



**THE DROVES**  
SOLAR FARM

# **The Droves Solar Farm**

## **Preliminary Environmental Information Report**

### **Volume III, Chapter 5: Scheme Description**

Prepared by: LDA Design

Date: May 2025

PINS Reference: EN0110013



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# Appendix 5.3

## Design Principles



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# 1 Design Principles

## 1.1 Introduction

- 1.1.1 Good design is important and has a direct effect on the quality of people's lives. It is as much about processes and behaviours as it is about delivering design outcomes that support sustainable development.
- 1.1.2 The achievement of good design by Nationally Significant Infrastructure Projects (NSIP) is a key requirement of national planning policy. Developing the design of a project to reflect the good design criteria in national planning policy is also identified by the Planning Inspectorate as a key activity at the pre-application stage.
- 1.1.3 To deliver a good and sustainable design that complies with planning policy, the Applicant has development design principles that have and will continue to be embedded into the Scheme during the pre-application stage.
- 1.1.4 This document provides an overview of how the design principles have been established along with the design principles relevant to the Scheme.

## 1.2 Policy and Guidance Context

- 1.2.1 In England the design of infrastructure projects is the subject of key policy documents and guidance notes, which are used to help inform the principles of 'good design'. These include NPS EN-1 [Ref 1-1], EN-3 [Ref 1-2] and the National Infrastructure Commission's (NICs) 'Design Principles for National Infrastructure' report [Ref 1-3].
- 1.2.2 Section 4.7 of EN-1 sets out criteria for good design for energy infrastructure. It states that *"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"* (Paragraph 4.7.2).
- 1.2.3 Paragraph 4.7.3 of EN-1 demonstrates the link between good design and the need to apply the mitigation hierarchy to avoid, reduce, mitigate or compensate for any adverse environmental effects of development. It states that: *"good design is also 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 such as noise"*.
- 1.2.4 Given the benefits of good design in mitigating the adverse impacts of a development, EN-1 highlights the need to consider good design from the early stages of the design process and states that: *"design principles should be established from the outset of the project to guide the development from conception to operation"* (Paragraph 4.7.5). Footnote 122 of EN-1 states 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"*.
- 1.2.5 Section 4.7 of EN-1 states that the Applicant must demonstrate how the design process was conducted and how the proposed design evolved in their application. The advice continues in



paragraph 4.7.8 stating that “*Applicants should also consider any design guidance developed by the local planning authority*”. The Applicant has reviewed the Breckland Council Design Guide [Ref 1-4] in developing the Project Level Design Principles for the Scheme.

- 1.2.6 EN-3 also sets expectations on ‘good design’ and the application of the mitigation hierarchy in relation to renewable energy infrastructure. Section 2.1 states: “*Applicants must show how any likely significant negative effects would be avoided, reduced, mitigated or compensated for, following the mitigation hierarchy. Early application of the mitigation hierarchy is strongly encouraged, as is engagement with key stakeholders including SNCBs, both before and at the formal pre-application stage*” (para 2.1.8).
- 1.2.7 Paragraph 2.5.2 states: “*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.*”
- 1.2.8 Section 2.10 of EN-3 sets out the influencing factors on the design of solar farms. Paragraph 2.10.59 states that “*Applicants should consider the criteria for good design set out in EN-1 Section 4.7 at an early stage when developing projects*”.
- 1.2.9 The NIC’s ‘Design Principles for National Infrastructure’ provides further guidance on good design for infrastructure projects and is referred to in EN-1. It highlights the importance of the design process to bring together engineering, environmental and creative expertise to shape and deliver a development project. The document notes that “*design is as much about process as it is product. Imaginative thinking about design should be embedded at every step of planning and delivery. The principles ensure a good process leads to a good design outcome*”. The document sets out four thematic design principles for National Infrastructure, which are:
- Climate - Mitigate greenhouse gas emissions and adapt to climate change.
  - People - Reflect what society wants and share benefits widely.
  - Places - Provide a sense of identity and improve our environment.
  - Value - Achieve multiple benefits and solve problems well.
- 1.2.10 The NIC Design Principles are deliberately high level and intended to provide a framework for more detailed project level design principles to be developed on individual schemes. Further guidance on how to develop and embed project level design principles to major infrastructure projects is provided in the NIC’s ‘Project Level Design Principles’ [Ref 1-5]. It states that “*Project level design principles should directly address the Design Principles for National Infrastructure of climate, people, places and value, plus any supporting organisational or sectoral principles. There should be a clear logic to the structuring of the design principles, from strategic to project level, within an easy-to understand hierarchy.*” Furthermore, it states that the development of project level design principles is an iterative, ongoing activity throughout the lifecycle of a project and should evolve to reflect “*any significant new information coming to light, a deeper understanding of community and place, and the development of detailed designs.*”
- 1.2.11 Non-statutory advice on good design for NSIPs was issued by the Planning Inspectorate in October 2024 [Ref 1-6]. The Advice 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.

- 1.2.12 The Advice is clear that good design does not primarily refer to how infrastructure looks aesthetically, but it requires an effective, intentional, transparent and deliverable process to be planned, followed and secured.
- 1.2.13 The Applicant has undertaken a review of Annex A of the Advice Note, which sets out the good design issues that should be considered by applicants prior to the submission of a DCO application for examination.
- 1.2.14 The Applicant will include within DCO Application material an explanation of how each of the ‘Good design issues to consider’ have been addressed and include references to where the relevant information can be found within the DCO Application for the Drovers Solar Farm.

## 1.3 Good Design

### Introduction

- 1.3.1 In accordance with policy requirements, the approach to achieving good design has been considered from the outset of the Scheme and a framework for good design has been developed by the Applicant.

### IGP Design Principles

- 1.3.2 The Scheme is being developed by The Drovers Solar Farm Limited, part of IGP, which is a leading international developer of renewable energy projects, with a focus on utility-scale solar projects and battery storage systems.
- 1.3.3 The Applicant recognises the importance of achieving good design outcomes. To ensure good design is embedded in all of their projects, IGP have a Design Champion who is responsible for advocating a good practice design approach and share lessons learnt across their portfolio of projects.
- 1.3.4 To further embed good design in all of their projects, the Applicant has established a set of overarching design principles referred to as ‘IGP Design Principles’. Through the application of the IGP Design Principles, the Applicant’s projects aim to deliver direct benefits to communities, enhance biodiversity, control any adverse effects on the local environment throughout the lifecycle of the project, and help tackle climate change by harnessing and storing renewable energy. The IGP Design Principles are:
- Decarbonisation & energy security
  - Environmentally led design
  - Biodiversity net gain & nature recovery
  - Design flexibility
  - Social value & community benefits
  - Efficient infrastructure & ethical supply chain



- Sustainability, durability & reversibility; and
- Our commitment to mitigation.

1.3.5 The Applicant launched the IGP Design Principles after the Co-Design (non-statutory consultation) events for the Drovers Solar Farm. For the purposes of Co-Design, the Applicant presented 8 Project Outcomes, which were developed by the project team. The IGP Design Principles have replaced the 8 project outcomes, as these are being universally applied across all IGP Projects, including The Drovers Solar Farm, to ensure consistency in approach across all of their projects. The 8 project outcomes are aligned with the IGP Design Principles.

1.3.6 It should be noted that the design principles may be further refined during the pre-application stage as a result of responses made to the statutory consultation, discussions with statutory consultees and key stakeholders and/or the outcome of environmental assessments.

### **The Drovers Solar Farm - Vision Statement**

1.3.7 The vision for Scheme encapsulates the IGP Design Principles and localises what the Scheme is seeking to deliver for the UK and Breckland. The Vision for the Drovers Solar Farm is to:

1.3.8 *“Contribute to delivering the UKs transition to decarbonised and low-cost renewable energy provision whilst leaving a positive legacy of benefits for the people of Breckland and Breckland’s natural environment.”*

### **Project Level Design Principles**

1.3.9 The NICs Design Principles and the IGP Design Principles are high level in order to establish a unifying, overarching vision for infrastructure in order to provide an outline framework for more detailed design thinking on individual projects and for the development of project level design principles.

1.3.10 The role of the project level design principles is help guide delivery from definition through to decommissioning by addressing the Scheme’s requirements, benefits and outcomes.

1.3.11 As set out in NIC’s Guidance, project level design principles should:

- Reflect the overarching design vision and address the agreed project requirements, benefits and outcomes
- Firmly anchor the proposals, supporting a design narrative that’s relevant to the local context
- Recognise place including landscape, the natural environment, culture and heritage
- Be informed by the people affected, including residents groups, and local employers
- Reflect an inclusive approach to ensure equitable delivery of benefits and prevention from harm
- Demonstrate that opportunities have been identified to deliver wider benefits and outcomes beyond the project, utilising systems thinking; and
- Be clearly written, with quantifiable measures, so that final outcomes can be tested against them.



1.3.12 The development of design principles is an iterative, ongoing process during the pre-application stage with the aim of aligning all parties around agreed, shared outcomes, that facilitate timely and effective delivery.

1.3.13 The Applicant has developed a series of Project Level Draft Design Principles, which have been informed by stakeholder feedback received during the Co-Design. Table 1.1 below sets out the Project Level Draft Design Principles for the Scheme.

**Table 1.1 Project Level Draft Design Principles**

IGP Design Principles	Project Level Draft Design Principles
1. Decarbonisation & energy security	1.1 - Reduce carbon emissions during all phases of the Scheme
2. Environmentally led design	2.1 - Respond to the character of the Site, informed by the Breckland Local Landscape Character Assessment.
	2.2 - Retain and enhance existing vegetation wherever practicable to retain the fabric of the Site and aid integration of the Scheme into its context
	2.3 - Support objectives of Norfolk’s Green Infrastructure Strategy
	2.4 - Improve soil health during the lifetime of the Scheme
	2.5 - Respect setting of heritage assets along the Nar Valley
	2.6 - Protect and support engagement and understanding of local heritage assets.
	2.7 - Respect residential amenity.
	2.8 - Consider experience of people travelling along adjacent roads, including the A1065, South Acre Road, River Road and Narford Lane.
	2.9 - Consider experience of people using the Public Rights of Way
	2.10 - Retain fields comprising entirely Grade 1 and fields comprising entirely of Grade 1 and 2 in agricultural use where practicable
	3.1 - Integrate the Scheme into the local environment and allow the movement of wildlife through the Site.



IGP Design Principles	Project Level Draft Design Principles
3. Biodiversity Net gain and nature recovery	3.2 - Review and incorporate initiatives set out in the Local Nature Recovery Strategy where practicable
	3.3 - Reduce the impact of water runoff on the Nar Valley
	3.4 - Deliver a Biodiversity Net Gain of at least 10%
	3.5 - Engage with Westacre Estate to explore opportunities to compliment rewilding project objectives
4. Design flexibility	4.1 - Design for resilience and adaptation to future climate change
	4.2 - Provide flexibility in design parameters to allow for technological advancement to maximise energy production
	4.3 - Ensure the Scheme is resilient to flooding and does not increase flooding elsewhere
5. Social value & community benefits	5.1 - Support the objectives set out in the Future Breckland programme
	5.2 - Provide opportunities to boost local and regional economies
	5.3 - Engage openly, transparently and meaningfully with stakeholders, using feedback to inform the Scheme
	5.4 - Identify opportunities for wider community benefits in consultation with local stakeholders
	5.5 - Behave as a considerate neighbour through all phases of the Scheme
	5.6 - Provide clear lines of communication between the developer and the local community
	5.7- Provide education and interpretation of the Scheme and Site
	5.8 - Collaborate with High Grove Solar Farm
5.9 - Route construction away from local villages and Swaffham town centre	



IGP Design Principles	Project Level Draft Design Principles
	<p>5.10 - Retain all Public Right of Ways on the existing alignment during the Operational Phase where practicable.</p> <p>5.11 - Improve connectivity and accessibility through the Site.</p>
6. Efficient infrastructure & ethical supply chain	6.1 - Optimise generation and export capacity of the Scheme within the constraints of the Site to make the most efficient use of land and available grid connection.
7. Sustainability, durability & reversibility	<p>7.1 - Prioritise sustainable resource management and techniques during all phases of the Scheme</p> <p>7.2 - Allow existing woodland blocks to continue to be managed sustainably</p> <p>7.3 - Allow for dual use of land where practicable</p>
8. Our commitment to mitigation	Mitigation is encapsulated within the project level design principles set out above.



## References

- Ref 1-1 Department of Energy and Climate Change (DECC) (2023) Overarching National Policy Statement for Energy (EN-1).
- Ref 1-2 DECC (2023) National Policy Statement for Renewable Energy Infrastructure (EN-3).
- Ref 1-3 National Infrastructure Commission (2020) Design Principles for National Infrastructure.
- Ref 1-4 Breckland Council (2024) Breckland Design Guide.
- Ref 1-5 National Infrastructure Commission (2024) Project Level Design Principles Guidance from the National Infrastructure Commission Group.
- Ref 1-5 Planning Inspectorate (2024) Nationally Significant Infrastructure: Advice on Good Design.



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