are:



- a. Assemble
- b. Research
- c. Co-ordinate
- d. Secure

2.2.28 These steps in the design process provide the framework for this DAD.

2.2.29 Annex A of the Advice on Good Design sets out the good design issues that should be considered by applicants prior to the submission of a DCO application. Appendix B of this document confirms how the Applicant has considered good design in accordance with Annex A of the Advice on Good Design.

2.2.30 The National Infrastructure Commission (NIC) design group<sup>1</sup> published the Design Principles for National Infrastructure in 2020 [Ref 11]. This sets out four principles to guide the planning and delivery of major infrastructure projects. These are set out below:

- a. Climate: mitigate greenhouse gases and adapt to climate change, enable decarbonisation.
- b. People: reflect what society wants, improve quality of life and health/wellbeing as well as take into account the views of affected communities.
- c. Places: create a sense of identity and improve the environment, provide a positive contribution to the local landscape, protect and enhance biodiversity and achieve biodiversity net gain.
- d. Value: achieve multiple benefits and solve problems, seek opportunity to add value and solve multiple problems with one solution.

2.2.31 According to the NIC, “*design is about how something works and how it looks*”. Design should be used to solve problems and maximise the benefits. It should be integral to all aspects of a scheme and considered at all stages.

2.2.32 The NIC Design Group also published Project Level Design Principles [Ref 12] in May 2024. This guidance is aimed primarily at client side project directors and explains how to develop and embed project level Design Principles. The guidance recognises that “*Infrastructure design is about so much more than aesthetics. Using an iterative, structured design process from the project outset can deliver multiple environmental, social, and economic benefits, while limiting adverse impacts.*”

2.2.33 The National Design Guide [Ref 13] published in January 2021 sets out key components to achieve good design including layout, form, scale, appearance, landscape, materials and detailing. Part 2 of the National Design

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<sup>1</sup> The National Infrastructure Commission was an executive agency responsible for providing advice to the UK Government on infrastructure, however from 1 April 2025 it was superseded by the National Infrastructure and Service Transformation Authority (NISTA).

Guide explains that there are 10 characteristics of well-designed places (context, identity, built form, movement, nature, public spaces, uses, homes and buildings, resources and lifespan) which work together to create physical character and help nurture and sustain a sense of community and positively address environmental issues affecting Climate.

- 2.2.34 Other guidance relevant to the Proposed Development includes the Landscape Institute's Technical Guidance Note 04/20 [Ref 14] which provides multi-disciplinary guidance on the planning, design and management of infrastructure. It states that:

*"Achieving good design which works with the landscape and delivers valuable green infrastructure therefore needs a joined up, collaborative approach, where all planning and design elements of the project are integrated. This requires a common vision and purpose and a culture of openness to new ideas and perspectives."*

## 3. Assemble

### 3.1 Project Brief

- 3.1.1 The purpose of the Proposed Development is to deliver low carbon renewable energy via the construction of solar PV infrastructure and battery storage that will connect to the proposed National Grid substation near Navenby. From the outset, the Applicant has sought to deliver positive design outcomes in the context of compliance with national planning policy and through application of the mitigation hierarchy.
- 3.1.2 The Applicant also sought optionality and flexibility in the design of the Proposed Development so as not to unduly constrain the Proposed Development at an early stage.

### 3.2 Site Selection

- 3.2.1 The identification of the site for the Proposed Development was driven by the availability of deliverable land and site suitability in accordance with the requirements of policy. Following a formal application to National Grid for a connection into the 400kV Overhead Line at Whisby, National Grid informed the Applicant that this point of connection was not available and instead the Applicant was offered and subsequently secured a point of connection at the proposed National Grid Substation near Navenby.
- 3.2.2 Having secured land with willing landowners, and in recognition of the need to consider reasonable alternatives, the Applicant sought to assess the site against other potential alternative sites to ensure it was the most suitable taking into account operational requirements, national and local planning policy and planning and environmental constraints. **Appendix A: Site Selection Report of the Planning Statement [EN010154/APP/7.2]** sets out the approach to assessing the suitability of the site for the Proposed Development and potential alternative sites against a range of planning, environmental and operational criteria for a generating station with capacity of more than 50MW.
- 3.2.3 The site of the Proposed Development was considered more suitable than other sites assessed due to the following factors:
- The site comprises a contiguous land parcel and is of sufficient size to accommodate the Proposed Development and includes suitable land for landscape and ecological enhancement.
  - The site has suitable access from the strategic and local road network for construction traffic via the A46 and A15.
  - There are limited areas of woodland, reducing the extent of solar array shading.
  - Suitable topography for a solar development.

- e. 77.50% (approximately 830ha) of the Principal Site does not comprise best and most versatile agricultural land and there is no ALC Grade 1 or 2 land. 22.50% of the Principal Site (approximately 241ha) is ALC Grade 3a.
  - f. The vast majority of the site is located in Flood Zone 1.
  - g. Initial approaches to landowners were positively received with sufficient land made available by landowners to accommodate the Proposed Development.
  - h. The land is held in relatively few land ownerships which is preferable from a land acquisition and assembly perspective.
- 3.2.4 Further details on the site selection process is set out in in **Appendix A: Site Selection Report** of the **Planning Statement [EN010154/APP/7.2]**.

### 3.3 Mitigation hierarchy

- 3.3.1 The Planning Inspectorate's guidance set out in Nationally Significant Infrastructure: Advice on Good Design [Ref 11] highlights the importance of Environmental Impact Assessment (EIA) in the design process and that it is an *"an important decision-making tool and can help the achievement of good design outcomes by avoiding or reducing adverse effects and providing benefits through identifying ways to improve the environmental or cultural opportunities"*.
- 3.3.2 The process of EIA and the application of the mitigation hierarchy (to avoid or reduce and, if possible, offset potential environmental effects) has been integral to the design development of the Proposed Development. **Chapter 5: Environmental Impact Assessment Methodology** of the ES **[EN010154/APP/6.1]** sets out how the mitigation hierarchy has been applied in the EIA process.

### 3.4 Design Team

- 3.4.1 The multi-disciplinary team responsible for developing the design of the Proposed Development is set out below.

#### Fosse Green Energy Limited

- a. Experienced Client Team (Windel and Recurrent Energy) with a track record of DCO consents, having successfully gained a DCO for the Mallard Pass Solar Project.
  - b. Globally experienced EPC solar design team at Recurrent Energy who reviewed and approved the constructability of design.
- 3.4.2 Landowner engagement to minimise the impacts of the evolving design on existing agricultural land uses, and where practicable to identify opportunities for the Proposed Development to co-exist with these.

## AECOM

- a. Design Champion and technical design of the Proposed Development including location and extent of solar PV development, the siting of solar infrastructure including cabling, the Onsite Substation and centralised and distributed BESS, the location of accesses and the location of temporary construction compounds.
- b. Lead on the development of the Design Vision, Design Principles and Design Commitments.
- c. Environmental assessment of the technical design and layout at Statutory Consultation as presented in the Preliminary Environmental Information Report and in the Environmental Statement in the DCO application.
- d. Town planning input to ensure that national and local planning policy informed the evolving and submitted design.

## ICENI

- a. Development of the landscape masterplan and technical input to the evolving design at Non-Statutory and Statutory Consultation and the DCO application stages.

## Camargue

- a. Lead on Non-Statutory and Statutory Consultation to seek views from statutory consultees, communities and landowners on the evolving design and the technical assessments that informed design development. Open and transparent engagement with North Kesteven District Council and Lincolnshire County Council on design evolution, including sharing various design iterations.

## 3.5 Programme

- 3.5.1 The programme relating to the evolution of the design of the Proposed Development is set out below.

**Table 3-1 Proposed Development Programme**

Activity	Date
Preparation of early Design Principles to frame early decision making	May 2023
Scoping Opinion published	25 July 2023
Design Workshop to develop the early layout plan for Non-Statutory Consultation	July 2023

Activity	Date
Non-Statutory Consultation including in-person and virtual events and engagement with a range of organisations including statutory bodies, parish councils and local authorities	11 September 2023 to 20 October 2023
Design Workshop to review feedback from Non-Statutory Consultation	October 2023
Development of Design Principles based on national and local planning policy and site context	May 2024
Design Workshop to review the design to be presented at statutory consultation	May 2024
Statutory Consultation including in-person and virtual events and engagement with a range of organisations including statutory bodies, parish councils and local authorities	21 October 2024 to 2 December 2024
Design Workshop to review feedback from the Statutory Consultation	December 2024
DCO Submission	18 July 2025
Examination, Recommendation and Decision	Autumn 2025 to Autumn 2026
Preparation of detailed design	Anticipated 2027 - 2031
Construction	Anticipated 2031-2033
Start of operation	2033
Decommissioning	2093

## 3.6 Site Context

- 3.6.1 This section summarises the site context and characteristics of land within the Order Limits and the surrounding area in relation to topography, landscape character, views, land use, agricultural land, ecology and biodiversity, cultural heritage, flood risk and hydrology and accessibility. It sets out the constraints and opportunities, informed by extensive desk-based and field work surveys, that were identified to help guide the early design of the Proposed Development. These characteristics have informed the development of the



design for the operational above ground components of the Proposed Development.

## Overview

- 3.6.2 The following sections provide a high-level summary of the site context where it has informed the design of the Proposed Development. A more detailed description of the baseline environment is provided in the relevant chapters of the ES [EN010154/APP/6.1].

## Topography

- 3.6.3 The development of large scale solar development requires relatively flat land as this is ideal for construction and helps reduce visual impact. Flat land also limits the shading between arrays and enables the panels to be configured for higher energy generation levels. The land within the Order Limits has a gradient of 3% or less and the site is therefore suitable for solar generation.

## Landscape Character and Views

- 3.6.4 Land within the Order Limits, the extents of which are shown on **Figure 2-1: Environmental Constraints** of the ES [EN010154/APP/6.2], is comprised predominantly of agricultural fields, which are large and generally of regular shape, interspersed with individual trees, small woodland blocks, hedgerows, linear tree belts, farm access tracks, and local transport roads. Hedgerows within the Order Limits are predominantly low and intermittent. Neither land within the Order Limits nor the immediate surrounding area is covered by any statutory landscape designations, such as National Parks, or National Landscapes (formerly Areas of Outstanding Natural Beauty). Land within the Order Limits does however fall within the Witham Valley Country Park<sup>2</sup>, which covers the entirety of the Principal Site and the Lincoln Cliff Area of Great Landscape Value, an escarpment running north south parallel to the A607 between Lincoln and Grantham.
- 3.6.5 Section 10.5 of **Chapter 10: Landscape and Visual Amenity** of the ES [EN010154/APP/6.1] describes in detail the landscape characteristics of land within and surrounding the Order Limits, including the following:
- Low lying land within the plains of the River Witham rising in the north west and forming part of a localised valley.
  - A consistent arable land use across the Principal Site with generally large scale fields in the south and smaller fields in the north and east. Agriculture is the main land use in the Cable Corridor, however there are overhead pylons and associated wires which cross the Lincoln Cliff.

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<sup>2</sup> The Witham Valley Country Park is a Country Park comprising public green space which provides areas for recreation and for people to enjoy the outdoors and experience nature in an informal semi-rural park setting. The Country Park covers approximately 40 square miles of countryside. The Proposed Development does not encroach upon any publicly accessible recreation areas.

- c. In the Principal Site, landform and vegetation patterns result in differing perceptions of openness and enclosure. The northern and central parts are more open in character due to the combination of relatively elevated landform and more intermittent field boundaries. In contrast, across the eastern part of the Principal Site, there is a greater sense of enclosure, due to the lower lying landform and greater density of vegetation. In the Cable Corridor, the vegetation patterns are mainly field boundary hedgerows with trees.
- d. Public rights of way cross both the Principal Site and Cable Corridor providing recreational routes and connecting surrounding villages.
- e. In the Principal Site there are few sources of lighting, however, the character of the night skies is influenced by the A46 and surrounding settlements. The Cable Corridor crosses an area of predominantly 'darker skies' reflecting the agricultural land use and limited sources of lighting across the plains of the River Brant and to the east of the A15.

**Figure 3-1- View towards the Site from PRow 03/09**



**Figure 3-2- Tunman Wood**



**Figure 3-3- View towards the Site from A46**



**Figure 3-4- View from towards Tunman Woods from PRow 01/01**



**Figure 3-5- View towards A46 south of Morton Hall**



**Figure 3-6- River Witham, View South from Thurlby Road**





**Figure 3-7- View west along Bassingham Road towards the Site**



**Figure 3-8- View Southwest towards the Site from Fosse Lane**



**Figure 3-9- View Southeast towards the Site from Fosse Lane**



- 3.6.6 Section 10.5 of **Chapter 10: Landscape and Visual Amenity** of the ES [EN010154/APP/6.1] further describes the national, regional and local landscape character areas that apply to land within the Order Limits. The relevant National Landscape Character Areas are:
- a. NCA 47: Southern Lincolnshire Edge. A large geographic area, extending between the south-east of Lincoln and the east of Grantham with an open arable landscape, large geometric fields and with a clear character defined by the dipslope (where the low lying land rises steeply across the Lincoln Cliff).
  - b. NCA 48: Trent and Belvoir Vales. A large geographic area, extending south-west of Lincoln to Nottingham, characterised by an undulating, strongly rural and predominantly arable farmland, centred on the River Trent and a low-lying rural landscape with relatively little woodland cover, and long, open views.
- 3.6.7 At a regional level, the East Midlands Regional Landscape Character Assessment identifies Landscape Character Groups and Types including LCG4: Lowland Vales and LCG6 Limestone Farmlands.
- 3.6.8 Locally, the North Kesteven District Landscape Character Assessment identifies the following Landscape Character Types:
- a. LCT: Trent & Witham Vales including sub-area 2 Terrace Sandlands, sub-area 4 Lincoln Fringe and sub-area 5 Witham and Brant Vales;
  - b. LCT: Lincoln Cliff and sub-area 6: Lincoln Cliff; and
  - c. LCT: Central Plateau and sub-area 7: Limestone Heath.
- 3.6.9 Stated opportunities for enhancement within sub-area 5 include strengthening field boundaries and biodiversity improvements. Furthermore, stated opportunities for enhancement within sub-area 6 are based around continuation of tree cover and restoration of distinctive hedgerow patterns.
- 3.6.10 **Appendix 10-C Landscape Character Baseline** of the ES [EN010154/APP/6.3] sets out the key characteristics of the national, regional and local landscape character areas.

## Land Use

- 3.6.11 The Site consists primarily of non BMV agricultural fields of poorer quality. There are existing 400kV overhead National Grid powerlines carried by pylons within and surrounding the Site. The overhead powerlines also cross the Lincoln Cliff (an Area of Great Landscape Value).
- 3.6.12 Several large settlements are located within close proximity to the Order Limits including the City of Lincoln and North and South Hykeham to the north east, and Newark-on-Trent to the south west. A number of smaller settlements immediately surround the Principal Site including:

- a. Thorpe on the Hill, approximately 0.4km north east of the Principal Site;
  - b. Morton Hall and Morton, approximately 0.4km and adjacent to the west of the Principal Site, respectively;
  - c. Witham St Hughs, adjacent to the west of the Principal Site;
  - d. Norton Disney, approximately 0.6km south west of the Principal Site;
  - e. Bassingham, adjacent to the east of the Principal Site;
  - f. Thurlby, adjacent to the south east of the Principal Site;
  - g. Haddington, approximately 0.3km east of the Principal Site; and
  - h. Aubourn, approximately 0.6km north east of the Principal Site.
- 3.6.13 There are limited industrial and commercial land uses within the immediate vicinity of the DCO Site. However, there are three employment sites allocated under the CLLP within 3km of the Order Limits. The sites are E23 (Gateway Park South), E25 (Camp Road Industrial Estate), and E3 (St Modwen Park, Witham St Hughs). Sites E23 and E25 are Important Established Employment Areas (IEEAs) which are over 2ha and have a minimum of 8,000 sqm of ground floor space and five or more units occupied by different businesses.
- 3.6.14 The A46 intersects the Principal Site within the northern section, and the A607 intersects the Cable Corridor. Local minor roads within and surrounding the Site include Moor Lane, Bassingham Road, Clay Lane, Thurlby Road, Stone Lane and Fen Lane.
- 3.6.15 The Cable Corridor passes largely through agricultural land between the villages of Bassingham, Boothby Graffoe, Coleby and Navenby.



**Figure 3-10- Aubourn, View looking West from Chapel Lane**



**Figure 3-11- Bassingham, view looking East along Linga Lane**



**Figure 3-12- Boothby Graffoe, View looking North up Blacksmith Lane**



**Figure 3-13- Navenby, View looking North along 'High Street'**



**Figure 3-14- Thorpe on the Hill, View looking East along Lincoln Lane**



**Figure 3-15- Witham St Hughs, View Looking South along Hedge Lane**



## Agricultural Land Classification

- 3.6.16 The land within the Principal Site is predominantly classified as Agricultural Land Classification (ALC) Grade 3b (moderate quality agricultural land) with some Grade 3a (good quality agricultural land). There is no Grade 2 or Grade 1 agricultural land within the Principal Site. An agricultural land quality survey was undertaken including 1,018.7ha of land in the Bassingham and Navenby areas within the Principal Site in April, May and October 2023, and later in August and October 2024. Overall, 15ha (1.5%) of the surveyed land was identified as non-agricultural including, urban, woodland or made ground. A small area of 18.4ha (1.8%) was inaccessible for survey; this was not extrapolated given it only represented two missing survey locations. Subgrade 3a (BMV land) extended to 282.9ha (27.8%) of the surveyed land, while 702.4ha (68.9) was ALC Subgrade 3b. The ALC grading for the Site is summarised in Table 12-15 of **Chapter 12: Socio-Economics and Land Use** of the ES [EN010154/APP/6.1].
- 3.6.17 Approximately 50% of the land within the Principal Site is currently used for non-food crop (e.g. biofuel, biomass fuel and pet foods). Further information on the soil classification is presented in **Appendix 12-B: Agricultural Land Classification Report** of the ES [EN010154/APP/6.3]. According to Natural England's ALC online mapping [Ref 15], the Cable Corridor is located within predominantly Grade 3 ALC land, with inclusion of areas of Grade 2, east of the A607.

## Ecology and biodiversity

- 3.6.18 There are no sites statutorily designated for their biodiversity value at an international or European level within 10km of the Site. In addition there are no Sites of Special Scientific Interest (SSSI) or Local Nature Reserves (LNR) within the Order Limits. There are two sites statutorily designated for their biodiversity value in close proximity to the Proposed Development. These are Whisby Nature Park LNR, which is approximately 410m north of the Principal Site and Swanholme Lakes LNR and SSSI, which is approximately 4km north-east of the Principal Site. Within a 10km radius of the DCO Site, there are a number of statutory designated nature conservation sites, including Ashton's Meadow SSSI, which is located 1.5km to the west of the DCO Site and Lea Marsh SSSI, which is located 1.7km northwest of the DCO Site.
- 3.6.19 There are 29 sites that are non-statutorily designated for their biodiversity value within 2km of the Order Limits, all designated as LWSs. Two non-statutorily designated sites lie within the Order Limits. These are the River Witham, Aubourn to Beckingham Local Wildlife Site (LWS), located in the Principal Site and the Navenby Green Man Road Verges LWS, located in the Cable Corridor. Tunman Wood (including Stocking Wood) LWS and Tunman Wood North LWS are located adjacent to the Principal Site and the Navenby Heath Road Verges LWS is located adjacent to the Cable Corridor.

- 3.6.20 There are no areas of Ancient Woodland within 2km of the Cable Corridor, however, there are three areas of Ancient Woodland within 2km of the Principal Site, which include:
- a. Tunman / Housham Woods (part of Tunman Wood LWS and also including Stocking Wood), which is immediately adjacent to the Principal Site;
  - b. Hawdin's / Norton Big Wood (part of Norton Big Wood) which is approximately 850m west of the Cable Corridor; and
  - c. Great Low Wood, which is approximately 1,350m north-west of the Principal Site.
- 3.6.21 There are a number of Tree Preservation Orders (TPO) within and adjacent to the DCO Site, as further discussed in **Appendix 10-H: Arboricultural Impact Assessment** of the ES [EN010154/APP/6.3].
- 3.6.22 Further information related to ecology and biodiversity is presented in **Chapter 8: Ecology and Nature Conservation** of the ES [EN010154/APP/6.1].

### Cultural Heritage

- 3.6.23 There are no World Heritage Sites or registered battlefields within the DCO Site. There is one listed building, the Grade II listed River Farmhouse, within a parcel of land omitted from the DCO Site Boundary but located within the surrounding Principal Site.
- 3.6.24 There is one Grade II registered park and garden, Coleby Hall, located approximately 200m to the north of the Cable Corridor. This includes the Grade I Temple at Coleby Hall and the Grade II\* Coleby Hall. Colby Conservation Area, which includes Coleby Hall Park and Garden as well as a number of Grade II listed buildings and the Grade I listed Church of All Saints, extends to within approximately 300m to the north of the Cable Corridor. Boothby Graffoe Conservation Area extends to within 200m of the south of the Cable Corridor and includes a number of Grade II listed buildings. Within the 1km study area in relation to the Cable Corridor, there are four grade I listed buildings, one grade II\* listed buildings and 14 grade II listed buildings.
- 3.6.25 There are no Scheduled Monuments within the DCO Site, however Somerton Castle is located approximately 700m south of the Cable Corridor, which includes three Grade I listed buildings; Somerton Castle and Outbuilding to North-West, South-West Outbuilding at Somerton Castle and the Orchard Outbuilding at Somerton Castle. There are four Scheduled Monuments within the 3km study area of the Principal Site, namely:
- a. Churchyard Cross, St Germain's Churchyard (NHLE 1013082), located within 200m of the Principal Site;
  - b. Remains of a Preceptory, Fishponds and Post-Medieval Gardens at Eagle Hall (NHLE 1008316), within 2km to the northwest of the Principal Site;



- c. Churchyard Cross, All Saints' Churchyard (NHLE 1009215), approximately 2km to the southwest of the Principal Site; and
  - d. Hall Close: A Medieval a Post-Medieval Hall Complex South of Dovecote Lane, with Dovecote, Gardens, Fishponds, Churchyard and Cultivation Remains (NHLE 1021080), abutting the Principal Site.
- 3.6.26 Further information on archaeology and heritage is presented in **Chapter 7: Cultural Heritage** of the ES [EN010154/APP/6.1].

### Flood Risk and Hydrology

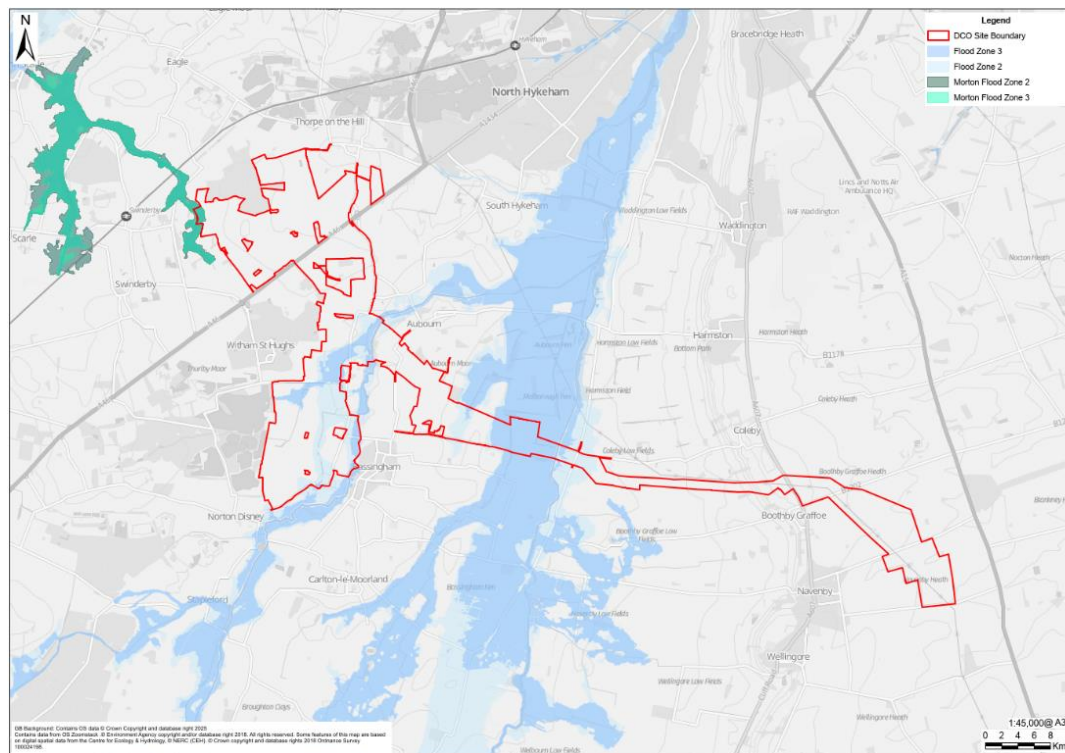
- 3.6.27 The River Witham passes though the southeast of the Principal Site to the northeast of Thurlby, and to the west of Bassingham Road. The Cable Corridor crosses the River Brant which flows south to north and passes through the DCO Site to the northeast of Bassingham and to the west of Broughton Lane.
- 3.6.28 The DCO Site is located within two River Basin Districts: the Anglian River Basin District and the Humber River Basin District as shown on **Figure 9-1: Surface Waterbodies and Their Attributes** of the ES [EN010154/APP/6.2]. The DCO Site extends across two management catchments, namely Witham (Anglian) and Trent Lower and Erewash (Humber).
- 3.6.29 The Principal Site is located predominantly within Flood Zone 1<sup>3</sup>, with areas of Flood Zone 2<sup>4</sup> associated with the River Witham in the southeast and central sections of the Principal Site. The western extent of the Cable Corridor, west of Broughton Lane is located within areas of Flood Zone 2 and 3. There are also discrete areas immediately east of Broughton Lane located within Flood Zone 2. Located to the east of the Principal Site and north of the Cable Corridor there is an area of Flood Zone 3 which extends both north-east, and to the south of the Principal Site and Cable Corridor two further areas of Flood Zone 3, with some presence of Flood Zone 2, which extend to the south-west.
- 3.6.1 There is an area of Flood Zone 3 located to the north-west of the Principal Site, which extends north for approximately 3.5 km where it joins a larger area of both Flood Zone 3 and Flood Zone 2. The remaining areas of the DCO Site are located within Flood Zone 1. Plate 3-1 shows the fluvial flood risk map.
- 3.6.2 Further information on flood risk is presented in **Chapter 9: Water Environment** of the ES [EN010154/APP/6.1] and within the **Flood Risk Assessment** (Appendix 9-C of the ES [EN010154/APP/6.3]).

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<sup>3</sup> Flood Zone 1 refers to land and property with a low probability of flooding (less than 1 in 1,000 annual probability of river or sea flooding).

<sup>4</sup> Flood Zone 2 refers to land and property with a medium probability of flooding (between a 1 in 100 and 1 in 1,000 annual probability of river flooding, or between a 1 in 200 and 1 in 1,000 annual probability of sea flooding).

**Plate 3-1 Fluvial flood risk map**



## Accessibility

- 3.6.3 The A46 (from Lincoln to Newark-on-Trent and beyond) intersects the northern part of the Principal Site, whilst the A607 (Lincoln to Grantham) passes from north to south through the centre of the Cable Corridor. The A15, (from Lincoln to Peterborough) is located to the east and outside of the Order Limits. There are several farm access tracks and local minor roads located within the Order Limits. Local minor roads include Moor Lane, Bassingham Road, Clay Lane, Thurlby Road, Stone Lane and Fen Lane. The Avenue and Fosse Lane are located within and adjacent to the Principal Site. In addition to the A607, the Cable Corridor crosses Broughton Lane, Heath Lane, Green Man Lane, Gorse Hill Lane and an unnamed road.
- 3.6.4 There is no operational railway infrastructure within the DCO Site, however a dismantled railway line is located within the Cable Corridor, to the east of the River Brant.
- 3.6.5 There are 27 public footpaths, three Bridleways, six restricted Byways, and seven permissive paths located within the Principal Site. These are mainly located north of the A46 and around the River Witham where it intersects the Order Limits. Within the Cable Corridor there are five PRowWs. The existing walking and cycling network is shown in **Figure 13-2 Existing Walking and Cycling Network** of the ES [EN010154/APP/6.2].

## 3.7 Summary of Constraints and Opportunities

- 3.7.1 Following a review of the site context and baseline information, the following constraints were identified:
- a. The need to minimise the impact on the existing flat and open landscape;
  - b. The need to protect the character and setting of settlements, small rural villages and residential properties in close proximity to the Order Limits;
  - c. The need to minimise impacts on residential amenity;
  - d. The need to minimise impacts to Best and Most Versatile agricultural land;
  - e. The need to protect locally important species and habitats;
  - f. The need to protect trees and nearby Ancient Woodland;
  - g. The need to protect the setting of heritage assets;
  - h. The need to minimise impacts of flood risk particularly within areas of Flood Zones 2 and 3;
  - i. The need to protect the River Witham and River Brant; and
  - j. The need to minimise impacts to existing PRowS and road users.
- 3.7.2 Following a review of the site context and baseline information, the following opportunities were identified:
- a. The open and flat landscape is accommodating to solar infrastructure without the need for extensive vegetation removal or earthworks;
  - b. Existing hedgerows on boundaries of the DCO Site can be used to provide screening;
  - c. There are opportunities to improve planting and existing vegetation within the DCO Site;
  - d. The majority of the DCO Site is occupied by non-food crops which provides an opportunity to improve diversification of planting and improve biodiversity; and
  - e. There are opportunities to improve and reinforce existing PRowS that pass through the DCO Site through the provision of permissive paths.

## 3.8 Design Vision

- 3.8.1 From a clear understanding of the site context and the constraints and opportunities to delivery low carbon renewable energy, the overarching Design Vision was developed. The Design Vision, set out below, informed each stage of design development.

*To seek to maximise the renewable energy generation across the site for the agreed export capacity with National Grid Electricity Transmission, whilst aligning with national planning policy and aiming to minimise environmental effects, supporting the delivery of the Government's objectives and*



*commitments for the development of a secure, reliable, and affordable supply of energy while also meeting decarbonisation targets.*

- 3.8.2 The Design Vision was considered further in order to identify Design Principles that would provide the framework for the evolution of the design of the Proposed Development.

## 3.9 Design Principles

- 3.9.1 From the outset the Applicant has sought to deliver a high quality design that reflects the characteristics of the Site, takes into account the requirements of national and local policy and is informed by the outcomes of Non-Statutory and Statutory Consultation and environmental assessment. The Design Principles prepared for the Proposed Development establish a clear framework for delivering good design.

### Early Design Principles

- 3.9.2 The Scoping Request, submitted to the Planning Inspectorate on 23 June 2023 included a series of early Design Principles that were developed to align with the core purposes and ambitions of the 'Design Principles for National Infrastructure' [Ref 11] which are Climate, People, Places and Value. These principles informed the first iteration of the design of the Proposed Development and are set out below:

#### **Climate:**

- a. Positively contribute to delivering the UK to net zero by 2050;
- b. Design for resilience to future climate change;
- c. Prioritise sustainable techniques and technologies in construction and operation; and
- d. Minimise carbon throughout the project lifecycle.

#### **People:**

- a. Engage openly and transparently with local communities, stakeholders and neighbours, making use of local knowledge to improve our project;
- b. Consider feedback carefully and engage and respond meaningfully;
- c. Behave as a considerate neighbour through both construction and operation; and
- d. Respect public amenity.

#### **Value:**

- a. Recognising the evolving and advancing nature of technology and seek to ensure we retain the ability to use the best and latest available to maximise efficiency;
- b. Learn from comparable projects using best practice to design and deliver our project;

- c. Provide wider economic and supply chain benefits, and a positive legacy for the communities in and around Fosse Green Energy;
- d. Deliver a successful project, free from Government subsidy, helping contribute affordable energy to the national supply;
- e. Respect the wider landscape and the intrinsic value of the countryside and natural environment; and
- f. Respect and respond to features of heritage value.

**Place:**

- a. Deliver project-wide biodiversity net gain;
- b. Maximise opportunities to create appropriate multifunctional spaces to achieve energy generation, continued agricultural use, biodiversity enhancements, water and flood management and green spaces;
- c. Reduce any environmental impact, sensitively designing Fosse Green Energy to fit into the landscape and explore reasonable opportunities to mitigate potential visual impacts;
- d. Respect the distinctive and unique character of the countryside; and
- e. Recognise and respect heritage value, understanding the direct and indirect impact on cultural heritage assets.

3.9.3 Following further environmental assessment and engagement with stakeholders, the early Design Principles were further refined into those set out below.

## Project Design Principles

3.9.4 The Design Principles have been informed by the national and local policy outlined in Section 2, site characteristics outlined in Section 3, consultation outcomes and environmental assessment. Good design will be secured by delivering the Proposed Development in a way that meets these Design Principles. The Design Principles are set out below.

**Table 3-2 Design Principles**

Number	Design Principle
1	The Proposed Development will be sensitively integrated into its landscape setting, to minimise adverse landscape and visual effects as far as possible.
2	The Proposed Development will be sensitive to the existing agricultural land quality in Lincolnshire, reducing the amount of development (and in particular permanent land take) on Best and Most Versatile quality land where possible.

Number	Design Principle
3	The Proposed Development will respond sensitively to its proximity to residential dwellings, village settlements and the caravan park with regard to visual impact, noise and lighting.
4	The Proposed Development will recognise the potential impact on protected species and habitat features. It will safeguard these through the use of buffers, offsets and construction measures to minimise impacts.
5	The Proposed Development will be sensitive to heritage assets, providing suitable offsets, and including protecting views to Lincoln Cathedral.
6	The Proposed Development will be designed to be resilient to flood risk now and in the future, with close engagement with the Environment Agency.
7	The Proposed Development will provide safe accesses and minimise residual cumulative impacts on the road network as far as practical, whilst delivering the construction at a rapid pace to bring the project online as soon as practicable. The main route of the A46 will be preferred for construction traffic. Additional emergency accesses to the Site will also be provided where practicable.
8	The Proposed Development will be designed to align with field boundaries and existing landscape features. It will seek to retain any existing vegetation and minimise watercourse crossings where practicable.
9	The Proposed Development will seek to avoid adverse impacts and to enhance existing biodiversity through the creation of new green infrastructure and the creation of new habitat for wildlife to achieve a minimum 10% in Biodiversity Net Gain.
10	The Proposed Development will enhance, where possible, the existing connectivity within the network of PRow through the provision of permissive paths and circular routes to be available for public use during the operation of the authorised development to improve accessibility.
11	The Proposed Development will ensure that battery safety is managed through appropriate siting away from sensitive

Number	Design Principle
	receptors and ensuring the inclusion of embedded design mitigation measures to minimise risks.

## 3.10 Design Commitments

- 3.10.1 The Design Commitments, set out in Appendix A of this DAD, have been developed to support the practical application of the Design Principles at detailed design. Design Commitments are needed to secure elements of the design which are not covered by other control documents. The Design Commitments are secured under Requirement 6 'Detailed design approval' of the **Draft Development Consent Order [EN010154/APP/3.1]**.

## 3.11 Summary

- 3.11.1 The Design Vision and Principles provided a structured approach for design evolution from the early layout of the Proposed Development presented at Non-Statutory Consultation to the layout presented in the DCO application. They have helped refine the design of the Proposed Development and will continue to be applied post-consent, ensuring that the project remains aligned with its original vision.

## 4. Research

- 4.1.1 This section demonstrates how the design of the Proposed Development evolved from the brief set out in Section 3.1, and how design measures were used to mitigate adverse effects. This section also sets out how the layout of the Proposed Development has been shaped by the Design Principles and has responded to the environmental assessment process and consultation feedback and engagement with stakeholders via an iterative design process.

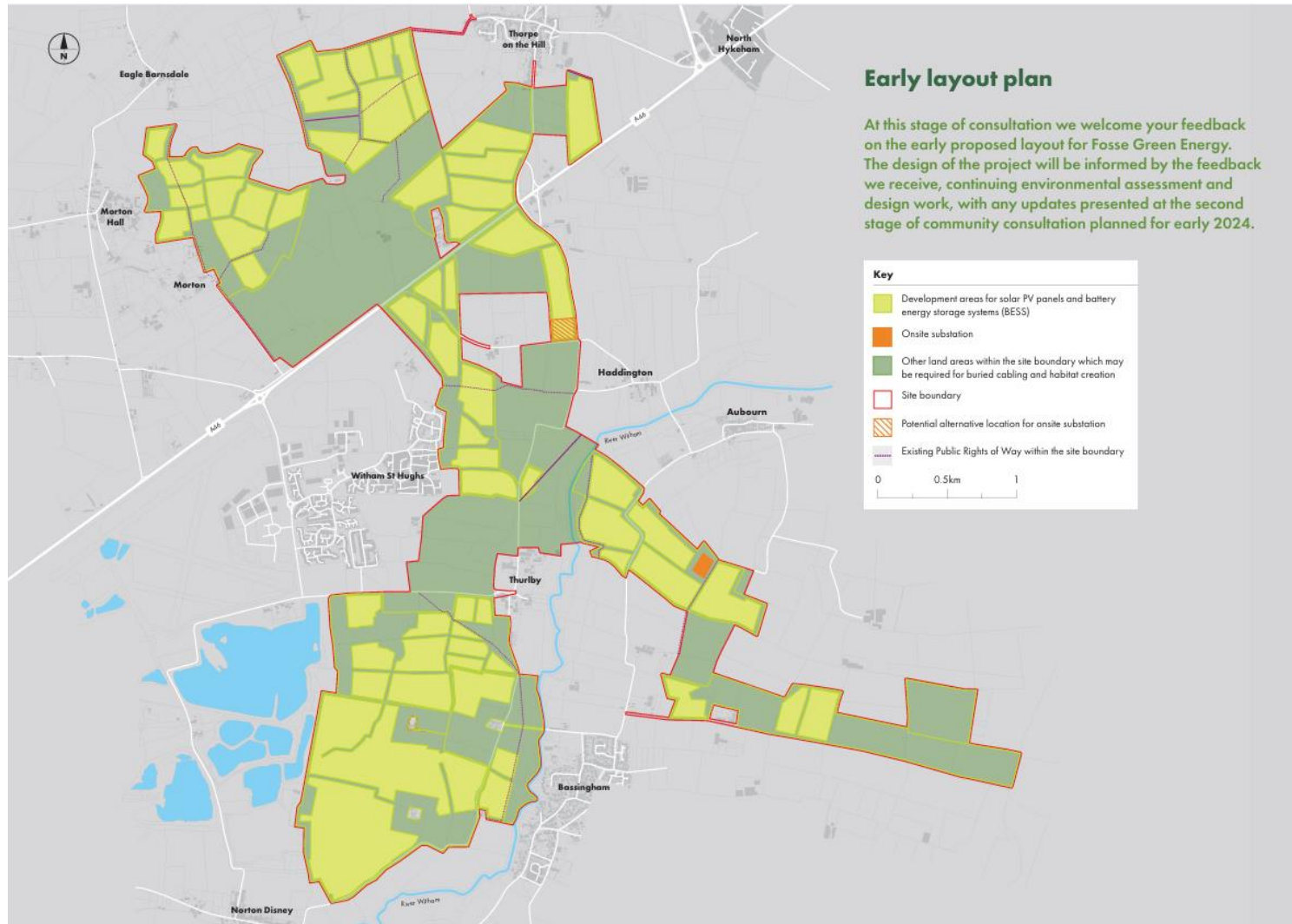
### 4.2 Layout for Non-Statutory Consultation

- 4.2.1 The Applicant held a Non-Statutory Consultation from 11 September 2023 to 20 October 2023. To aid understanding of the design, the Applicant sought to provide more information than is normally provided at the Non-Statutory Consultation stage and presented an early layout plan which showed the location of solar infrastructure including solar panels and BESS, two potential locations for the Onsite Substation, and two potential routes for the Cable Corridor. The early layout design was informed by the Planning Inspectorate's Scoping Opinion (**Appendix 1-B: EIA Scoping Opinion** of the ES [EN010154/APP/6.3]).
- 4.2.2 Two early design decisions were made at this stage:
- a. The maximum height of solar panels and BESS would not exceed 3.5m to enable screening by hedges, which is good practice.
  - b. The cable from the Principal site to the proposed National Grid substation near Navenby would be buried underground in order to reduce visual impact and the land take of Best and Most Versatile quality land. The early layout plan is set out in Figure 4-1.
- 4.2.3 At this early stage, the amount of land that would be used for solar panels and associated equipment, and the amount that would be set aside to create new, or enhanced existing, habitats for biodiversity net gain was still being determined. The principal components at this stage were:
- a. Solar infrastructure including ground mounted solar PV panels arranged in rows, PV module mounting structures and supporting infrastructure including inverters, transformers and switchgear,
  - b. An energy storage system to import energy from the grid network and store energy generated by the solar PV panels for release to the national grid at times of high demand.
  - c. Security fencing, likely to be 2m in height to enclose the operational areas of the site, along with pole mounted internal facing closed circuit television (CCTV) deployed around the perimeter of the site.

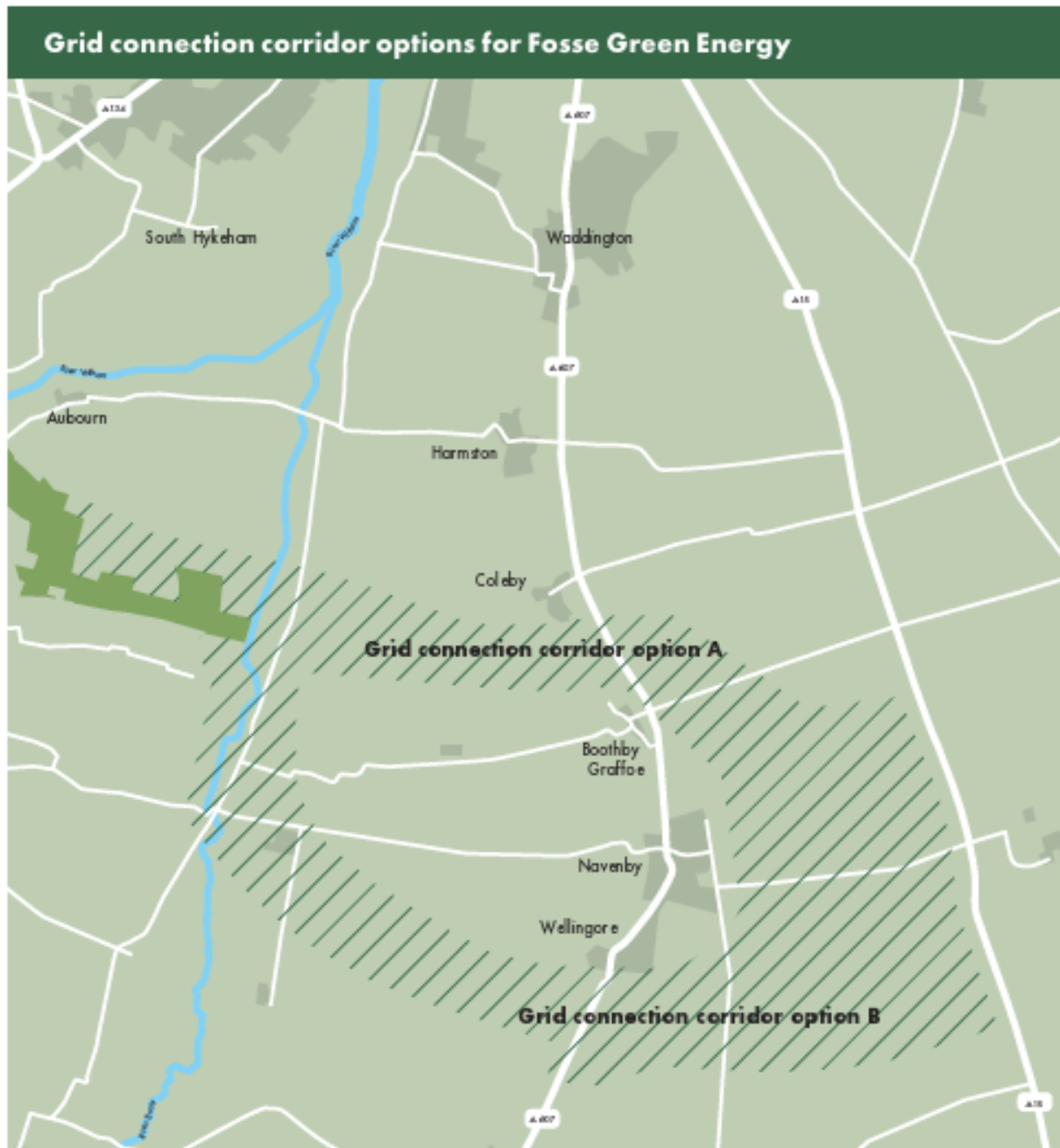


- d. Accesses to the site during construction and for routine maintenance when operational.
- e. New planting and landscaping to enhance biodiversity and improve the landscape.
- f. Protecting the existing network of Public Right of Ways (PRoWs), comprising bridleways, footpaths and a byway.
- g. Temporary construction compounds and temporary haul routes, to enable access within the site boundary during the construction stage.

**Figure 4-1- Early layout plan presented at Non-Statutory Consultation**



**Figure 4-2- Grid connection corridor options presented at Non-Statutory Consultation**



- 4.2.4 In developing the early layout, a design team workshop was held in July 2023 to develop the design through an understanding of the operational requirements of the Proposed Development (as set out above) and how these could align with early environmental mitigation recommendations relating to landscape and visual, ecology, heritage, noise, transport, water and flood risk. At this stage, the design was also informed by surveys and desk top analysis undertaken as part of the EIA scoping process including the Scoping Opinion (**Appendix1-B: EIA Scoping Opinion** of the ES [EN010154/APP/6.3], ongoing landowner discussions and the early Design Principles, as set out in Section 3.9 of this DAD.
- 4.2.5 The design at the non-statutory consultation stage, as illustrated on the early layout plan, showed areas of solar infrastructure to the north of the A46 to the east of Morton and Morton Hall and to the south of Thorpe-on-the-Hill, with the inclusion of setbacks and buffers to minimise impacts. Solar infrastructure was also located to the north and east of the Cathedral View caravan park with setbacks included. A large section to the north of the A46 was shown as being retained for cabling or habitat creation, and a corridor was included that sought to protect the long range views to Lincoln Cathedral, protecting its visual prominence.
- 4.2.6 The design to the south of the A46 identified areas of solar infrastructure to the east of Witham St Hughs, south of Aubourn and west of Basingham. Wide offsets were provided from settlements to minimise the visual impact of the solar infrastructure. An offset was also included around the Grade II listed River Farmhouse to minimise impacts to this heritage asset and its setting.
- 4.2.7 In terms of optionality at this stage:
- Two options were presented for the location of the Cable Corridor (referred to as the Grid Connection Corridor on Figure 4-2).
  - A location was put forward for the siting of the Onsite Substation south of Aubourn alongside a potential alternative location west of Haddington. From an operational perspective, the Onsite Substation needs to be located to the east of the Principal Site in order to minimise losses in transmission, however, given the environmental impacts of the Onsite Substation, the locations were carefully identified to ensure visual and noise impacts could be minimised.
- 4.2.8 The key area for flexibility at this stage was to ensure sufficient width for the Cable Corridor due to the need for more detailed ground investigation at the western end and given the uncertainty about the exact location of the proposed National Grid Substation near Navenby at the eastern end. Other areas for flexibility were not considered as the early layout design was sufficiently high level to build in the required flexibility at the next stage.
- 4.2.9 At this stage, it was anticipated that existing hedgerows, woodland, ditches, ponds and field margins would be retained within the layout of the solar PV array area and that any breaks or crossing for new access tracks, security

fencing and connection routes would be designed to use existing agricultural accesses between the fields and kept to a minimum. Buffer areas were also identified that could deliver a combination of hedgerow, grass and wildflower planting.

- 4.2.10 Feedback received at Non-Statutory Consultation related to a wide range of design related matters including the environmental impact on wildlife and habitats, screening and planting, heritage impacts, the size and scale of the Proposed Development in relation to surrounding villages, the density of solar arrays, visual impact and loss of views, noise impact, opportunities to create recreational routes, integration with the landscape, connectivity, fencing and proximity of the site to the point of connection.
- 4.2.11 A design team workshop was held in late October 2023 to review the feedback provided to the Non-Statutory Consultation and agree how the design should evolve within the framework provided by the Design Principles, taking account of operational requirements.
- 4.2.12 A number of changes were made as a result of feedback received from the Non-Statutory Consultation; the key changes are set out in **Table 4-1**, together with the relevant Design Principle that informed the change.

**Table 4-1 - Design Response to feedback from Non-Statutory Consultation**

Design Change	Relevant Design Principle
1 The provision of additional planting, screening measures, and buffers, including on land southeast of Thorpe on the Hill to reduce visual impacts.	<b>Design Principle 1</b> The Proposed Development will be sensitively integrated into its landscape setting, to minimise adverse landscape and visual effects as far as possible.
2 Additional buffers were provided at the Cathedral View Holiday Park and on land southeast of Thorpe on the Hill to reduce noise and visual impacts.	<b>Design Principle 3</b> The Proposed Development will respond sensitively to its proximity to residential dwellings, village settlements and caravan park with regard to visual impact, noise and lighting.
3 Permissive paths were included to enhance links across the site by providing circular walks and improving connectivity to public rights of way and local villages.	<b>Design Principle 10</b> The Proposed Development will enhance, where possible, the existing connectivity within the network of PRoW through the provision of permissive paths and circular routes to be available for public use during the operation of the authorised development to improve accessibility.



- 4.2.13 A Non-Statutory Consultation Feedback Report was published on the project website in October 2024 and made available at Statutory Consultation to enable respondents to understand how their feedback had been considered by the design team.

## 4.3 Layout for Statutory Consultation

- 4.3.1 A further design team workshop was held in May 2024 to review the design of the Proposed Development that would be presented at Statutory Consultation and which would form the basis of the environmental assessments as set out in the Preliminary Environmental Information Report. As a result, further changes were made to the design; these are set out in Table 4-2 together with the relevant Design Principle that informed the change.

**Table 4-2 – Further Design Changes made ahead of Statutory Consultation**

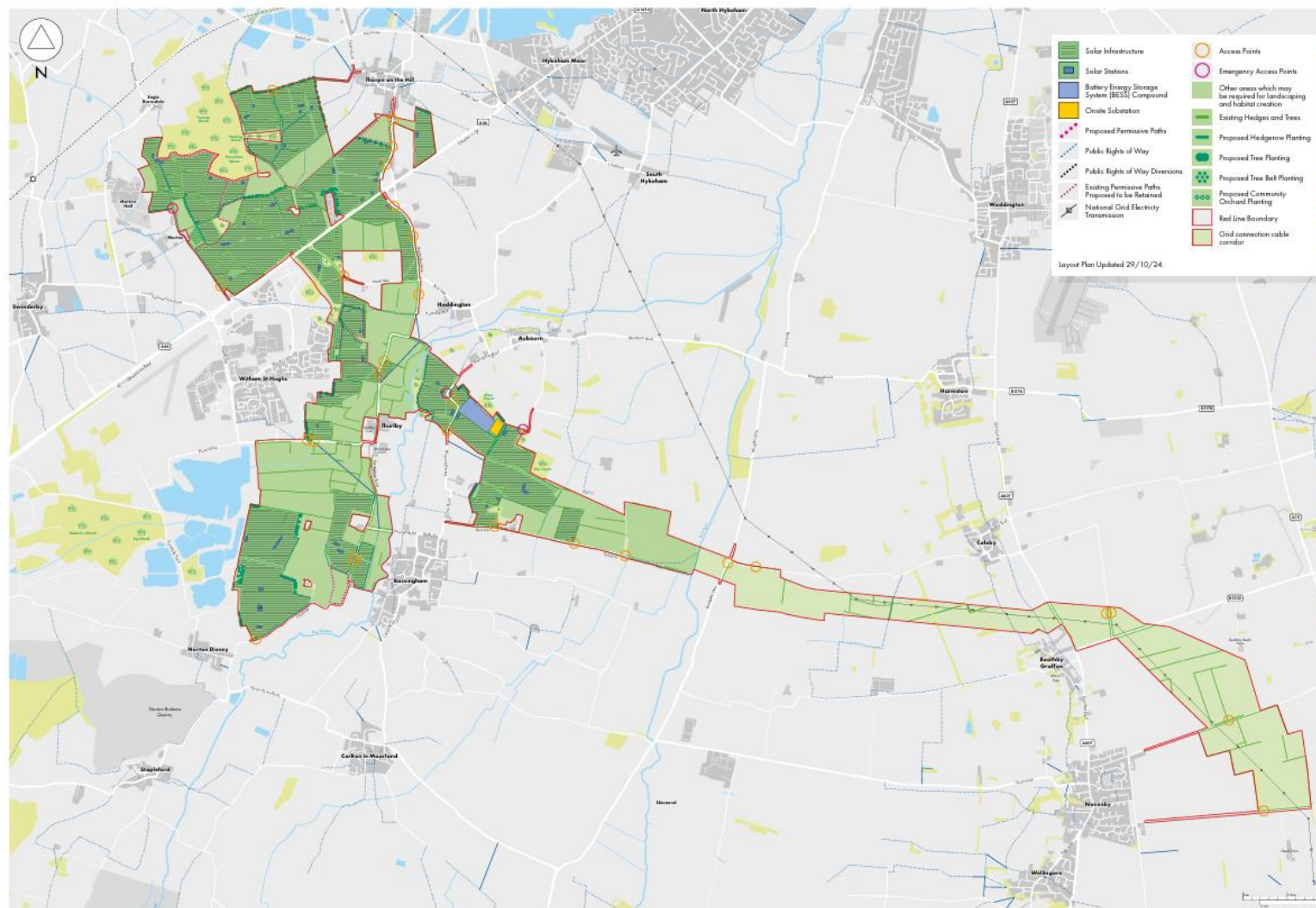
Design Change	Relevant Design Principle
1 Confirmation of the location of the Onsite Substation on land south of Aubourn within an area of enclosed landscape, bound by frequent small woodlands and hedgerows, to minimise potential visual effects.	<b>Design Principle 1</b> The Proposed Development will be sensitively integrated into its landscape setting, to minimise adverse landscape and visual effects as far as possible.
2 Relocation of solar infrastructure from land south of Moor Lane to land north of the A46 to reduce the impact of the Proposed Development on ground nesting bird habitat.	<b>Design Principle 4</b> The Proposed Development will recognise the potential impact on protected species and habitat features. It will safeguard these through the use of buffers and offsets.
3 Realignment of solar infrastructure around the Grade II listed River Farmhouse to follow historic field boundaries and maintain intervisibility between River Farmhouse and Church Farm (a non-designated monument) which forms the setting of these two heritage assets.	<b>Design Principle 5</b> The Proposed Development will be sensitive to heritage assets, providing suitable offsets, and including protecting views to Lincoln Cathedral.
4 Siting of above ground solar infrastructure outside Flood Zones 2 and 3 (excluding panels and cables).	<b>Design Principle 6</b> The Proposed Development will be designed to be resilient to flood risk now and in the future, with close engagement with the Environment Agency.

Design Change	Relevant Design Principle
5 Refinement of vehicular accesses.	<b>Design Principle 7</b> The Proposed Development will provide safe accesses and minimise residual cumulative impacts on the road network as far as practical, whilst delivering the construction at a rapid pace to bring the project online as soon as practical. The main route of the A46 will be preferred. Additional emergency accesses to the site will also be provided where practicable.
6 Areas for solar infrastructure and BESS were optimised to enhance safety.	<b>Design Principle 11</b> The Proposed Development will ensure that battery safety is managed through appropriate siting away from sensitive receptors and ensuring the inclusion of embedded design mitigation measures to minimise risks.
7 Spacings between BESS containers and between inverters and transformers was increased in order to comply with Local Fire Authority requirements.	<b>Design Principle 11</b> The Proposed Development will ensure that battery safety is managed through appropriate siting away from sensitive receptors and ensuring the inclusion of embedded design mitigation measures to minimise risks.

4.3.2 In addition to the above, the boundary of the Principal Site was refined to exclude individual residential properties. This change was made to clarify the boundary of the DCO Site and therefore was not guided by a specific Design Principle.

4.3.3 The Applicant undertook Statutory Consultation from 21 October 2024 to 2 December 2024. The design presented at Statutory Consultation reflected the feedback provided at Non-Statutory Consultation, ongoing technical engagement with stakeholders, discussions with landowners, further environmental surveys and desktop studies including Agricultural Land Classification surveys, landscape and visual, ecology, heritage, noise, transport, water and flood risk. Figure 4-3 is the layout presented at Statutory Consultation.

**Figure 4-3- Layout plan presented at Statutory Consultation**



- 4.3.4 As a result of design evolution, the design presented at Statutory Consultation provided a greater level of detail than the early layout plan provided at Non-Statutory Consultation. The location of solar infrastructure including a BESS compound, the Onsite Substation and Solar Stations was shown alongside areas for proposed planting (hedgerows, trees, tree belts and community orchards) and areas required for landscaping and habitat creation. The proposed location of permissive paths was shown in areas north of the A46, east of Witham St Hughs and west of Bassingham to enhance links across the site by providing circular walks and improving connectivity to public rights of way and local villages.
- 4.3.5 At this stage, the design showed a greater concentration of solar infrastructure north of the A46 than had been shown at the Non-Statutory Consultation stage, and a reduction in solar infrastructure south of Witham St Hughs. This change reflected the need to reduce impacts to and enhance habitat for ground nesting bird habitat on land south of Witham St Hughs, whilst maintaining renewable energy production, hence the relocation of solar infrastructure to the north of the A46. The corridor to protect long range views to Lincoln Cathedral was maintained. Solar infrastructure on land to the west of Bassingham was also reduced in order to minimise heritage impacts on the Grade II River Farmhouse by maintaining intervisibility between River Farmhouse and Church Farm (a non-designated monument).
- 4.3.6 Opportunities to deliver biodiversity net gain were also considered, with a commitment to deliver a minimum of 10%. Measures such as creating pollinator-friendly habitats, orchards, grasslands wildflower meadows and other planting across the site were considered.
- 4.3.7 In terms of optionality at this stage, the following options were presented at Statutory Consultation:
- a. Centralised and distributed BESS arrangements.
  - b. For solar panels, either a south facing fixed configuration or a single axis tracker configuration.
- 4.3.8 In terms of flexibility, the selected Cable Corridor remained sufficiently wide due to the need for more detailed ground investigation at the western end and given the uncertainty about the exact location of the proposed National Grid substation near Navenby at the eastern end.
- 4.3.9 Design related feedback received at Statutory Consultation related to a wide range of matters including permissive paths, screening and planting features, the removal of solar infrastructure south of Thorpe-on-the Hill, west of Bassingham and east of Morton, biodiversity net gain and environmental impacts notably heritage, water, and landscape and visual. The **Consultation Report [EN010154/APP/5.1]** sets out the Applicant's response to all feedback provided at Statutory Consultation.

4.3.10 A design team workshop was held in late December 2024 to review the design related feedback provided to the Statutory Consultation and to take into account ongoing technical engagement with stakeholders and consideration of discussions with landowners in the design of the Proposed Development. The application of the Design Principles set out at Section 3.9 of this DAD informed the discussion and decisions made. A number of changes were made as a result of feedback received from the Statutory Consultation, which are set out in **Table 4-23**. Alongside the change made, is the relevant Design Principle that informed the change.

**Table 4-3 - Design Response to feedback from Statutory Consultation**

Design Change	Relevant Design Principles
<p>1 Removal of parcels for the development of solar infrastructure in the following locations in response to comments from the local community and councils:</p> <ul style="list-style-type: none"> <li>• One parcel to the west of Bassingham.</li> <li>• One parcel to the southeast of Thorpe-on-the-Hill.</li> <li>• One parcel east of Morton Lane.</li> </ul> <p>Land within these areas will now be used for ecological mitigation and enhancement.</p>	<p><b>Design Principle 3</b></p> <p>The Proposed Development will respond sensitively to its proximity to residential dwellings, village settlements and caravan park with regard to visual impact, noise and lighting.</p>
<p>2 Revisions to the permissive path network:</p> <ul style="list-style-type: none"> <li>• Removal of permissive paths around Tunman Wood to minimise ecology impacts.</li> <li>• Additional permissive paths around the Cathedral Park Caravan Park to increase accessibility.</li> <li>• Change to the permissive path network to improve connectivity between Thurlby and Bassingham.</li> </ul>	<p><b>Design Principle 10</b></p> <p>The Proposed Development will enhance, where possible, the existing connectivity within the network of PRoW through the provision of permissive paths and circular routes to be available for public use during the operation of the authorised development to improve accessibility.</p>
<p>3 Siting of Solar Stations away from Public Rights of Way.</p>	<p><b>Design Principle 10</b></p> <p>The Proposed Development will enhance, where possible, the existing connectivity within the network of PRoW through the provision of permissive paths and</p>



Design Change	Relevant Design Principles
	circular routes to be available for public use during the operation of the authorised development to improve accessibility.
4 Removal of a community orchard at Morton.	<b>Design Principle 3</b> The Proposed Development will respond sensitively to its proximity to residential dwellings, village settlements and caravan park with regard to visual impact, noise and lighting.

## 4.4 Layout for DCO Application

- 4.4.1 Following the design team workshop in December 2024, the design of the Proposed Development continued to evolve through the process of environmental assessment and technical engagement with stakeholders. As a result, further changes were made to the design; these are set out below together with the relevant Design Principle that informed the change.

**Table 4-4 – Further Design Changes made ahead of Layout for DCO Application**

Design Change	Relevant Design Principle
1 A reduction in the size of the BESS compound to address noise impacts and to allow for increased landscaping to provide additional screening and increasing opportunities for biodiversity net gain.	<b>Design Principle 1</b> The Proposed Development will be sensitively integrated into its landscape setting, to minimise adverse landscape and visual effects as far as possible.  <b>Design Principle 3</b> The Proposed Development will respond sensitively to its proximity to residential dwellings, village settlements and caravan park with regard to visual impact, noise and lighting.
2 A slight reduction in the width of the Cable Corridor to remove land that was no longer required.	N/A
3 Confirmation of areas for the provision of mitigation for ground	<b>Design Principle 4</b> The Proposed Development will recognise the potential impact on

Design Change	Relevant Design Principle
nesting birds, including Skylark and Lapwing.	protected species and habitat features. It will safeguard these through the use of buffers and offsets.
4 Application of a 30m offset at the location of a badger sett.	<b>Design Principle 4</b> The Proposed Development will recognise the potential impact on protected species and habitat features. It will safeguard these through the use of buffers and offsets.
5 Removal of above ground solar Infrastructure from Flood Zone 3.	<b>Design Principle 6</b> The Proposed Development will be designed to be resilient to flood risk now and in the future, with close engagement with the Environment Agency.

4.4.2 In addition to the above, the boundary of the Principal Site was refined to remove areas where no works are proposed e.g. woodland blocks and unsuitable arable land. This change was made to clarify the boundary of the DCO Site, therefore was not guided by a specific Design Principle.

4.4.3 **Figure 4-4** is the layout presented at DCO application stage.

**PROJECT**  
Fosse Green Energy

**CLIENT**  
Fosse Green Energy Ltd

**CONSULTANT**  
AECOM Limited  
Sunley House  
4 Bedford Park  
Surrey, CR2 2AP, UK  
www.aecom.com

**LEGEND**

- DCO Site Boundary
- Indicative South Facing Fixed layout
- PV Panels
- Solar PV Array Area
- Solar Station Compound
- BESS Compound
- On-site Substation
- Bird Mitigation Area - Permanent Grassland
- Bird Mitigation Area - Managed Arable
- Construction Access Point
- Operational Access Point
- Emergency Access Point
- Access Tracks
- Proposed Permissive Paths
- Existing Permissive Paths Proposed to be Retained
- Public Right of Way
- Public Right of Way Diversion
- Existing Woodland
- Proposed Tree
- Existing Tree
- Proposed Belt Of Trees
- Community Orchard - Open Access
- Proposed Hedgerow
- Existing Hedgerows
- Retained Arable or Grassland

**NOTES**

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**LEGISLATION**  
Regulation 52(2a) Infrastructure Planning (Applications: Prescribed Forms and Procedure) Regulations 2009

**ISSUE PURPOSE**  
DCO Submission

**FIGURE TITLE**  
Bird Mitigation Land Allocation

**FIGURE NUMBER**  
Figure 8-5

**DOCUMENT REFERENCE**  
EN010154/APPW.2

**REV.**  
01

- 4.4.4 The design that is presented at DCO application stage has been further refined and reflects the outcomes of several iterations of consultation, assessment and application of the Design Principles. Solar infrastructure is still located north and south of the A46, however, as evident from the layout, the scale of development has reduced with the removal of solar infrastructure from several areas and the refinement of offsets from environmental features, such as trees and watercourses. The corridor to protect long range views to Lincoln Cathedral is maintained as well as the intervisibility between River Farmhouse and Church Farm.
- 4.4.5 The landscape design has sought to integrate the Proposed Development into the surrounding landscape by utilising existing features and avoiding or minimising adverse landscape and visual effects as much as possible. This is evident in the retained hedgerows, trees and woodland, arable fields and ponds and the proposed hedgerows, woodlands and tree belts, grassland and community orchards located at the site boundary and throughout the DCO Site itself. The **Framework Landscape and Ecological Management Plan [EN010154/APP/7.15]** sets out the landscape strategy and the measures that will be implemented to minimise impacts on the landscape.
- 4.4.6 The design also shows the location of managed arable land which is provided to benefit ground nesting birds. These areas are indicatively illustrated as Arable fields A to F on **Figure 4-4** of this DAD. These areas would provide habitat for important ground nesting birds such as Skylark and Lapwing. The managed arable would be rotated within the areas of the Order Limits where there is no solar PV infrastructure and the fields will continue to be used for maize, barley and wheat. This also demonstrates how the Proposed Development co-exists with existing land uses, ensuring the continuation of current farming practices in Arable fields A to F. In addition, areas of permanent grassland are proposed as bird mitigation areas for ground nesting birds, illustrated as Grassland A to D on **Figure 4-4** of this DAD.
- 4.4.7 The approach to the design of bird mitigation was informed by the Ministry of Defence's response to Statutory Consultation. Due to the proximity of the Proposed Development to RAF Waddington and RAF Cranwell, their principal concern was the creation of new wetland features or new vegetative habitats that may attract and support populations of large and/or flocking birds that would be hazardous to aircraft operations. The Ministry of Defence did not anticipate that the Proposed Development would cause any significant increase in bird strike hazard, however considered that the design of any solar development should take this into account and where possible limit the potential of bird strike occurring. As shown on **Figure 4-4** of this DAD, the managed arable land and the grassland areas are well distributed throughout the Site which, along with ensuring the mitigation land is well integrated into its surrounding and allows for rotation, is an approach that prevents bird flocking.
- 4.4.8 With the measures proposed, the design is anticipated to result in an uplift in biodiversity, as set out in the **Biodiversity Net Gain Report**

**[EN010154/APP/7.12]**. The Proposed Development will deliver a minimum of 30% biodiversity net gain in habitat units, 50% biodiversity net gain in hedgerow units and 10% biodiversity net gain in watercourse units<sup>5</sup>.

- 4.4.9 The net gain in biodiversity aligns with Design Principle 9 - The Proposed Development will seek to avoid adverse impacts and to enhance existing biodiversity through the creation of new green infrastructure and the creation of new habitat for wildlife to achieve a minimum 10% in Biodiversity Net Gain.
- 4.4.10 As demonstrated, the design presented at the DCO application stage represents the outcome of several design iterations, including feedback from Non-Statutory and Statutory Consultation, ongoing technical engagement with stakeholders, discussions with landowners and the outcomes of environmental assessment. The design has evolved within the framework provided by the continuous application of the Design Principles set out at Section 3.9 of this DAD that have been central to decision making.

## 4.5 How the design has delivered positive outcomes

### Sustainable Infrastructure sensitive to place

- 4.5.1 The Applicant has sought to deliver good design outcomes, that result in sustainable infrastructure, that is sensitive to place, from an early stage. As demonstrated in Section 3.2 which explains site selection, a process was undertaken to assess the suitability of the site for the Proposed Development and potential alternative sites against a range of planning, environmental and operational. Importantly the majority of the DCO Site does not comprise Best and Most Versatile agricultural land and the vast majority of the DCO Site is located in Flood Zone 1. Following site selection, the Applicant sought to fully understand the site context to inform the early layout plan.
- 4.5.2 As demonstrated in Sections 4.2, 4.3 and 4.4 of this DAD, the design of the Proposed Development has evolved in response to feedback from Non-Statutory and Statutory Consultation and through ongoing environmental assessment and application of the mitigation hierarchy. This approach has ensured that where possible the design has been amended to address feedback and potential adverse effects. Given the collaborative and holistic approach to design, the Proposed Development is sensitive to place.
- 4.5.3 In terms of the delivery of sustainable infrastructure, sustainability measures have been incorporated into the design of the Proposed Development to mitigate its impact. Sustainability measures are set out in Sections 6.4 and 6.5 of **Chapter 6: Climate Change** of the ES **[EN010154/APP/6.1]**, and include the following:

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<sup>5</sup> Using DEFRA's Statutory Biodiversity Metric (SBM) (Version 1.0.4). For further information, see the **Biodiversity Net Gain Report [EN010154/APP/7.12]**.



- a. Increasing recyclability by segregating construction waste to be re-used and recycled where reasonably practicable;
- b. Designing, constructing and implementing the Proposed Development in such a way as to minimise the creation of waste and maximise the use of alternative materials with lower embodied carbon, such as locally sourced products and materials with a higher recycled content where feasible;
- c. Reusing suitable infrastructure and resources where possible to minimise the use of natural resources and unnecessary materials (e.g. reusing excavated soil for fill requirements);
- d. Liaising with construction personnel for the potential to implement staff minibuses and car sharing options;
- e. Implementing a Travel Plan in the Construction Traffic Management Plan (CTMP) to reduce the volume of construction staff and employee trips to the Proposed Development, by limiting car parking at construction compounds to a maximum of 225 spaces across four zones of the Principal Site, while encouraging car sharing, implementing a shuttle bus service for non-local staff staying in nearby accommodation and, and providing cycle parking spaces, as set out in the **Framework Construction Traffic Management Plan [EN010154/APP/7.18]**;
- f. Switching vehicles and plant off when not in use and ensuring construction vehicles conform to current EU emissions standards; and
- g. Conducting regular planned maintenance of the construction plant and machinery to optimise efficiency.

4.5.4 The Proposed Development includes measures to mitigate flood risk, including the exclusion of above ground solar infrastructure within Flood Zone 3. Measures included in the **Framework Construction Environmental Management Plan [EN010154/APP/7.7]** aimed at preventing an increase in flood risk during the construction works include:

- a. Storing topsoil and other construction materials outside of the 1 in 100-year floodplain extent where feasible. If areas located within Flood Zone 2 (or 3) are to be utilised for the storage of construction materials, this would be done in accordance with the applicable flood risk activity regulations, if required.
- b. Conducting regular planned maintenance of the plant and machinery.
- c. Appointing named person(s) to monitor weather forecasts on a monthly, weekly and daily basis, and plan works accordingly.

- d. The construction laydown area site office and supervisor will be notified of any potential flood occurring by use of the Flood line Warnings Direct or equivalent service.
  - e. Developing health and safety plans for construction activities to account for potential climate change impacts on workers, such as flooding and heatwaves. To include measures such as toolbox talks on training on dangers of extreme weather conditions.
  - f. All temporary construction compounds will be located outside of areas of fluvial Flood Zone 2 and 3.
  - g. The provision of temporary settlement and drainage measures.
- 4.5.5 To manage flood risk during construction and operation, the **Framework Surface Water Drainage Strategy (Appendix 9-D of the ES [EN010154/APP/6.3])** provides for the attenuation of surface water runoff from the Proposed Development, whilst minimising flood risk to the DCO Site and surrounding areas, via measures such as:
- a. Additional attenuation in the form of SuDS incorporated to control any increase in the rate of flow towards receiving watercourses including allowances for climate change;
  - b. Infrastructure flood resilience methods set, including the requirement for Solar PV Panels to be set back by 10m from all water features; and
  - c. The design of the Proposed Development will incorporate climate change projections required by the Environment Agency to ensure flood risk from all sources, including a sea level rise assessment, is accounted for and managed across the lifetime of the Proposed Development so it will remain operational in times of flood.
- 4.5.6 Measures to protect against the adverse effects of climate change on the natural environment are also set out in the **Framework Construction Environmental Management Plan [EN010154/APP/7.7]**. These measures include:
- a. Consideration of future climate conditions when selecting species for use in green infrastructure.
  - b. Protecting against increased soil erosion and degradation due to increased precipitation by covering exposed soil with grass, reducing permeability.
- 4.5.7 Given the mitigation measures embedded into the design of the Proposed Development, it has been demonstrated that when taken as a whole, the Proposed Development comprises sustainable infrastructure.

## Landscape strategy, green infrastructure and biodiversity net gain

- 4.5.8 Delivery of the Landscape Strategy set out in the **Framework Landscape and Ecological Management Plan [EN010154/APP/7.15]** is integral to achieving good design outcomes. The overall goal of the landscape strategy is to integrate the Proposed Development into its surrounding landscape and to avoid or minimise adverse landscape and visual effects as much as possible. This design approach also seeks to maximise opportunities for delivering net biodiversity gains. Accordingly, the landscape design aims to:
- Integrate the Proposed Development into the existing landscape pattern by utilising and aligning with existing features, including vegetation where feasible;
  - Replace habitats lost during construction and enhance habitats within the DCO Site Boundary through the creation of grasslands, tree belts and areas of scrub; and
  - Filter and screen more prominent components of the Proposed Development in views from sensitive receptors.
- 4.5.9 Measures included in the **Framework Landscape and Ecological Management Plan [EN010154/APP/7.15]** include the retention of existing habitats including individual trees, shrubs and woodland, hedgerows, arable land and ponds which will maintain visual amenity, reinforce the character of the landscape, provide a structure for the addition of new planting, provide land for bird mitigation and enhance the biodiversity value of aquatic species. A range of new habitats are proposed including woodland and tree belts, hedgerows with trees, scrub, individual trees, various forms of grassland, community orchard, localised features and arable flora. These measures will provide biodiversity enhancements providing value to wildlife, screen sensitive areas and supplement existing retained features.
- 4.5.10 The **Framework Landscape and Ecological Management Plan [EN010154/APP/7.15]** sets out how new green infrastructure will be created. This includes the introduction of grassland beneath the Solar PV Panels, and across the extent of the wider Principal Site, which will enhance biodiversity compared to the current agricultural landscape. In addition, hedgerows will be improved which improves the landscape structure and ecological connectivity. Tree and shrub planting will provide additional habitat and increase biodiversity and ponds will be restored where appropriate.
- 4.5.11 The corridor provided to protect long range views to Lincoln Cathedral reinforces green infrastructure north of the A46 and a substantial offset has been integrated along the eastern edge of Witham St Hughs, which continues the green corridor along the drainage ditch running between Haddington Lane in the south and the A46 in the north. An orchard and hedgerows with trees will also be included in this area.

- 4.5.12 As is typical for ground-mounted solar projects, with the measures proposed, the Proposed Development provides a net gain in biodiversity across habitats, hedgerows and watercourses. The **Biodiversity Net Gain Report [EN101054/APP/7.12]** provides details on how the Proposed Development will meet this target.

### Accessibility

- 4.5.13 Following consideration of the site context, the opportunity to enhance accessibility across and within the DCO Site was identified at an early stage. Survey work, discussions with landowners and feedback from Non-Statutory and Statutory Consultation further informed the potential locations where improvements could be provided. As a result, approximately 9.5km of new permissive paths is proposed to supplement the existing Public Right of Way network, link existing routes and create new, and enhance existing, connections to surrounding villages including:
- Route from Tunman Wood linking to PRoW LL/TOTH/11/1 to the east of Morton.
  - Route from Tunman Wood to Fosse Lane including a link to the Cathedral View Caravan Park linking with PRoW LL/TOTH/6A/1.
  - Cathedral View Caravan Park to Fosse Lane, providing a circular walk and safer route and access to Thorpe-on-the-Hill for residents.
  - East of Witham St Hughs, providing a circular walk around the proposed community orchard and linking to PRoW LL/AUbo/11/2.
  - Route south of Thurlby linking to PRoW LL/ThuN/2/1.
  - West of Basingham providing a circular walk and linking to PRoW LL/NoDi/1/2.
- 4.5.14 The permissive paths are shown on **Figure 3-3: Proposed Permissive Paths** of the ES **[EN010154/APP/6.2]**. In addition to the publicly accessible permissive paths set out above, provision has also been made for two new proposed private access tracks to link the Cathedral View Holiday Park and Field Farm House with proposed permissive paths, as shown in Figure 7.15-1 of the **Framework Landscape and Ecological Management Plan [EN010154/APP/7.15]**.
- 4.5.15 The permissive paths provided will be operational for the duration of the operation of the Proposed Development, via permission from landowners. Permissive paths are secured in the **Streets, Rights of Way and Access Plans [EN010154/APP/2.3]** and the **Framework Landscape and Ecological Management Plan [EN010154/APP/7.15]**.

## 4.6 Relationship of good design outcomes to the Design Vision

- 4.6.1 The Design Vision stated at Section 3.8 of this DAD sought to maximise renewable energy generation across the site whilst aligning with national planning policy and aiming to minimise environmental effects. As demonstrated in Section 4.5 of this DAD the design of the Proposed Development has resulted in sustainable infrastructure that is sensitive to place and landscape and accessibility measures that both integrate the Proposed Development into the existing landscape and provide increased connectivity. These measures are framed through application of the Design Principles as set out in this DAD, which in turn have sought to reflect the requirements of national planning policy and minimise the environmental effects of the Proposed Development.
- 4.6.2 Accordingly, the Proposed Development reflects the intent of the Design Vision, given it seeks to maximise energy generation and, in parallel, deliver the good design measures through the Design Commitments, which secure the practical implementation of the Design Principles.



## 5. Co-ordinate

### 5.1 Design Refinement

- 5.1.1 As set out in Section 4.4 of this DAD the vast majority of the structural design changes were made following Statutory Consultation and in preparing the final layout that formed the basis of assessment in the Environmental Statement.
- 5.1.2 However, following this stage the design has been further modified and refined within the framework provided by the Design Principles in response to specific issues raised by the technical disciplines undertaking the environmental assessment. This includes the following:

**Table 5-1 Further Design Changes Made**

Design Change	Relevant Design Principle
Revisions to highway accesses as access designs have been discussed and agreed with the Local Highway Authority, Lincolnshire County Council.	<b>Design Principle 7</b> The Proposed Development will provide safe accesses and minimise residual cumulative impacts on the road network as far as practical, whilst delivering the construction at a rapid pace to bring the project online as soon as practical. The main route of the A46 will be preferred for construction traffic. Additional emergency accesses to the Site will also be provided where practicable.
Amendments to internal access tracks within the Principal Site to avoid tree root protection areas.	<b>Design Principle 8</b> The Proposed Development will be designed to align with field boundaries and existing landscape features. It will seek to retain any existing vegetation and minimise watercourse crossings where practicable.
Minor amendments to reduce the number of watercourse crossings by re-routing internal access tracks to use existing culvert locations.	<b>Design Principle 8</b> The Proposed Development will be designed to align with field boundaries and existing landscape features. It will seek to retain any existing vegetation and minimise watercourse crossings where practicable.

## 5.2 Process for post-consent decision-making

- 5.2.1 Decision making on design matters post consent will be via the discharge of the relevant requirements set out in Schedule 2 of the **Draft Development Consent Order [EN010154/APP/3.1]**. The relevant local planning authorities, Lincolnshire County Council and North Kesteven District Council, will be the discharging authorities for the detailed design.

## 6. Securing Good Design

### 6.1 Securing Good Design

- 6.1.1 The design of the Proposed Development submitted as part of this DCO application is considered to respond to the Design Principles resulting in a good quality design that meets the overarching design vision for the Proposed Development.
- 6.1.2 If the DCO consent is granted, good design will be secured post-consent via the following documents:
- a. The Design Commitments at Appendix A of this Document, secured by Requirement 6 of the **Draft Development Consent Order [EN010154/APP/3.1]**.
  - b. **Works Plans [EN010154/APP/2.2]**, secured by Schedule 1 of the **Draft Development Consent Order [EN010154/APP/3.1]**.
  - c. **Proposed Development Parameters [EN010154/APP/7.4]**, secured by Requirement 6 of the **Draft Development Consent Order [EN010154/APP/3.1]**.
  - d. **Framework Battery Safety Management Plan [EN010154/APP/17]**, secured by Requirement 7 of the **Draft Development Consent Order [EN010154/APP/3.1]**.
  - e. **Framework Landscape and Ecological Management Plan [EN010154/APP/7.15]**, secured by Requirement 8 of the **Draft Development Consent Order [EN010154/APP/3.1]**.
  - f. **Framework Construction Traffic Management Plan [EN010154/APP/7.18]** secured by Requirement 14 of the **Draft Development Consent Order [EN010154/APP/3.1]**.
  - g. **Framework Public Rights of Way Management Plan [EN010154/APP/7.14]** secured by Requirement 18 of the **Draft Development Consent Order [EN010154/APP/3.1]**.
- 6.1.3 In addition, a **Framework Operational Environmental Management Plan [EN010154/APP/7.8]** has been produced as part of the DCO application, secured by Requirement 13 of the **Draft Development Consent Order [EN010154/APP/3.1]**, to demonstrate how any mitigation and management measures will be implemented. It also sets out the monitoring and auditing activities designed to ensure that such mitigation measures are carried out, and that they are effective.
- 6.1.4 Requirement 6 of the **Draft Development Consent Order [EN010154/APP/3.1]** requires final design details to be submitted and

approved by the relevant planning authority. This will provide a further opportunity for the design to be refined and improved, in accordance with the design vision and principles.

- 6.1.5 Construction and decommissioning details are described in **Chapter 3: The Proposed Development** of the ES [EN010154/APP/6.1] and will be principally managed through detailed management plans including the Construction Environmental Management Plan, the Construction Traffic Management Plan and the Decommissioning Environmental Management Plan, which are secured through the requirements of the DCO (see schedule 2 of the **Draft Development Consent Order** [EN010154/APP/3.1]). The **Framework Construction Environmental Management Plan** [EN010154/APP/7.7], **Framework Construction Traffic Management Plan** [EN010154/APP/7.18] and **Framework Decommissioning Environmental Management Plan** [EN010154/APP/7.9] provide details of the likely working methods and mitigation measures to be implemented during these stages.

## 6.2 Community Liaison Group

- 6.2.1 The Applicant recognises the value of ongoing engagement with local communities and has set up a Community Liaison Group (CLG), based on the key local parishes that overlap the Proposed Development, that seeks to:
- a. Act as the key point of contact for engaging with communities and as a way to explore ways to minimise impacts and reduce tension through the life of the project.
  - b. Create an opportunity to discuss relevant topics.
  - c. Create open communication channels to help build trust and enable open and honest discussion, which are important ways to combat misinformation.
- 6.2.2 Requirement 5 of the **Draft Development Consent Order** [EN010154/APP/3.1] provides the framework for establishing the CLG and its duration. Notwithstanding this requirement, the Applicant has already established the CLG and held the first meeting in order to maintain a dialogue with the local community and it is anticipated that the next meeting will be held post submission of the DCO application.

## 6.3 Flexibility

- 6.3.1 The design of the Proposed Development still includes some flexibility as the technology for solar PV and BESS continues to evolve rapidly; for example, solar PV panels are becoming increasingly powerful year on year and better at minimising shading losses, which affects how developers space the rows of solar PV and the amount of land needed to achieve the proposed export capacity. As a result, the design parameters of the Proposed Development maintain some degree of flexibility to allow the most appropriate technology to be utilised at the time of construction. These design elements are set out in

the **Proposed Development Parameters [EN010154/APP/7.4]** and will be confirmed at the detailed design stage through discharge of Requirement 6 of the **Draft Development Consent Order [EN010154/APP/3.1]**. To account for flexibility and enable the optimal design of the Proposed Development post consent, the Rochdale Envelope approach has been adopted for environmental assessment in order that the reasonable worst case is assessed, as set out in **Chapter 5: EIA Methodology** of the ES **[EN010154/APP/6.1]**.



## 7. Conclusion

- 7.1.1 The design of the Proposed Development has evolved in accordance with good design criteria set out in paragraphs 4.7.5 to 4.7.9 of NPS EN-1 and the Planning Inspectorate's Advice on Good Design. It has also been informed, to the extent relevant, by the NPPF, local planning policy, and design guidance to ensure good design outcomes.
- 7.1.2 The Design Vision and Design Principles have provided a framework for design evolution and take into account stakeholder engagement, consultation feedback, and technical studies. The Design Principles have sought to guide the design to minimise adverse impacts, enhance opportunities, and balance flexibility and certainty in the DCO application. The design team has worked collaboratively at all stages of the design process in order to ensure that the design presented in the DCO application is cohesive and mitigates adverse effects. Through carefully developing the design in response to the baseline analysis and the opportunities identified, the Applicant has achieved a design that responds positively to its location, delivers substantial benefits, keeps negative impacts to the minimum and makes valuable enhancements to the local area.
- 7.1.3 The application of the Design Vision and Design Principles has resulted in sustainable infrastructure that is sensitive to place (as demonstrated in Section 4.5 of this DAD), has minimal impacts on heritage assets (demonstrated in Sections 4.2, 4.3 and 4.4 of this DAD), demonstrates efficient use of natural resources (demonstrated in Section 4.5 of this DAD), matched by an appearance that demonstrates good aesthetic as far as possible (demonstrated in Section 4.5 of this DAD), in accordance with paragraph 4.7.2 of NPS EN-1.
- 7.1.4 The mechanisms that secure good design and apply post consent are set out in Section 6 along with the approach to maintaining community engagement via a Community Liaison Group.
- 7.1.5 The **Planning Statement [EN010154/APP/7.2]** and NPS Accordance Tables demonstrate how the Applicant has complied with the requirement to achieve good design, as set out in NPS EN-1, NPS EN-3 and NPS EN-5.
- 7.1.6 If DCO consent is granted, the design will be implemented post-consent according to the Design Commitments (at Appendix A of this Document), **Works Plans [EN010154/APP/2.2]**, **Proposed Development Parameters [EN010154/APP/7.4]**, and Control Documents as secured in the **Draft Development Consent Order [EN010154/APP/3.1]** and in accordance with the **Environmental Statement [EN010154/APP/6.1]**.

## 8. References

- Ref 1 HM Government (2008). Planning Act 2008. Available at: <https://www.legislation.gov.uk/ukpga/2008/29/contents> [Accessed 04 April 2025]
- Ref 2 Planning Inspectorate (2024). Nationally Significant Infrastructure Projects: Advice on Good Design. Available at: <https://www.gov.uk/guidance/nationally-significant-infrastructure-projects-advice-on-good-design> [Accessed 04 April 2025]
- Ref 3 Department for Energy Security and Net Zero (2024). Overarching National Policy Statement for Energy (EN-1). Available at: <https://assets.publishing.service.gov.uk/media/65bbfbd709fe1000f637052/overarching-nps-for-energy-en1.pdf> [Accessed 04 April 2025]
- Ref 4 Department for Energy Security and Net Zero (2024). National Policy Statement for Electricity Networks Infrastructure (EN-3). Available at: [National Policy Statement for renewable energy infrastructure \(EN-3\)](https://assets.publishing.service.gov.uk/media/65a78a5496a5ec000d731abb/nps-electricity-networks-infrastructure-en5.pdf) [Accessed 04 April 2025]
- Ref 5 Department for Energy Security and Net Zero (2024). National Policy Statement for Electricity Networks Infrastructure (EN-5). Available at: <https://assets.publishing.service.gov.uk/media/65a78a5496a5ec000d731abb/nps-electricity-networks-infrastructure-en5.pdf> [Accessed 04 April 2025]
- Ref 6 Ministry of Housing, Communities and Local Government, Ministry of Housing, Communities & Local Government (2018 to 2021) and Department for Levelling Up, Housing and Communities (2025). National Planning Policy Framework. Available at: [https://assets.publishing.service.gov.uk/media/67aaf8f3b41f783cca46251/NPPF\\_December\\_2024.pdf](https://assets.publishing.service.gov.uk/media/67aaf8f3b41f783cca46251/NPPF_December_2024.pdf) [Accessed 04 April 2025]
- Ref 7 Central Lincolnshire Joint Strategic Planning Committee (CLJSPC) (2023). Central Lincolnshire Local Plan. Available at: <https://www.n-kesteven.gov.uk/sites/default/files/2023-04/Local%20Plan%20for%20adoption%20Approved%20by%20Committee.pdf> [Accessed 04 April 2025]
- Ref 8 Thorpe on the Hill Parish Council (2016). Thorpe on the Hill Neighbourhood Plan. Available at: [https://www.n-kesteven.gov.uk/sites/default/files/2023-01/neighbourhood\\_plan\\_thorpe\\_on\\_the\\_hill.pdf](https://www.n-kesteven.gov.uk/sites/default/files/2023-01/neighbourhood_plan_thorpe_on_the_hill.pdf) [Accessed 04 April 2025]
- Ref 9 Bassingham Parish Council (2016). Bassingham Neighbourhood Plan. Available at: [https://www.n-kesteven.gov.uk/sites/default/files/2023-01/bassingham\\_neighbourhood\\_plan.pdf](https://www.n-kesteven.gov.uk/sites/default/files/2023-01/bassingham_neighbourhood_plan.pdf) [Accessed 04 April 2025]

- Ref 10 Coleby Parish Council (2018). Coleby Parish Neighbourhood Plan. Available at: [https://www.n-kesteven.gov.uk/sites/default/files/2023-01/coleby\\_neighbourhood\\_plan.pdf](https://www.n-kesteven.gov.uk/sites/default/files/2023-01/coleby_neighbourhood_plan.pdf) [Accessed 04 April 2025]
- Ref 11 National Infrastructure Commission (NIC) (2020). Design Principles for National Infrastructure. Available at: <https://nic.org.uk/app/uploads/NIC-Design-Principles.pdf> [Accessed 04 April 2025]
- Ref 12 National Infrastructure Commission (NIC) Design Group (2024). Project Level Design Principles. Available at: <NIC-Design-Principles-Handbook-Digital-PDF.pdf> [Accessed 04 April 2025]
- Ref 13 Ministry of Housing, Communities and Local Government, Ministry of Housing, Communities & Local Government (2018 to 2021) and Department for Levelling Up, Housing and Communities (2021). National Design Guide. Available at: [https://assets.publishing.service.gov.uk/media/602cef1d8fa8f5038595091b/National\\_design\\_guide.pdf](https://assets.publishing.service.gov.uk/media/602cef1d8fa8f5038595091b/National_design_guide.pdf) [Accessed 04 April 2025]
- Ref 14 Landscape Institute (2020). Infrastructure Technical Guidance Note 04/20. Available at: <https://landscapewpstorage01.blob.core.windows.net/www-landscapeinstitute-org/2018/01/LI-Infrastructure-TGN-FINAL-200924.pdf> [Accessed 04 April 2025]
- Ref 15 Natural England (2010). Regional Agricultural Land Classification Maps. Available at: <https://publications.naturalengland.org.uk/category/5954148537204736> [Accessed 04 April 2025]

# Appendix A Design Commitments

## A.1 Introduction

- A.1.1 This Design Commitments Appendix has been prepared to outline the Design Commitments for the detailed design of the Proposed Development. Design Commitments are needed to secure design elements of the Proposed Development not included in other application documents.
- A.1.2 Should the DCO be granted, the Design Commitments will be secured via Requirement 6 of the **Draft Development Consent Order [EN010154/APP/3.1]**. Requirement 6 states that no part of the authorised development may commence until certain details are submitted and approved by the Local Planning Authorities. Specifically, Requirement 6 Section (2)(a) states the details submitted “*must accord with the design commitments*”. The Design Commitments are listed as a certified document under Schedule 10 of the **Draft Development Consent Order [EN010154/APP/3.1]**.
- A.1.3 The Design Commitments stem from the Proposed Development’s Design Principles, which are set out in the **DAD [EN010154/APP/7.3]**. They ultimately come from the Design Vision of the Proposed Development which is:
- To seek to maximise the renewable energy generation across the site for the agreed export capacity with National Grid Electricity Transmission, whilst aligning with national planning policy and aiming to minimise environmental effects, supporting the delivery of the Government’s objectives and commitments for the development of a secure, reliable, and affordable supply of energy while also meeting decarbonisation targets.*
- A.1.4 To note, there is some overlap of the Design Commitments and the Environmental Commitments as set out in the **Environmental Commitments Register [EN010154/APP/6.5]**. Those which overlap are included in the Design Commitments as well for completeness.

## A.2 Design Commitments

- A.2.1 The Design Commitments for the Proposed Development are set out in **Table A-1**.



**Table A-1 Design Commitments**

<b>ID</b>	<b>Description</b>	<b>Relevant Design Principle</b>	<b>Phase commitment to be implemented</b>	<b>Securing Mechanism</b>
<b>Landscape</b>				
LA1	Maintain existing field patterns and the structure of the landscape and maximise natural screening provided by existing vegetation across the DCO Site where practicable.	Design Principles 1 and 8	Construction and Operation	Requirement 6: Detailed design approval as set out in the <b>Draft Development Consent Order [EN010154/APP/3.1]</b> .
LA2	The solar PV panels and associated infrastructure will be sited to preserve views of Lincoln Cathedral from Tunman Hill.	Design Principles 1 and 5	Construction and Operation	Requirement 6: Detailed design approval, as set out in the <b>Draft Development Consent Order [EN010154/APP/3.1]</b> .  Work No. 1 as shown on the <b>Works Plans [EN010154/APP/2.2]</b> .
LA3	Larger infrastructure, such as the Onsite Substation and the centralised BESS Compound, will be located within areas of enclosed landscape, bound by frequent small woodlands and hedgerows, in order to minimise potential visual effects.	Design Principle 1	Operation	Requirement 6: Detailed design approval and Requirement 8: Landscape and ecological management plan, as set out in the <b>Draft Development Consent</b>

ID	Description	Relevant Design Principle	Phase commitment to be implemented	Securing Mechanism
				<p><b>Order</b> <b>[EN010154/APP/3.1].</b></p> <p>Article 3 (Development consent etc. Granted by this Order) in the Draft Development Consent Order.</p> <p>Work Nos. 2 and 4 as shown on the <b>Works Plans</b> <b>[EN010154/APP/2.2].</b></p>
LA4	Solar infrastructure will be sited 10m away from the local road network, where practicable, in order to minimise visual impact on people travelling.	Design Principle 1	Operation	Requirement 6: Detailed design approval as set out in the <b>Draft Development Consent Order</b> <b>[EN010154/APP/3.1].</b>
LA5	The Cable Corridor is proposed alongside existing large-scale pylons to avoid affecting new areas within the sensitive landscape character of Lincoln Cliff.	Design Principle 1	Construction	Requirement 6: Detailed design approval as set out in the <b>Draft Development Consent Order</b> <b>[EN010154/APP/3.1].</b>
LA6	A substantial offset (minimum 100m from the Proposed Development) will be provided along the eastern edge of Witham	Design Principle 1	Construction and Operation	Requirement 6: Detailed design approval as set out in the <b>Draft Development</b>

ID	Description	Relevant Design Principle	Phase commitment to be implemented	Securing Mechanism
	St Hughs, which continues the green corridor along the drain to the north.			<b>Consent Order [EN010154/APP/3.1].</b>
LA7	Fencing around the Principal Site perimeter will be wooden posts with stock proof fencing, measuring up to 2m high, allowing visual permeability, thereby minimising its visual impact.	Design Principle 1	Construction and Operation	Requirement 9: Fencing and other means of enclosure as set out in the <b>Draft Development Consent Order [EN010154/APP/3.1].</b>
LA8	Implementation of tree planting, hedgerow planting and hedgerow reinforcement across the DCO Site. Establishment and maintenance measures are outlined in the <b>Framework Landscape and Ecological Management Plan [EN010154/APP/7.15].</b>	Design Principles 1 and 3	Construction and Operation	Requirement 6: Detailed design approval and Requirement 8: Landscape and ecological management plan as set out in the <b>Draft Development Consent Order [EN010154/APP/3.1].</b>
<b>Amenity</b>				
AM1	A minimum offset of 50m from solar infrastructure will be included around all residential properties to minimise impacts to their visual amenity.	Design Principles 1 and 3	Construction and Operation	Requirement 6: Detailed design Approval as set out in the <b>Draft Development Consent Order [EN010154/APP/3.1].</b>

ID	Description	Relevant Design Principle	Phase commitment to be implemented	Securing Mechanism
AM2	Temporary construction compounds in the Cable Corridor will be located to avoid visual, noise and lighting impacts, and not result in a higher impact than that assessed within the ES.	Design Principle 3	Construction	<p>Requirement 6: Detailed design approval and Requirement 12: Construction environmental management plan, as set out in the <b>Draft Development Consent Order</b> [EN010154/APP/3.1]</p> <p>Work No. 5A as shown on the <b>Works Plans</b> [EN010154/APP/2.2].</p>
<b>Lighting</b>				
LI1	No part of the Proposed Development will be continuously lit, maintaining existing levels of darkness during the night.	Design Principles 1 and 3	Operation	<p>Requirement 13: Operational environmental management plan as set out in the <b>Draft Development Consent Order</b> [EN010154/APP/3.1].</p>
LI2	Operational lighting will be triggered by Passive Infra-red Detector (PID) systems, which will be installed around the perimeter of the Proposed Development.	Design Principles 1 and 3	Operation	<p>Requirement 6: Detailed design approval as set out in the <b>Draft Development</b></p>

ID	Description	Relevant Design Principle	Phase commitment to be implemented	Securing Mechanism
				<b>Consent Order [EN010154/APP/3.1].</b>
LI3	Operational Lighting, as described in <b>Chapter 3: The Proposed Development</b> of the ES <b>[EN010154/APP/6.1]</b> , will be directional to minimise potential for light spillage beyond the Site particularly towards neighbouring properties, habitats, highways or waterways.	Design Principles 1 and 3	Operation	Requirement 6: Detailed design approval as set out in the <b>Draft Development Consent Order [EN010154/APP/3.1].</b>
LI4	To minimise light spill, the lights installed will be of the minimum brightness and/or have a power rating capable of performing the desired function. Light fittings will be used to reduce the amount of light emitted above the horizontal (reduce upward lighting).	Design Principles 1 and 3	Operation	Requirement 6: Detailed design approval as set out in the <b>Draft Development Consent Order [EN010154/APP/3.1].</b>
LI5	The lighting of the Onsite Substation will be motion sensor triggered and operate from dusk.	Design Principles 1 and 3	Operation	Requirement 6: Detailed design approval as set out in the <b>Draft Development Consent Order [EN010154/APP/3.1].</b>
LI6	Low level lighting on specific operational units will be triggered by motion sensors, from dusk.	Design Principles 1 and 3	Operation	Requirement 6: Detailed design approval as set out in the <b>Draft Development Consent Order [EN010154/APP/3.1].</b>



ID	Description	Relevant Design Principle	Phase commitment to be implemented	Securing Mechanism
LI7	The inward facing CCTV cameras will typically use night-vision technology and will not require additional lighting.	Design Principles 1 and 3	Construction	Requirement 6: Detailed design approval as set out in the <b>Draft Development Consent Order [EN010154/APP/3.1]</b> .
LI8	No permanent lighting outside of working hours during construction.	Design Principles 1 and 3	Construction	Requirement 12: Construction environmental management plan as set out in the <b>Draft Development Consent Order [EN010154/APP/3.1]</b> .
<b>Public Rights of Way/Permissive Paths</b>				
PR1	Where development is proposed adjacent to a PRow, there will be a minimum offset of 10m from the centre line (minimum 20m total). Where development is proposed on both sides of a PRow, sections of wider offsets reflecting local features, such as hedgerows, will be integrated to vary the extent of views experienced across the Principal Site, where practicable.	Design Principles 1 and 10	Operation	Requirement 6: Detailed design approval as set out in the <b>Draft Development Consent Order [EN010154/APP/3.1]</b> .
PR2	The Proposed Development will create new permissive paths available to the	Design Principle 10	Operation	Requirement 17: Permissive paths and Requirement 8: Landscape

ID	Description	Relevant Design Principle	Phase commitment to be implemented	Securing Mechanism
	<p>public during the operational lifetime. These permissive paths include:</p> <ul style="list-style-type: none"> <li>- New connections around Cathedral Park;</li> <li>- New connection at Tunman Wood;</li> <li>- New connection at Thurlby; and</li> <li>- Circular route to the west of Bassingham.</li> </ul>			<p>and ecological management plan as set out in the <b>Draft Development Consent Order</b> [EN010154/APP/3.1].</p> <p>Streets, Rights of Way and Access Plans [EN010154/APP/2.3]</p>
<b>Ecology</b>				
EC1	The River Witham will be crossed using trenchless methods (e.g. Horizontal Directional Drilling (HDD)), which includes launch and exit pits outside of the River Witham, Aubourn to Beckingham Local Wildlife Site (LWS), and at least 10m distance from the top of the watercourses to protect the riparian habitats within the LWS, where the Interconnecting Cable Corridor is proposed.	Design Principles 4 and 8	Construction	Requirement 6: Detailed design approval and Requirement 12: Construction environmental management plan, as set out in the <b>Draft Development Consent Order</b> [EN010154/APP/3.1]
EC2	A buffer of at least 10m between the Proposed Development and the bank-top of the River Witham will be provided at the section of the River Witham, Aubourn to Beckingham LWS adjacent to the southern	Design Principle 4	Construction and Operation	Requirement 6: Detailed design approval as set out in the <b>Draft Development Consent Order</b> [EN010154/APP/3.1].

ID	Description	Relevant Design Principle	Phase commitment to be implemented	Securing Mechanism
	end of the Principal Site to protect riparian habitats and any species that may use it (e.g. riparian mammals) (extended to a minimum of 100m from the River Witham where the Interconnecting Cable Corridor is proposed and in recognition of the presence of Otter).			
EC3	The inclusion of buffers of at least 15m between the Proposed Development and woodlands, and appropriate buffers between the Proposed Development and veteran or ancient trees (based on tree root protection areas), to avoid any direct impact on these habitat types.	Design Principles 4 and 8	Construction and Operation	Requirement 6: Detailed design approval and Requirement 8: Landscape and ecological management plan, as set out in the <b>Draft Development Consent Order [EN010154/APP/3.1]</b> .
EC4	The inclusion of buffers of at least 20m between wetland habitats and the Proposed Development.	Design Principle 4	Construction and Operation	Requirement 6: Detailed design approval as set out in the <b>Draft Development Consent Order [EN010154/APP/3.1]</b> .
EC5	All cables will be installed at a minimum depth of 2m below minor/ordinary watercourses (except where minor/ordinary watercourses have minimal	Design Principle 4 and 6	Construction	Requirement 12: Construction environmental management plan as set

ID	Description	Relevant Design Principle	Phase commitment to be implemented	Securing Mechanism
	or no water flow and water management is easily managed) and 5m beneath main rivers, excluding the River Witham and River Brant where cables will be installed by trenchless methods (e.g. HDD) at a minimum of 5m depth below the bed to prevent disturbance to fish species using running water habitats. There will be a minimum 16m buffer between HDD send or receive pits from the landward toe of flood defences.			out in the <b>Draft Development Consent Order [EN010154/APP/3.1]</b> .
EC6	Retained hedgerows and scrub along field or ditch boundaries and/ or woodland edges will be protected with undeveloped buffers of at least 5m from the Proposed Development to the boundary of hedgerows without trees, and a wider buffer, concordant with the requirements for each individual tree and for any hedgerows with trees (see <b>Appendix 10-G: Arboricultural Impact Assessment</b> of the ES [EN010154/APP/6.3]).	Design Principle 4 and 8	Construction and Operation	Requirement 6: Detailed design approval, Requirement 8: Landscape and ecological management plan and Requirement 12: Construction environmental management plan, as set out in the <b>Draft Development Consent Order [EN010154/APP/3.1]</b> .
EC7	The inclusion of the following buffers from the Proposed Development to retain and	Design Principle 4 and 8	Construction	Requirement 8: Landscape and ecological management plan and

ID	Description	Relevant Design Principle	Phase commitment to be implemented	Securing Mechanism												
	<p>avoid the majority of peripheral and boundary habitats of value:</p> <table><tr><th>Habitat</th><th>Buffer</th></tr><tr><td>Hedgerows</td><td>5m</td></tr><tr><td>Watercourses, drainage ditches, and waterbodies</td><td>10m</td></tr><tr><td>Trees</td><td>15m</td></tr><tr><td>Woodland</td><td>25m</td></tr><tr><td>Badgers</td><td>30m</td></tr></table>	Habitat	Buffer	Hedgerows	5m	Watercourses, drainage ditches, and waterbodies	10m	Trees	15m	Woodland	25m	Badgers	30m			Requirement 12: Construction environmental management plan, as set out in the <b>Draft Development Consent Order</b> [EN010154/APP/3.1].
Habitat	Buffer															
Hedgerows	5m															
Watercourses, drainage ditches, and waterbodies	10m															
Trees	15m															
Woodland	25m															
Badgers	30m															
EC8	<p>A 30m exclusion zone around Badger setts within the Principal Site will be provided to prevent disturbance and accidental damage.</p> <p>The Cable Corridor is sufficiently wide that the final route for the cable laying can be micro-sited to avoid any Badger setts, including a 30m exclusion zone around setts.</p>	Design Principle 4	Construction and Operation	Requirement 6: Detailed design approval, Requirement 8: Landscape and ecological management plan and Requirement 12: Construction environmental management plan, as set out in the <b>Draft Development Consent Order</b> [EN010154/APP/3.1].												



ID	Description	Relevant Design Principle	Phase commitment to be implemented	Securing Mechanism				
EC9	An area 15m to 25m wide adjacent to existing ponds and woodland will be encouraged to naturally regenerate. There will be no routine management of these areas.	Design Principle 4 and 8	Operation	Requirement 8: Landscape and ecological management plan as set out in the <b>Draft Development Consent Order [EN010154/APP/3.1]</b> .				
EC10	Vegetation clearance for accesses will be minimised as much as is practicable.	Design Principle 4 and 8	Construction	Requirement 12: Construction environmental management plan as set out in the <b>Draft Development Consent Order [EN010154/APP/3.1]</b> .				
EC11	Construction compounds will be setback from any LWS that is adjacent to the DCO Site, with the following set-backs applicable to habitats: <table border="1"><thead><tr><th>Habitat</th><th>Setback</th></tr></thead><tbody><tr><td>Woodland habitats (Tunman Wood LWS (including Stocking Wood))</td><td>15m</td></tr></tbody></table>	Habitat	Setback	Woodland habitats (Tunman Wood LWS (including Stocking Wood))	15m	Design Principle 4 and Design Principle 9	Construction	Requirement 6: Detailed design approval and Requirement 12: Construction environmental management plan, as set out in the <b>Draft Development Consent Order [EN010154/APP/3.1]</b> .
Habitat	Setback							
Woodland habitats (Tunman Wood LWS (including Stocking Wood))	15m							

ID	Description	Relevant Design Principle	Phase commitment to be implemented	Securing Mechanism
	<div>and Tunman Wood North LWS)</div> <div>Navenby Heath Road Verges LWS</div> <div> <div>Important habitats such as hedgerow and scrub</div> <div>At least 5m from the boundary of hedgerows without trees and a wider buffer, concordant with the requirements for each individual tree, for any hedgerows with trees.</div> </div>			
	The construction compounds will not be greater than 2ha in size and located on existing cropland habitat at a minimum distance of 4.5m from hedgerow habitats.			
EC12	No new culverts are proposed. For cable crossings, the avoidance of intrusive trenching techniques will minimise impacts on fish species and maintain connectivity of habitats for fish.	Design Principle 8	Construction and Operation	Requirement 6: Detailed design as set out in the <b>Draft Development Consent Order [EN010154/APP/3.1]</b> .

ID	Description	Relevant Design Principle	Phase commitment to be implemented	Securing Mechanism
EC13	<p>Development will be avoided in arable fields and retained in its current use where feasible.</p> <p>A minimum 181ha of managed arable land will be provided for areas of habitat retention, creation, and habitat enhancement to offset the impact of loss of arable farmland for breeding Skylark, Lapwing and other ground nesting birds. (This is in addition to 64ha of permanent grassland, also for the purposes of bird mitigation).</p>	Design Principle 9	Construction and Operation	Requirement 6: Detailed design approval, Requirement 8: Landscape and ecological management plan, Requirement 12: Construction environmental management plan and Requirement 13: Operational environmental management plan, as set out in the <b>Draft Development Consent Order [EN010154/APP/3.1]</b> .
EC14	Arable fields will continue as currently used for Maize, Barley or Wheat and, within these fields, Skylark plots will be provided a minimum of 25m between the plots and at least 50m from the field boundary.	Design Principles 2 and 9	Operation	Requirement 6: Detailed design approval, Requirement 8: Landscape and ecological management plan and Requirement 13: Operational environmental management plan, as set out in the <b>Draft Development Consent</b>

ID	Description	Relevant Design Principle	Phase commitment to be implemented	Securing Mechanism
				<b>Order</b> <b>[EN010154/APP/3.1].</b>  Work No. 9 as shown on the <b>Works Plans</b> <b>[EN010154/APP/2.2].</b>
EC15	New hedgerows with trees will be established to supplement the existing, retained hedgerows with trees and be maintained at a minimum of 3m high and 'infilled' where there are gaps in existing hedgerows.	Design Principle 9	Operation	Requirement 8: Landscape and ecological management plan as set out in the <b>Draft Development Consent Order</b> <b>[EN010154/APP/3.1].</b>
EC16	Gaps in currently defunct hedges will be planted with suitable native species to improve the connectivity of habitats (such as between ancient and other broad-leaved woodland) within and adjacent to the Principal Site.	Design Principle 9	Operation	Requirement 8: Landscape and ecological management plan as set out in the <b>Draft Development Consent Order</b> <b>[EN010154/APP/3.1].</b>
EC17	Scrub composed of native shrubs is proposed adjacent to hedgerows to increase the shrub habitat and enhance biodiversity.	Design Principle 9	Operation	Requirement 8: Landscape and ecological management plan as set out in the <b>Draft Development Consent</b>

ID	Description	Relevant Design Principle	Phase commitment to be implemented	Securing Mechanism
				<b>Order [EN010154/APP/3.1].</b>
EC18	Species-rich grassland will be established across the Principal Site, under the PV panels and in set aside areas. Conservation margins sown with a wild bird seed mix will also be established as well as arable margins created through locally sourced seed/the existing seed bank and annual cultivation.	Design Principle 9	Operation	Requirement 8: Landscape and ecological management plan as set out in the <b>Draft Development Consent Order [EN010154/APP/3.1].</b>
EC19	Existing ponds in the Principal Site in poor condition will be restored with the aim of maximising their wildlife value. This will partly be achieved by de-silting to ensure that they remain at least partly wet during normal conditions, allowing amphibians and invertebrates to complete their life cycles. Where existing ponds are overshadowed by mature trees, these trees will be prioritised for pollarding, to increase light and decrease leaf fall onto the ponds.	Design Principle 9	Operation	Requirement 8: Landscape and ecological management plan as set out in the <b>Draft Development Consent Order [EN010154/APP/3.1].</b>
EC20	Habitat piles and hibernacula will be constructed in suitable areas, such as close to ponds or watercourses, using natural materials generated during clearance of the site, such as logs, turf, and grass strimming.	Design Principle 9	Operation	Requirement 8: Landscape and ecological management plan as set out in the <b>Draft Development Consent</b>



ID	Description	Relevant Design Principle	Phase commitment to be implemented	Securing Mechanism
				<b>Order [EN010154/APP/3.1].</b>
<b>Agricultural Land</b>				
AG1	Agricultural land will be returned to its previous use following decommissioning.	Design Principle 2	Decommissioning	Requirement 20: Decommissioning as set out in the <b>Draft Development Consent Order [EN010154/APP/3.1].</b>
AG2	Above ground infrastructure will be positioned to avoid Best and Most Versatile (BMV) land as far as practicable.	Design Principle 2	Construction and Operation	Requirement 6: Detailed design Approval as set out in the <b>Draft Development Consent Order [EN010154/APP/3.1].</b>
<b>Heritage</b>				
HE1	Intervisibility will be maintained between Church Farm and River Farm by not locating solar infrastructure in between.	Design Principle 5	Operation	Requirement 6: Detailed design Approval as set out in the <b>Draft Development Consent Order [EN010154/APP/3.1].</b>
HE2	A minimum offset of 100m has been left from the Proposed Development to Listed Buildings and Scheduled Monuments.	Design Principle 5	Construction and Operation	Requirement 6: Detailed design Approval as set out in the <b>Draft Development</b>

ID	Description	Relevant Design Principle	Phase commitment to be implemented	Securing Mechanism
				<b>Consent Order [EN010154/APP/3.1].</b> Work No. 9 as shown on the <b>Works Plans [EN010154/APP/2.2].</b>
<b>Water</b>				
WA1	Individual solar PV panels will be held above the ground surface on mounting structures (a minimum of 500mm above ground level).	Design Principle 6	Construction and Operation	Requirement 6: Detailed design approval and Requirement 10: Surface and foul water drainage, as set out in the <b>Draft Development Consent Order [EN010154/APP/3.1].</b>
WA2	New access roads will be permeable in order to remain consistent with their pre-developed state.	Design Principle 6	Construction and Operation	Requirement 6: Detailed design approval and Requirement 10: Surface and foul water drainage as set out in the <b>Draft Development Consent Order [EN010154/APP/3.1].</b>
WA3	Edge swales will be provided to capture excess runoff and reduce existing surface water risk along The Avenue in Morton,	Design Principle 6	Construction and Operation	Requirement 6: Detailed design approval and Requirement 10: Surface

ID	Description	Relevant Design Principle	Phase commitment to be implemented	Securing Mechanism
	adjacent to solar PV fields 25, 30 and 34 to the northeast of the Principle Site (As shown on Drainage Strategy General Arrangement included in Annex C of the <b>Framework Surface Water Drainage Strategy [EN010154/APP/6.3]</b> ). Edge swales will be sized and located accordingly to capture as much excess overland surface water runoff that can be reasonably accommodated.			and foul water drainage, as set out in the <b>Draft Development Consent Order [EN010154/APP/3.1]</b> .
WA4	All proposed buildings, compound areas, the Onsite Substation and centralised and distributed BESS and the majority of the solar PV panels will be located in Flood Zone 1.	Design Principle 6	Construction and Operation	Requirement 6: Detailed design approval as set out in the <b>Draft Development Consent Order [EN010154/APP/3.1]</b> .
<b>Transport and Access</b>				
TA1	The provision of suitable points of access for construction vehicles with adequate visibility and supporting improvements to take place within the highway boundary and the DCO Site if required.	Design Principle 7	Construction	Requirement 6: Detailed design approval and Requirement 14: Construction traffic management plan, as set out in the <b>Draft Development Consent Order [EN010154/APP/3.1]</b> .

ID	Description	Relevant Design Principle	Phase commitment to be implemented	Securing Mechanism
TA2	Two accesses to the centralised BESS site will be provided where practicable and safe turning areas will be provided throughout.	Design Principles 7 and 11	Construction and Operation	Requirement 7: Battery safety management as set out in the <b>Draft Development Consent Order [EN010154/APP/3.1]</b> .
TA3	Access tracks will be suitable for fire service vehicles and developed in close liaison with the Lincolnshire Fire and & Rescue Service.	Design Principles 7 and 11	Construction and Operation	Requirement 7: Battery safety management as set out in the <b>Draft Development Consent Order [EN010154/APP/3.1]</b> .
<b>Battery Safety</b>				
BA1	The centralised BESS will be sited a minimum of 200m to residential receptors.	Design Principle 11	Construction and Operation	Requirement 7: Battery safety management as set out in the <b>Draft Development Consent Order [EN010154/APP/3.1]</b> .  As shown on the <b>Works Plans [EN010154/APP/2.2]</b> .
BA2	A spacing of a minimum of 3m between battery units in the centralised and distributed BESS design.	Design Principle 11	Operation	Requirement 7: Battery safety management as set out in the <b>Draft</b>

ID	Description	Relevant Design Principle	Phase commitment to be implemented	Securing Mechanism
				Development Consent Order [EN010154/APP/3.1].



# **Appendix B Consideration of the Planning Inspectorate's Advice on Good Design**

## B.1 Introduction

B.1.1 Annex A of the Inspectorate's Advice Page on Good Design sets out 'good design issues to consider'. The Inspectorate sets out that applicants should consider the content of Annex A before submitting a DCO application.

B.1.2 **Table B-1** below explains how the Applicant has considered good design in accordance with Annex A of the Inspectorate's Advice Page.

**Table B-1 Consideration of Annex A of the Inspectorate's Advice Page on Good Design**

Issue	Considerations	Project consideration of issue
<b>Design Approach Document (DAD)</b>	Is a DAD provided?	A DAD has been prepared that sets out the project brief (Chapter 3), the design process followed (Chapter 4), the Design Principles (Chapter 3) and beneficial outcomes (Chapter 4). The DAD explains how the design of the Proposed Development has been informed by national and local planning policy, site characteristics, feedback from Non-Statutory and Statutory Consultation, ongoing technical engagement with stakeholders and the outcomes of environmental assessment.
	Does the DAD address the brief, the design process, the design principles, and beneficial outcomes?	
	If a DAD is not provided, where are the design process and design principles set out?	N/A
<b>Analysis, Research</b>	How has the development site been analysed to inform a good design approach?	An initial understanding of the site was gained from the site selection process, as set out in Section 3.2 of this DAD. Following site selection, a more detailed understanding of the site context was sought in order to identify the constraints and opportunities that informed the early layout of the Proposed Development at the Non-Statutory Consultation stage.
	What are the main conclusions from this analysis that inform the	Section 3.7 of this DAD sets out the constraints and opportunities that informed the early layout of

Issue	Considerations	Project consideration of issue
	design at this stage and as it develops?	the Proposed development at the Non-Statutory Consultation stage.
<b>Response</b>	What are the main significant adverse effects of the proposed development and how are they addressed to enable good design?	<p>Sections 4.2, 4.3 and 4.4 of this DAD demonstrate how the Proposed Development seeks to minimise adverse effects through good design. Examples below include:</p> <ul style="list-style-type: none"> <li>• Bird mitigation land is distributed throughout the site which prevents birds flocking. This was a concern raised by the Ministry of Defence.</li> <li>• Distributed BESS have been sited away from sensitive noise receptors.</li> <li>• Solar infrastructure has been sited to minimise impacts to heritage assets, such as the Grade II River Farmhouse.</li> <li>• Views to Lincoln Cathedral have been maintained by the provision of a wide corridor between solar infrastructure north of the A46.</li> </ul>
<b>Vision</b>	What is the vision for the completed development and its surroundings? Where is it set out?	The Design Vision is set out at Section 3.8 of this DAD.
	Set out the narrative, how the vision will achieve sustainability, create a new place and hold the design together.	Chapter 3 of this DAD describes the process of site selection and the understanding of site context to inform the Design Vision and Design Principles.
<b>Skills</b>	What professional disciplines and skill sets are being and will be working on the design of the project?	The design team is set out at Section 3.4 of this DAD.
	Is there a design champion designated for this project,	Yes, as stated in Section 3.4 of this DAD.

Issue	Considerations	Project consideration of issue
<b>Developing the design</b>	and if so, who is it and what are their skills?	
	Describe the approach to good design and explain how the design has (and will continue) to evolve.	This DAD explains how the design has achieved good design outcomes by responding to constraints, local context, consultee feedback and national and local planning policy. This DAD includes a description of the design process development and evolution from project inception to the submission of the DCO application.
	How is any required flexibility being addressed?	Sections 4.2, 4.3 and 4.4 set out how optionality and flexibility have been considered throughout the design process.
	What design choices have (and will be) made?	Sections 4.2, 4.3 and 4.4 set out the design decisions that have been made as the design has evolved. Further design decisions may be made at the detailed design stage and in the development of the Landscape and Ecological Management Plan.
	What are the emerging design principles and how have the principles directly informed decision making?	The Design Principles are set out at Section 3.9 of this Document. Sections 4.2, 4.3 and 4.4 set out how the Design Principles provided a framework for and informed decision making. Section 3.10 explains that Design Commitments have been developed to support the practical application of the Design Principles and are set out in Appendix A of this document.
	Is there a hierarchical approach to elements of the proposal (for example in designing major and less important bridges in a highways scheme)?	No, due to the technical requirements of a solar scheme.
	Have digital techniques, including algorithms and AI	AI has not been used in design development.

Issue	Considerations	Project consideration of issue
	been used in design development? If so, explain the tools and data used.	
	Is there a coherent narrative of how the approach to design has evolved?	This DAD explains the narrative behind the design evolution.
	Where are design outcomes set out?	Section 4.5 of this DAD sets out how the design has delivered positive outcomes.
	Will additional value beyond the site boundary be incorporated?	There will be improved accessibility as a result of the provision of permissive paths, as described in Sections 4.3 and 4.4 and 4.5.
<b>Independent design review</b>	Has the design development been the subject of an independent design review?	No.  The design team, as set out in Section 3.4 of this DAD, is very experienced in the development of large scale solar projects, with a good understanding of the role that good design has in mitigating adverse effects and delivering positive outcomes.
	If so, what were the main comments and how has the design responded to them?	N/A
	Is it the intention to include design reviews post-consent? If so, how are these secured?	No post-consent design reviews are proposed.
<b>Delivery</b>	How will the final design be delivered? Will there be a design management plan, a design guide or a design code? If not, why are they not required?	If DCO consent is granted, the design will be implemented in accordance with the Design Commitments (at Appendix A of this Document), <b>Works Plans [EN010154/APP/2.2]</b> , <b>Proposed Development Parameters [EN010154/APP/7.4]</b> , <b>Environmental Statement [EN010154/APP/6.1]</b> , and Control Documents in the <b>Draft Development Consent Order [EN010154/APP/3.1]</b> .  A Design Code will not be provided as there are no public facing

Issue	Considerations	Project consideration of issue
		buildings or structures which provide an opportunity for greater design articulation through coding.
	Is there a design consultation plan to engage the community following consent of the DCO?	A Community Liaison Group has been set up to engage with the community should the DCO be consented. See Section 6 of this DAD.
	Is there an agreed process for post-consent decisions with local planning authorities and others, where required?	The relevant local planning authorities will be the discharging authority for Requirement 6 (detailed design) of the <b>Draft Development Consent Order [EN010154/APP/3.1]</b> which requires details of layout, scale, and external appearance (amongst other items) to be submitted to the relevant local planning authority for approval.
Place	How is placemaking being addressed?	Design Principle 1 of this DAD sets out that the Proposed Development will be sensitively integrated into its landscape setting, to minimise adverse landscape and visual effects as far as possible. The evolution of the design has therefore sought to recognise the need for careful siting, design and mitigation, and the importance of an iterative approach to design to ensure appropriate design solutions are reached.
	How will this be a distinctive place and how will the community benefit from it?	Distinctiveness is not a Design Principle relevant to the Proposed Development as it has been designed so that it is sensitively integrated into its landscape setting and to minimise adverse landscape and visual effects as far as possible. However, community benefits will be delivered through the provision of permissive paths, a community orchard and woodland, biodiversity net gain and through a community benefit



Issue	Considerations	Project consideration of issue
		<p>fund, which is parallel to but separate from the DCO application.</p> <hr/> <p>The positive outcomes delivered by the design of the Proposed Development are set out in Section 4.5 of this DAD.</p> <p>How the design outcome relates to the Design Vision is set out in Section 4.6 of this DAD.</p> <p>Section 6.1 of this DAD set out how the good design measures proposed are secured in the DCO application.</p>
<b>People</b>	<p>What consultation has taken place with statutory and local authorities, communities and people with an interest in the land?</p>	<p>A Non-Statutory and Statutory Consultation was undertaken to seek the views of statutory and local authorities, communities and people with an interest in the land. Full details of the Non-Statutory and Statutory consultation are set out in the <b>Consultation Report [EN010154/APP/5.1]</b>.</p>
	<p>How will their views be incorporated in the design evolution and where will this be set out?</p>	<p>Sections 4.2, 4.3 and 4.5 of this DAD provide an overview of how the design has evolved in response to the feedback received at Non-Statutory and Statutory Consultation. Full details of how the Applicant has taken account of feedback received is set out the <b>Consultation Report [EN010154/APP/5.1]</b>.</p>
<b>Integrated design approach</b>	<p>Explain how an integrated, holistic approach to the project's design will be achieved.</p>	<p>An integrated, holistic approach to design has been achieved through close collaboration within the design team, and through holding design workshops at key stages for decision making.</p>
	<p>Where is it shown in the documentation? Is there a masterplan?</p>	<p>The Landscape Mitigation Plan, which is an appendix to the <b>Framework Landscape and Ecological Management Plan [EN010154/APP/7.15]</b> provides an overview of the Proposed</p>

Issue	Considerations	Project consideration of issue
		Development in terms of siting of solar development, landscape mitigation and bird mitigation land, demonstrating the integrated, holistic approach.
	How will this be secured?	The development of a detailed Landscape and Ecological Management Plan, which will be substantially in accordance with the <b>Framework Landscape and Ecological Management Plan [EN010154/APP/7.15]</b> , is secured by Requirement 8 of the <b>Draft Development Consent Order [EN010154/APP/3.1]</b> .
<b>National Policy Statements (NPSs)</b>	How have the requirements for good design in the relevant NPS (or NPSs) been met?	This DAD demonstrates how the Proposed Development has taken the relevant design policies within NPS EN-1, NPS EN-3 and NPS EN-5 into consideration throughout the design development process, as well as the Inspectorate Advice Page on Good Design. Additionally, the NPS accordance tables set out Appendix B of the <b>Planning Statement [EN010154/APP/7.2]</b> include specific responses demonstrating how the project accords with the good design policies of NPS EN-1, NPS EN-3 and NPS EN-5.
<b>Design Principles</b>	<p>Set out the good design principles being applied to the project.</p> <p>Are the design principles structured or grouped logically?</p> <p>How will they be developed prior to consent?</p>	<p>Section 3.9 of this DAD sets out the Design Principles for the Proposed Development.</p> <p>Yes, the Design Principles have been developed to align with key themes identified within national and local policy requirements and the characteristics of the DCO Site.</p> <p>Design principles may be further refined in the Examination stage as a result of further discussion on the design of the Proposed Development.</p>

Issue	Considerations	Project consideration of issue
	How will they be illustrated and secured?	If DCO consent is granted, the design will be implemented post-consent according to the Design Commitments (at Appendix A of this Document), <b>Works Plans [EN010154/APP/2.2]</b> , <b>Proposed Development Parameters [EN010154/APP/7.4]</b> , <b>Environmental Statement [EN010154/APP/6.1]</b> , and Control Documents in the <b>Draft Development Consent Order [EN010154/APP/3.1]</b> . These documents will ensure good design outcomes, uphold the Environmental Statement's conclusions, and provide flexibility.
National Infrastructure Commission (NIC) 'principles'	Is there a response to the NIC's four principles of good design?	Yes, the Design Principles have been developed to align with national and local policy requirements, including the four key principles of good design set out in the NIC's guidance. The early Design Principles were framed around Climate, People, Value and Place as set out in Section 3.9 of this DAD.
	If not, what design principles have been adopted?	N/A
	What process has been used to develop and embed project level design principles?	As demonstrated in this DAD, the Design Principles have been used as a framework for decision making in relation to design matters at key stages of design development.