THE DROVES
SOLAR FARM

The Droves Solar Farm

Design Approach Document (Part 1)

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Contents

Preface

The Droves Solar Farm is being developed to support the UK's transition to cleaner, low-cost energy. Alongside this ambition is a goal to deliver a positive legacy for Breckland and the surrounding area. Nowhere is this more clearly reflected than in the treatment of the historic droves – the ancient livestock routes that pass through the Site.

Design Approach Document	
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The Story of the Droves

The story of the droves reflects the story of the Site – how it has evolved over time and how it could be experienced in the future. As thoroughfares for romans and herdsmen, the droves once passed through pasture, now long since converted to arable land for modern agriculture use. To meet the challenges of our time, as part of The Droves Solar Farm, the routes will pass through land identified for a new purpose. Yet, the routes themselves will endure, a constant through the eras of change, connecting places, people and wildlife.

The treatment of the droves embodies the approach taken for the Scheme as a whole – to be custodians of the landscape and its features, tread lightly, protect and restore where we can, and when the time comes, return the land, renewed for future generations.

Early routemakers

Herding to pasture and market

Working farm in the modern era

A place to protect

Through the seasons: renewed and amplified for all creatures, great and small

Executive Summary

This Design Approach Document (DAD) has been prepared on behalf of The Droves Solar Farm Limited ('The Applicant') to support the application for a Development Consent Order (DCO) for The Droves Solar Farm (the Scheme).

The Droves Solar Farm is proposed to help meet the urgent need for home grown, secure, renewable energy that is required by Government policy to address climate change and energy security.

The proposal also offers the opportunity to deliver wide-ranging benefits beyond renewable energy production including recovery of natural environments, economic growth and social benefits such as education, health and wellbeing opportunities.

The DAD demonstrates how good design has been embedded in the design of the Scheme and how the design of the Scheme has evolved up to the point of the DCO Application within a clear design framework.

The DAD has been prepared in accordance with the Planning Inspectorate's guidance titled 'Nationally Significant Infrastructure Projects: Advice on Good Design' and sets out the design decisions taken at each step of the Scheme's development, and the rationale for these decisions, as well as the mechanisms by which good design will be secured post consent.

The process, guided by a Design Vision and by Design Principles, has sought to minimise adverse impacts, enhance opportunities, and balance flexibility and certainty in the DCO Application. Key design changes have included the removal of substation and Battery Energy Storage System (BESS) infrastructure from sensitive areas to mitigate impacts on the Nar Valley's landscape, heritage and communities; and enhancing former droves that run through the Site, amplifying their role as green infrastructure corridors and reinforcing their legibility. These changes demonstrate how the Design Principles, which include application of the mitigation hierarchy and a landscape-led approach, have led to good design outcomes.

The DAD outlines how good design will be secured post-consent through a suite of management plans and requirements in the **draft Development Consent Order (draft DCO) [APP/3.1],** including but not limited to the **Design Principles, Parameters and Commitments [APP/5.8]**, the **outline Landscape and Ecological Management Plan [APP/7.11]**, and the **outline Construction Environmental Management Plan [APP/7.6]**. A Community Liaison Manager will be appointed to ensure ongoing dialogue with local stakeholders during construction and operation, supporting transparency and responsiveness in design implementation.

The DAD demonstrates how the Scheme has met national policy requirements in the Overarching National Policy Statement for Energy (EN-1, 2023) (NPS EN-1) **(REF 1)** which requires that through good design, 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.

In summary, this DAD sets out how the Scheme achieves a balance between delivering urgently needed renewable energy and minimising environmental and community impacts, in line with national policy and good design guidance.

Glossary

33kV Sub-distribution Switch Rooms Switch rooms within the Solar PV Site that collect the generated power from the Solar PV Arrays and convert it to 33kV.

Access Tracks The tracks either existing or proposed, within the Site, which provide access around the Scheme.

Ancillary Buildings The office, storage and plant buildings or containers which may be located within the Solar PV Site.

Ancillary Infrastructure Works that are ancillary to the Scheme, including enclosure and boundary treatment, security and monitoring infrastructure, landscaping and biodiversity measures including planting, drainage and irrigation works, signage, earthworks, and access including Permissive Paths.

Applicant The Droves Solar Farm Limited.

Associated Development Development associated with the Scheme including but not limited to the BESS, Customer Substation, National Grid Substation, Grid Connection Infrastructure and Ancillary Infrastructure, and any other works integral to the construction, operation, maintenance and decommissioning of the Scheme.

Battery Energy Storage System (BESS) Battery Energy Storage System (BESS), is used to describe the battery storage installation to allow for the storage, importation, and exportation of energy to the National Grid. For the purposes of the Environmental Impact Assessment, it has been assumed battery technology will be adopted for the BESS.

BESS Units Individual battery units that are grouped together to form the BESS.

Cable Circuit An electrical conductor necessary to transmit electricity between two points within the Scheme and may include one or more auxiliary cables for the purpose of gathering monitoring data, earthing cables, cables for auxiliary supply, optical fibre and other types of communication cables, cables connecting to direct current boxes.

Cabling The low or medium voltage cables within the Scheme, which transmit electricity between PV Panel to Conversion Units and from there to the Customer Substation and BESS. These cables consist of 33kV (kilovolt), and 400kV cables, as well as earthing cables and optical fibre cables.

Concept Masterplan A plan showing the early design of the Scheme presented at Non-Statutory and Statutory Consultation.

Construction Compound An area within the Site where deliveries will be set down, managed and redistributed throughout the Construction Phase.

Control Documents Documents listed in Schedule 13 of the draft Development Consent Order (DCO) which are proposed to be secured by the DCO and act as legal controls for the Scheme.

Conversion Units Conversion Units incorporate the inverters, transformers and switchgear and are required to manage the electricity generated by the PV Panels. These would either be standalone equipment, or they would be housed ('integrated') together within a container.

Customer Substation The Scheme substation comprising electrical infrastructure such as the Transformers, Switchgear and metering equipment required to facilitate the export of electricity from the Scheme to the National Grid Substation. The Customer Substation will also provide Ancillary Buildings for staff welfare and storage facilities. The Customer Substation will convert the electricity transmitted along the Cable Route Corridor up to 400kV (kilovolt) for onward transmission to the National Grid Substation via the Grid Connection Cables.

Design Commitments Design commitments secure specific elements of the detailed design such as appearance, materials, type, colour, surfacing and offsets and are relied upon within the Environmental Statement. They are secured through the **Design Principles, Parameters and Commitments Document [APP/5.8]** which sets outs specific design commitments for the detailed design of the Scheme.

Design Parameters Design parameters secure the size and location (footprint, width, and height relative to above ordnance datum (AOD)) of different elements of the Scheme in alignment with the Rochdale Envelope approach and are the basis of the Environmental Assessment.

Design Vision The overarching strategic goal of the Scheme which defines the key considerations and elements it will deliver.

Development Consent Order (DCO) Development consent is required pursuant to the Planning Act 2008 for Nationally Significant Infrastructure Projects. A development consent order is a statutory instrument containing powers that enable the applicant to carry out the construction, operation, maintenance and decommissioning of the Nationally Significant Infrastructure Project. Applications for DCOs are made to, and decided by, the relevant Secretary of State.

Development Consent Order (DCO) Application The application for a Development Consent Order (DCO) to be submitted by the Applicant for the Scheme.

Fixed South Facing PV Arrays Solar photovoltaic (PV) tables that face south and are mounted to fixed Mounting Structures in an east/west configuration.

Green Infrastructure A network of multifunctional green space and other green features, urban and rural, which can deliver quality of life and environmental benefits for communities.

Glossary Continued

Grid Connection Cables The 400kV (kilovolt) cables connecting the Customer Substation to the Point of Connection.

Grid Connection Infrastructure Underground and/or overhead lines including new pylons between the National Grid Substation and the Point of Connection.

Ground Mounted PV Modules Solar photovoltaic (PV) modules attached to structures that are fixed to the ground which include Single Axis Tracker PV Arrays or Fixed South Facing PV Arrays.

Highway Works Any works associated with the temporary or permanent amendments to the highway and/or highway verges to facilitate the Construction Phase, Operational Phase and Decommissioning Phase of the Scheme.

Illustrative Masterplan An illustrative layout showing one way the Scheme could be carried out within the parameters of the DCO Application.

Inverter, Inverters convert the Direct Current (DC) electricity generated by the PV Panels into Alternating Current (AC), which allows the electricity generated to be exported to the national grid.

Mitigation and Enhancement Areas The areas within the Order limits that are being proposed for mitigation and enhancement.

Mounting Structures The metal frames onto which the PV panels are attached.

National Grid Substation The 400kV (kilovolt) substation operated by National Grid Electricity Transmission.

Nationally Significant Infrastructure Project (NSIP) A NSIP is a large-scale development (as defined in sections 14-30A of the Planning Act 2008) such as certain new harbours, power generating stations (including wind farms), highways developments and electricity transmission lines, which require a type of consent known as ‘development consent’ which is governed by the Planning Act 2008.

Order limits The land shown on the Works Plans within which the Scheme can be carried out.

Point of Connection (POC) The National Grid Substation and associated connection into the 400kV overhead lines located at The Droves Solar Farm, which the Scheme connects to, to transfer the energy generated to the national grid system.

Project Level Principles Project level design principles are used to guide decision making throughout the design evolution process in order to deliver the intended outcomes of the Scheme.

PV panel Solar photovoltaic panel designed to convert solar irradiance to electrical energy. The PV panel is attached to a Mounting Structure.

PV Tables PV panels mounted onto the Mounting Structure, forming tables, which are set out in rows either in an east/west or a north/south configuration.

Scheme A Nationally Significant Infrastructure Project (NSIP) comprising a Ground Mounted solar photovoltaic generating station with a gross electrical capacity of over 50 megawatts, with Associated Development which would allow the generation, storage and export of electricity. The Scheme is known as "The Droves Solar Farm".

Single Axis Trackers Mounting Structures in a north/south configuration, that allow the PV Table to rotate and track the movement of the sun.

Site Area consisting of the Solar PV Site, Associated Development, Ancillary Infrastructure and Highway Works and any other element or component that forms part of the Scheme.

Solar PV Arrays Rows or groups of PV Tables that are connected to one another to form a Solar PV Array.

Solar PV Site A term used to describe the land that accommodates the Solar PV Arrays, Conversion Units and 33kV Sub-distribution switch rooms.

Switchgear A combination of electrical disconnect switches, fuses or circuit breakers used to control, protect, and isolate electrical equipment.

Temporary Construction Compounds Temporary laydown areas used during construction, comprising areas of hardstanding, car parking, areas to store materials and equipment, waste management, security infrastructure including fencing, lighting and cameras.

Transformers Transformers increase and decrease the voltage of the electricity. There would be 33kV Transformers and 400kV Transformers within the Scheme.

Section 1

1. Introduction

1.1 Overview of the Scheme

1.1.1 The Droves Solar Farm (the Scheme) comprises the construction, operation and maintenance, and decommissioning of a solar photovoltaic (PV) electricity generating station and associated development comprising a Battery Energy Storage System (BESS), a Customer Substation, and Grid Connection Infrastructure, including a new National Grid Substation. The Scheme would allow for the generation and export of over 50MW Alternating Current (AC) of renewable energy, connecting into the National Electricity Transmission System (NETS) overhead line that passes through the Site.

1.1.2 As the Scheme would have a generating capacity in excess of 50MW, it is considered to be a Nationally Significant Infrastructure Project (NSIP) under the Planning Act 2008.

1.1.3 The Scheme would be located within the Order limits, also referred to as 'the Site'. The Order limits contain all elements of the Scheme comprising the Solar PV Site, the Customer Substation, the National Grid Substation, the BESS, Grid Connection Infrastructure, Mitigation and Enhancement Areas, and the Highway Works.

1.1.4 Highway Works are sections of the highway network that will contain localised improvements, such as improvements to the road edge where it is deteriorated, or temporary highway and traffic works required to safely accommodate the Abnormal Indivisible Load (AIL) deliveries. These areas will support the movement of construction vehicles on narrower sections of the local highway network within parts of the construction vehicle routes to the Site.

1.1.5 A full description of the Scheme is set out in **Environmental Statement (ES) Chapter 5 The Scheme [APP/6.1].**

1.1.6 The extent of the Order limits are shown on the **Location Plan [APP/2.1]**.

Scheme Location

1.1.7 The Droves Solar Farm would be located to the north of Swaffham and south of Castle Acre, as shown on Figure 1.1 and encompasses approximately 838 hectares (hereafter referred to as the 'Site').The Order limits is located within the administrative boundaries of Breckland Council (BC) and Norfolk County Council (NCC), who are the host authorities. The Order limits lie adjacent to the administrative boundary of the Borough Council of King's Lynn & West Norfolk (BCKLWN).

Figure 1.1 Site Location Plan

1.2 Purpose of the Document

1.2.1 The Design Approach Document (DAD) has been prepared on behalf of the Applicant to support the application for a Development Consent Order (DCO).

1.2.2 The document is prepared pursuant to Regulation 5(2)(q) of The Infrastructure Planning (Applications: Prescribed Forms and Procedures) Regulations 2009 (APFP Regulations) **[Ref 2]** and forms part of a suite of supporting documents for the DCO Application.

1.2.3 The primary purpose of the DAD is to demonstrate how the Scheme would fulfil the requirement for good design and demonstrate adherence to the mitigation hierarchy (to avoid, reduce, mitigate, compensate) set out and required within the Overarching National Policy Statement (NPS) for Energy (EN-1) (2023) (NPS EN-1), the NPS for Renewable Energy Infrastructure (EN-3) (2023) (NPS EN-3) **[Ref 3]** and the NPS for Electricity Networks Infrastructure (EN-5) (2023) (NPS EN-5) **[Ref 4]**.

1.2.4 The document sets out how good design has been embedded into the Scheme from the outset, and how it will continue to be achieved through to detailed design, to ensure that the Scheme achieves well-designed outcomes and mitigates adverse effects. It explains the way in which the design has evolved since inception, the rationale for design decisions and the proposals contained within the DCO Application, as well as the mechanism by which good design will be secured post-consent.

1.2.5 This document also sets out how consultation and engagement have influenced evolution of the **ES Figure 5.1: Concept Masterplan [APP/6.3]** and design of the Scheme.

1.3 Document Structure

1.3.1 The DAD has been structured around four stages of the design process, as set out in non-statutory guidance provided by the Planning Inspectorate entitled “Nationally Significant Infrastructure Projects: Advice on Good Design” **[Ref 5]**. The advice is intended to complement the legislation, regulations and guidance issued by government and is produced under section 51 of the Planning Act 2008.

1.3.2 The four stages – Assemble, Research, Co-Ordinate, Secure – provide evidence, in a structured manner, that the Applicant has engaged in and is committed to a process that can deliver good design outcomes, which are specific and proportionate to the type of infrastructure proposed.

Section 2: Policy context for Good Design

1.3.3 Introduces the context of what is considered to be good design with reference to national and local planning policy and relevant design guidance.

Section 3: Assemble

1.3.4 Sets out the Scheme brief, including the Scheme’s purpose, proposed timeline, and multi-disciplinary design team. It also sets out the vision for the project, defining an ambition which goes beyond the Order limits, and includes the development of design principles.

1.3.5 Assemble is subdivided into three parts to aid legibility of the process followed by the project team, as follows:

- **Section 3 –** Part 1 - Project Team Brief & Team.
- **Section 4 –** Part 2 - Site Context.
- **Section 5 –** Part 3 - Design Framework, Vision and Project Level Design Principles.

Section 6: Research

1.3.6 This stage sets out the design evolution of the Scheme, from early non-statutory consultation (Co-Design) with key stakeholders through to the production of initial scheme design to inform the Preliminary Environmental Information Report (PEIR) and Statutory Consultation, demonstrating how the proposal sought to mitigate impacts and deliver positive outcomes.

Section 7: Co-ordinate

1.3.7 This section explains how the design was further iterated following Statutory Consultation, incorporating consultation responses and additional technical information.

Section 8: Securing Good Design

1.3.8 This section sets out how good design is secured and will be delivered, including ongoing design advice and community engagement.

Section 9: Conclusion

1.3.9 This section summarises the contents of the DAD and sets out how the Scheme has and will deliver good design.

Section 10: References;

1.3.10 Annex A: Consideration of the Planning Inspectorate's guidance 'Nationally Significant Infrastructure Projects: Advice on Good Design'.

Section 10: References

1.3.11 This section provides the full references of documents referred to throughout the DAD.

1.3.12 Table 1-1 below sets out an explanation of the key design terminology referred to in this DAD and throughout the DCO Application.

Annex A: Consideration of the Planning Inspectorate's guidance 'Nationally Significant Infrastructure Projects: Advice on Good Design'.

Table 1-1 Key Design Terminology

Design terminology	Definition
Design Vision	The overarching strategic goal of the Scheme which defines the key considerations and elements it will deliver. The Vision is set out in Section 5 of this document.
Design Principle	Principles are used to guide decision-making throughout the design evolution process in order to deliver the intended outcomes of the Scheme. They should result in tangible outputs that are secured by relevant plans and documents set out in the draft DCO (such as Works Plans, Design Parameters, Design Commitments and relevant management plans). Where these plans and documents allow for flexibility within detailed design, project-level design principles may be secured within the outline management plans to inform future design choices (within the consented parameters) post-consent. The Design Principles are set out in Section 3 of this document.

Design terminology	Definition
Design parameters	Design parameters secure the size and location (footprint, width, and height relative to above ordnance datum (AOD)) of different elements of the Scheme in alignment with the Rochdale Envelope approach and are the basis of the EIA. The parameters are set out in the **Design Principles, Parameters and Commitments [APP/5.8].**
Design Commitment	Design commitments secure specific elements of the detailed design such as appearance, materials, type, colour, surfacing and offsets and relied upon within the ES. The commitments are set out in the **Design Principles, Parameters and Commitments [APP/5.8].**

Section 2

2. Policy Context for Good Design

2.1 What is good design?

2.1.1 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.

2.1.2 As set out in the Planning Inspectorate's guidance 'NSIPs: Advice on Good Design', the principles of good design have been around since Roman times and go beyond purely aesthetics. The guidance highlights that the Governments in England and Wales recognise that good design is a process that needs to include the social, environmental and economic aspects of a development, including its construction, operation and management, and its relationships to its surroundings. Ultimately, good design is the result of a wide range of factors and considerations that seek to deliver functionality, durability and aesthetic appeal.

According to 'NSIPs: Advice on Good Design':

"Achieving good design requires a holistic approach to deliver high quality, sustainable infrastructure that responds to place and takes account of often complex environments.

Achieving high quality, good design outcomes requires an effective, intentional, transparent, deliverable process to be planned, followed and secured. Success in good design comes from a combination of securing both good process and good outcomes.

Given the scale and impact of NSIP developments, achieving well-designed project outcomes addressing sustainability and climate change is essential."

2.1.3 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'. As referenced in the previous section these include NPS EN-1), NPS EN-3 and the NPS EN-5 along with the National Infrastructure Commission's (NICs) 'Design Principles for National Infrastructure' report **[Ref 6]**. The government published an updated set of draft NPS's in April 2025 for consultation following a review of the existing energy NPSs however, they do not yet have effect. The published draft NPSs were reviewed for the purposes of this DAD; however, no relevant updates were identified in relation to design matters.

2.1.4 The following sections set out the key national and local policies that relate to good design, followed by other guidance and advice that has been considered.

2.1.5 The DAD provides the design narrative in response to these policy requirements. A full appraisal of how the Scheme has complied with the relevant policy tests set out in national and local policy is provided in the **Planning Statement [APP/5.5]** and the **Policy Compliance Document [APP/5.6]**.

2.2 National Policy and Guidance

2.2.1 The key policy documents relevant to the Scheme that set out the requirement for good design in NSIPs are as follows:

Overarching National Policy Statement for Energy (EN-1)

2.2.2 Section 4.7 of NPS EN-1 sets out criteria for good design for energy infrastructure.

2.2.3 Paragraph 4.7.1 states that “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”.

2.2.4 Paragraph 7.7.2 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. 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 ".

2.2.5 Paragraph 4.7.3 of NPS 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. Projects should look to use modern methods of construction and sustainable design practices such as use of sustainable timber and low carbon concrete. Where possible, projects should include the reuse of material.” Further, Paragraph 4.7.4 states that “given the benefits of good design in mitigating the adverse impacts of a project, applicants should consider how good design can be applied to a project during the early stages of the project lifecycle.”".

2.2.6 Given the benefits of good design in mitigating the adverse impacts of a development, NPS EN-1 highlights the need to consider good design from the early stages of the design process and states that: " ….a project board level design champion could be appointed, and a representative design panel used to maximise the value provided by the infrastructure. Design principles should be established from the outset of the project to guide the development from conception to operation. Applicants should consider how their design principles can be applied post-consent." (Paragraph 4.7.5).

2.2.7 Footnote 122 of NPS 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 the National Design Guide and National Model Design Code, as well as any local design policies and standards".

2.2.8 Paragraphs 4.7.6 set out how the Applicant could consider good design including:

- consideration of the siting of infrastructure relative to existing landscape character, land form and vegetation;
- sensitive use of materials in any associated development; and
- the incorporation of nature inclusive design.

2.2.9 Paragraph 4.7.7 requires the Applicant to demonstrate “how the design process was conducted and how the proposed design evolved”.

2.2.10 Section 4.7 of NPS 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 BC Design Guide against the Island Green Power (IGP) Design Principles (refer to Section 3 for further information) and Project Level Design Principles.

2.2.11 In relation to the Secretary of States decision making, Paragraph 4.7.10 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.”

2.2.12 Paragraph 4.7.11 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.”

2.2.13 Paragraph 4.7.12 confirms that 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” when considering applications.

National Policy Statement for Renewable Energy Infrastructure (EN-3)

2.2.14 NPS 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" (Paragraph 2.1.8).

2.2.15 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."

2.2.16 Section 2.10 of NPS 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."

2.2.17 Paragraph 2.10.60 sets out that “applicants will consider several factors when considering the design and layout of sites, including proximity to available grid capacity to accommodate the scale of generation, orientation, topography, previous land use, and ability to mitigate environmental impacts and flood risk”.

2.2.18 Paragraph 2.10.61 of NPS EN-3 further adds that “For a solar farm to generate electricity efficiently the panel array spacing should seek to maximise the potential power output of the site. The type, spacing and aspect of panel arrays will depend on the physical characteristics of the site such as site elevation.”

2.2.19 Paragraph 2.10.98 of NPS EN-3 explains how good design can minimise landscape and visual effects, and states that “Applicants should follow the criteria for good design set out in Section 4.7 of EN-1 when developing projects and will be expected to direct considerable effort towards minimising the landscape and visual impact of solar PV arrays especially within nationally designated landscapes.”

National Policy Statement for Electrical Networks Infrastructure (EN-5)

2.2.20 NPS EN-5 also sets expectations on 'good design' in relation to electrical network infrastructure.

2.2.21 Paragraph 2.4.1 requires “the Secretary of State to have regard, in designating an NPS, and in determining applications for development consent to the desirability of good design.”

2.2.22 Paragraph 2.4.2 states: "Applicants should consider the criteria for good design set out in EN1 Section 4.7 at an early stage when developing projects" (Paragraph 2.4.2).

2.2.23 Paragraph 2.4.3 recognises 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."

2.2.24 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 Infrastructure Commission's (NIC) 'Design Principles for National Infrastructure'

2.2.25 **The NIC's 'Design Principles for National Infrastructure'** provides further guidance on good design for infrastructure projects and is referred to in NPS 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; and

Value

Achieve multiple benefits and solve problems well.

2.2.26 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' document **[REF 7]**. 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."

NSIPs: Advice on Good Design (Planning Inspectorate, April 2025)

2.2.27 Advice on good design for Nationally Significant Infrastructure Projects (NSIP) was issued by the Planning Inspectorate in October 2024 and updated in April 2025. The Applicant has undertaken a review of the Advice Note and has set out within a separate note (Appendix A) how each of the 'Good design issues to consider' set out in Annex A have been addressed within the DCO Application for the Scheme.

2.3 Local Policy & Guidance

Breckland Local Plan, adopted 2023 [REF 8]

2.3.1 The Scheme lies wholly within the administrative boundary of Breckland Council (BC). The Breckland Local Plan (adopted in September 2023) forms the development plan for BC up to 2036. Listed below are the relevant policies related to design

2.3.2 Policy GEN 02 – Promoting High Quality Design sets out the BC's policy on design to ensure development integrates with its surroundings to create successful places. The policy states that BC will require high quality design in all development within the district that:

- respects and is sensitive to the character of the surrounding area and makes a positive architectural and urban design contribution to its context and location
- contributes positively to the public realm and public spaces, protecting the high levels of amenity and quality of life making Breckland an attractive, successful and vibrant place for residents, workers and visitors
- creates high quality, safe and sustainably designed buildings, places and streets; and
- maximises connectivity within and through a development and to the surrounding areas, including the provision of high quality and safe pedestrian and cycle routes.
- The policy, while not specifically relating to renewables, identifies key themes that are applicable to the Scheme including character of surroundings and context, amenity and connectivity.

Breckland Design Guide 2024 [REF 9]

2.3.3 In 2024, the Breckland Design Guide was published. The guidance has 6 overarching themes with design guidance for each.

- **Theme 1:** Guidance on complementing and enhancing local character through the thorough understanding of the local context
- **Theme 2:** Guidance on including the local planning authority and communities early on within the design process
- **Theme 3:** Guidance on developing schemes which integrate with nature and the local landscape
- **Theme 4:** Guidance on providing active travel links to services and parking design
- **Theme 5:** Guidance on creating distinctive character to respond sensitively to the local context; and
- **Theme 6:** Guidance on creating climate responsive designed development.

2.3.4 As noted above, the Applicant has reviewed and taken account of Breckland Design Guide's themes and principles against the IGP Design Principles and Project Level Design Principles.

Section 3

3. Assemble: Project Team Brief & Team

3.1 Project Team Brief

Island Green Power

3.1.1 The Applicant is The Droves Solar Farm Limited. The Droves Solar Farm is a 100%-owned subsidiary of Island Green Power UK Projects Limited, which is in turn a 100%-owned subsidiary of Island Green Power's UK group holding company, Island Green Power Group Limited (IGP). The Applicant is part of IGP, who are a leading international developer of utility-scale solar projects and battery storage systems', established in 2013.

3.1.2 IGP has successfully delivered nearly 40 solar projects worldwide that have generated more than 3GW of energy capacity. This includes 21 solar projects in the UK. These range in size from below 5MW to Nationally Significant Infrastructure Projects (NSIPs) such as Cottam, currently the UK's largest consented solar project. Cottam will generate 600MW of clean, renewable and secure electricity and includes 600MW of Battery Storage that will store then release energy as needed.

3.1.3 Their mission is to deliver renewable energy solutions that create lasting value for the communities they serve, protecting the environment while fostering economic growth and energy independence.

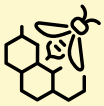
3.1.4 Recently, IGP's Cottam and West Burton projects have received DCOs. The Cottam Solar Project was granted development consent by the Secretary of State on 5 September 2024. The West Burton Solar Project was granted development consent by the Secretary of State on 24 January 2025

IGP Global Design Principles

3.1.5 IGP has established a set of company-wide 'global design principles'. These global design principles aim to ensure that all IGP projects 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. They align with the core ambitions outlined in the NIC Design Principles for National Infrastructure: Climate, People, Places and Value and are used by IGP at all stages of their projects, from site selection through to delivery.

(overpage)

IGP's 8 Global Design Principles are as follows:

 1. Decarbonisation & energy security.	Designed to maximise their clean energy generation potential, Projects will contribute to energy security and help deliver the UK's 2050 net zero targets, providing secure, reliable, affordable and home-grown energy to the nation.
 2. Environmentally led design.	Our Projects are sensitively designed to minimise the potential impact to versatile and high quality land, always considering the surrounding landscape and protecting local heritage sites.
 3. Biodiversity net gain & nature recovery.	Designed to make a positive contribution to the local environment, our Projects create new habitats and include enhancements to deliver a measurable net gain for biodiversity throughout operation.
 4. Design flexibility.	Designed with input from the local community, our Projects are functional and fit for purpose, adaptable and able to respond to innovative new technologies, with built-in resilience to climate change.
 5. Social value & community benefits.	Our Projects provide additional benefits and opportunities, in consultation with the local community. We minimise disruption to Public Rights of Way during all phases, and enhance local walking routes and paths where possible.
 6. Sustainability, durability & reversibility.	Designed to deliver reliable sustainable energy, we ensure the installation of our Projects remain temporary, and can be fully reversed if necessary, with minimal impact to the environment.
 7 Efficient infrastructure & ethical supply chain.	Designed to maximise operational efficiency, our Projects ensure consistent energy output and minimal losses through advanced, ethically sourced technologies and an optimised site layout.
 8. Commitment to mitigation.	By adhering to the mitigation hierarchy, our Projects reduce potential environmental impacts and control any adverse effects throughout construction, operation, maintenance and decommissioning.

The Need for Renewable Energy

3.1.6 The UK Government recognises the potential of solar power as part of its ambitious goal to achieve net zero with plans for 70GW of solar power by 2035. Alongside this, climate change is negatively affecting agricultural productivity, which is prompting higher levels of uncertainty for landowners and farmers alike. Securing diversified income is vital to the rural economy.

3.1.7 At a local level, NCC recognises the urgent need to address climate change and has committed to taking action through its Environmental Policy (2019) and Climate Strategy (2023). Its Climate Strategy, unanimously endorsed in March 2024, outlines NCC's commitment to leading by example and safeguarding the county for future generations.

3.1.8 BC declared a climate emergency in September 2019. Since then, BC has committed to reducing the level of greenhouse gases within the district. It is striving to achieve net zero as an organisation by 2035 and has also developed a Sustainability Strategy (2021–2035).

3.1.9 In the light of the recognition to address energy security and climate change at the national and local level, IGP sought out sites with the potential to provide a substantial source of renewable electricity for the region and country, enabling Breckland and Norfolk to make a vital contribution to local and national net zero targets.

3.1.10 Solar Farms also provide the opportunity to deliver wide-ranging benefits beyond renewable energy production including recovery of natural environments, economic growth and social benefits such as education, health and wellbeing opportunities.

Site Selection

3.1.11 The Applicant has split the Site Evaluation into two parts: the first part is the National Grid Substation site section assessment, and the second part is the site evaluation of the solar development Site.

3.1.12 The National Grid site selection assessment approach is based on the National Grid Company plc's (NGC's) Substation and the Environment: Guidelines on Siting and Design document **[REF 10],** which explains the approach taken towards the transmission system of electricity for England to assist those parties responsible for design and locating substations. The Applicant considers that it followed a logical approach, starting with the siting zone of the proposed National Grid Substation along an approximately 45km stretch of the existing 400kV Transmission Line between Necton and Walpole. The Applicant has undertaken a study to identify potential siting zones for a new National Grid Substation, as outlined in the **Site Evaluation Report [APP/5.5].**

3.1.13 There is no standard methodology for selecting sites for solar energy generating stations. However, as the NPS EN-3 paragraphs 2.10.21 – 2.10.26 recognise, a viable grid connection is an essential material consideration for proceeding with development and is instrumental in defining the search area.

3.1.14 The proposed Site's initial evaluation was conducted in accordance with the key site selection factors outlined in Section 2.10 of NPS EN-3. The site evaluation involved a balance of these factors, including:

- Irradiance and site topography – Preference for south-facing aspect and/ or flatter topography
- Network connection – Proximity to the point of connection
- Proximity of site to dwellings – Avoidance of close proximity to residential dwellings or where it would not be possible to mitigate visual amenity, glint and glare appropriately
- Environmental considerations – Avoidance of environmental constraints, such as those containing Site of Special Scientific Interest (SSSIs), Nature Reserves, Ramsar Sites, Special Area of Conservation (SAC), and Special Protection Areas (SPA)
- Agricultural land classification and land type – Minimise the impact on the best and most versatile agricultural land; and
- Accessibility – Suitability of the access routes both during construction and operation.

3.1.15 The Site fits the factors explored by the Applicant and set out in NPS EN-3, being without many constraints and with the benefit of a potential viable connection point to be included in the Site. The Applicant considers factors including, but not limited to, a large enough site area, topography, access and the lack of designations. Having experience and understanding of the surrounding area and requirements for utility-scale solar, it was clear to the Applicant that the Site met their environmental site selection criteria. The Applicant therefore identified a suitable site and concluded its site evaluation process.

3.1.16 A site selection process was undertaken to consider potential alternative sites, as summarised in the **Planning Statement [APP/5.5]** and accompanying appendix **Site Evaluation Report [APP/5.5]**.

3.1.17 A key principle in the site selection process was to seek to avoid areas of particular environmental and landscape sensitivity where possible to minimise potential impacts. This is true from a natural and built environment perspective, including ecology and biodiversity, landscape, water resources, and cultural heritage.

Scheme Purpose

3.1.18 Subsequent to Site selection, the project team brief and purpose of the Scheme was developed to sensitively design and deliver:

- the construction, operation and maintenance, and decommissioning of a solar PV electricity generating station with a grid connection capacity of approximately 500MW.; and
- 'associated development' including Battery Energy Storage System (BESS), grid connection infrastructure and other infrastructure.

3.1.19 IGP set out that the design must take into account the local and surrounding context, should implement the mitigation hierarchy from inception, and ensure that impacts are minimised as far as possible, to achieve a design that's functional and fit for purpose.

3.2 Design Champion and Team

3.2.1 The Applicant is promoting several NSIPs and has therefore appointed a Board Level Design Champion to ensure good design is embedded across their portfolio of projects. The Design Champion advocates a good practice design approach, and shares lessons learned across its portfolio of projects. These approaches, principles and lessons learnt have been taken into consideration in the design development of the Scheme.

3.2.2 In addition to the Applicants' Board Level Design Champion, the Applicant also appointed a project level Design Champion to lead the design process and ensure a multi-disciplinary approach. The appointed Design Champion for the Scheme was the Project Lead for LDA Design, who has prior experience in leading the design of other NSIP scale solar projects.

3.2.3 The project level Design Champion was responsible for leading the development of the **ES Figure 5.1: Concept Masterplan [APP/6.3]** presented at the PEIR stage and subsequent iterations following feedback received during statutory consultation. These plans outline the spatial parameters (Rochdale Envelope) of the Scheme and proposed mitigation, which has been developed in close coordination with the Applicant's design team.

3.2.4 The Applicant has dedicated significant resources both internally and through the appointment of an experienced team of consultants to develop a high-quality design for the Scheme. The Scheme's design team is set out in Table 1.

Table 1 Scheme's design team

Role	Organisation	Responsibilities	Skills
Applicant Project Manager	Island Green Power	Oversight and delivery of the Scheme during the pre-application stage.	Chartered town planner with over 5 years of experience promoting and consenting solar development projects.
Design Lead	Island Green Power and LDA Design	Oversight of Scheme design to ensure that it upholds project design principles and delivers good design.	Experience in design and delivery of NSIP scale solar farms. The LDA Design design lead is a chartered member of the Landscape Institute.

Role	Organisation	Responsibilities	Skills
Environ-mental disciplines	LDA Design Aspect Ecology GHC Archaeology and Heritage and Headland Archaeology Velocity Transport Planning Hoare Lea Kernon Countryside Consulting Ltd Raincloud Consulting Ltd Bureau Veritas Volterra Partners Pager Power Lanpro Seed Arboriculture Ltd	Collaborative approach to design decisions through multidisciplinary working to ensure the design is developed to consider the existing context of the area, and identify the likely significant effects of the Scheme, provide mitigation measures and design enhancement measures to ensure good design that aligns with the Scheme Design Principles.	All Environmental Impact Assessment (EIA) topic leads are recognised as competent experts as set out in **Environmental Statement (ES) Appendix 1.1 Statement of Competence [APP/6.4]**.
Planning	DWD	Advise the project team on design related national and local policy requirements.	Chartered Town Planners experienced in NSIP scale solar farms.
Engineering	Island Green Power	Technical engineering design.	HV engineers, solar engineers with experience in NSIP scale solar farms, BESS engineers.
Commun-ication	Copper	Overseeing consultation, collating feedback, and embedding feedback as part of the iterative design process	Experience in NSIP scale solar farms.

3.2.5 In addition to the inputs of the design team, the outcomes of consultation and technical engagement, as well as the conclusions of environmental assessment have influenced decision making, resulting in a comprehensive and well-informed design. Comments provided at non-statutory, statutory and targeted consultation and the Applicant's response, including comments, resulted in a change to the design of the Scheme, which is provided in the **Consultation Report [APP/5.1]** and the **Consultation Report Appendices [APP/5.2]**.

3.3 Components of The Droves Solar Farm

3.3.1 To successfully generate and export approximately 500MW to the national grid, the Scheme would require the following components. A full description of the key components of the Scheme, as well as details of how it would be constructed, operated, maintained and decommissioned, is provided in **ES Chapter 5: The Scheme [APP/6.1]**.

- **PV panels –** Solar photovoltaic panels designed to convert solar irradiance to electrical energy. The PV panel is attached to a Mounting Structure.
- **Fencing and security** – a wire mesh fence would enclose the Solar PV Arrays, and a metal palisade fence would enclose other key infrastructure, such as the BESS and Customer Substation. A closed-circuit television (CCTV) system would be placed around the perimeter of the Site and National Grid Substation, and would face towards the elements of the Scheme.
- **Mounting structures** – the metal frames onto which the PV panels are attached.
- **Conversion units** – these electrical components incorporate the inverters, transformers and switchgear and are required to manage the electricity generated by the PV panels. These would either be standalone equipment, or they would be housed ('integrated') together within a container.

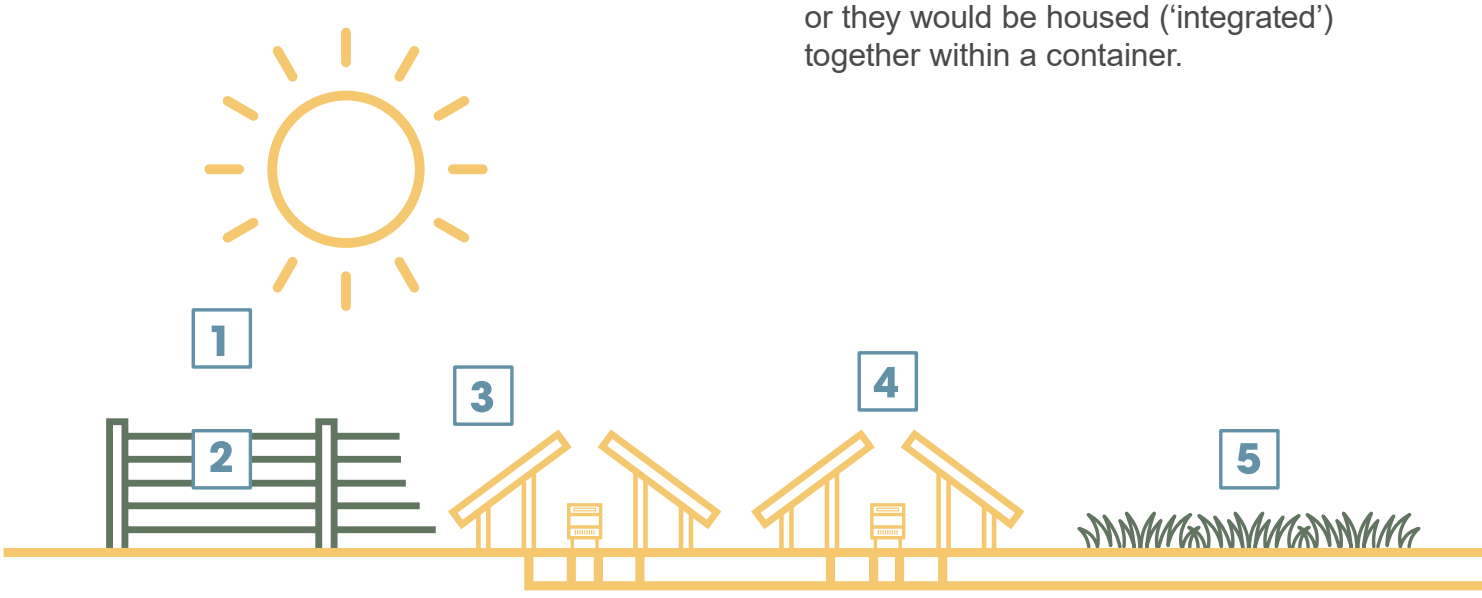


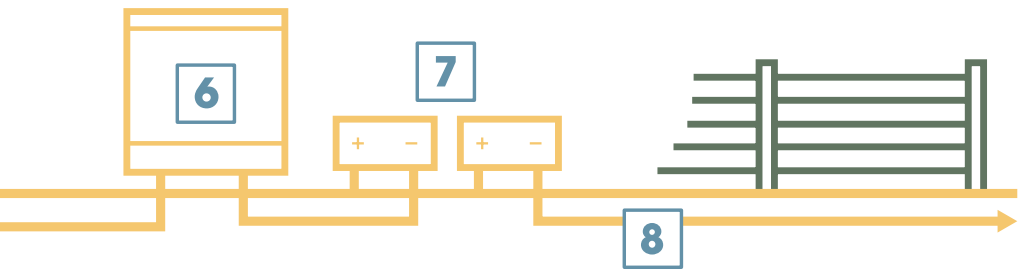
Figure 1.2: Schematic diagram showing the main elements that typically make up a solar farm

Not to scale and for indicative purposes only

- **Substations** – two types of substation would be required to export electricity to the national grid, comprising a Customer Substation and a National Grid Substation.
- **Access tracks** – existing or proposed, within the Site, which provide access around the Scheme.
- **Battery energy storage system** – the battery storage installation to allow for the storage, importation, and exportation of energy to the National Grid. For the purposes of the Environmental Impact Assessment, it has been assumed battery technology will be adopted for the BESS.
- **Lighting** – motion-sensing lighting would be installed around the Customer Substation, National Grid Substation and BESS, to support maintenance and security. Lighting would not be required within areas of the Site containing PV panels during the operational phase.
- **Site access** – the main point of access to the Site would be from the A1065. The point of access into the Site would include a security gate and would be designed to safely accommodate HGV traffic.
- **Temporary Construction Compounds** – an area within the Site where deliveries will be set down, managed and redistributed throughout the Construction Phase.
- **Cabling** – the low or medium voltage cables within the Scheme, which transmit electricity between PV Panel to Conversion Units and from there to the Customer Substation and BESS. These cables consist of 33kV (kilovolt), and 400kV cables, as well as earthing cables and optical fibre cables.
- **Grid Connection Infrastructure** – Underground and/or overhead lines including new pylons between the National Grid Substation and the Point of Connection.
- **Green Infrastructure -** Landscaping, habitat management, biodiversity enhancement and amenity improvements.

3.3.2 A schematic diagram showing the main elements of the Scheme is shown in Figure 1.2.

1. Solar Energy
2. Fencing
3. Solar Panels
4. Inverters (DC to AC)
5. Landscape area
6. Substation
7. BESS
8. Underground Cable



3.4 Scheme Programme

3.4.1 Table 2 below shows the programme relating to the evolution of the design of the Scheme, and the proposed timeline for the remainder of the Scheme.

2024	
Q2	Scheme Launch
Q3	Preparation for non-statutory consultation (Co-Design)
Q4	Non-statutory community consultation, including consultation workshops, local visits and meetings with stakeholders
2025	
Q1-Q2	Internal design review workshops and preparation of Concept Masterplan for statutory consultation
Q2-Q3	Statutory consultation, including consultation events, local visits and meetings with stakeholders, and further progression of environmental surveys
Q3	Ongoing engagement with stakeholders and targeted consultation
Q3-Q4	Ongoing engagement with stakeholders and preparation of final DCO submission, and all final documents for DCO submission, followed by DCO submission in November
2026	
Q1 2026 - Q1 2027	Examination, recommendation and decision phases
2027	Detailed design and procurement, preparation of final detailed masterplan
2031	Construction
2033	Operation
2093	Decommissioning

View along
River Road

Section 4

4. Assemble: Site Context

4.1 Site Overview

4.1.1 The Order limits encompass an area of approximately 839 ha of land, centred approximately at OS grid reference TF805122. The Order limits are presented in Figure 1.3.

4.1.2 The Site is wholly located within the administrative boundaries of BC and NCC, in an area of countryside to the north of Swaffham, south of Castle Acre and south-east of King's Lynn. The closest settlement to the Site is South Acre that adjoins the Order limits northern boundary.

Dry pond in the corner of Field 27

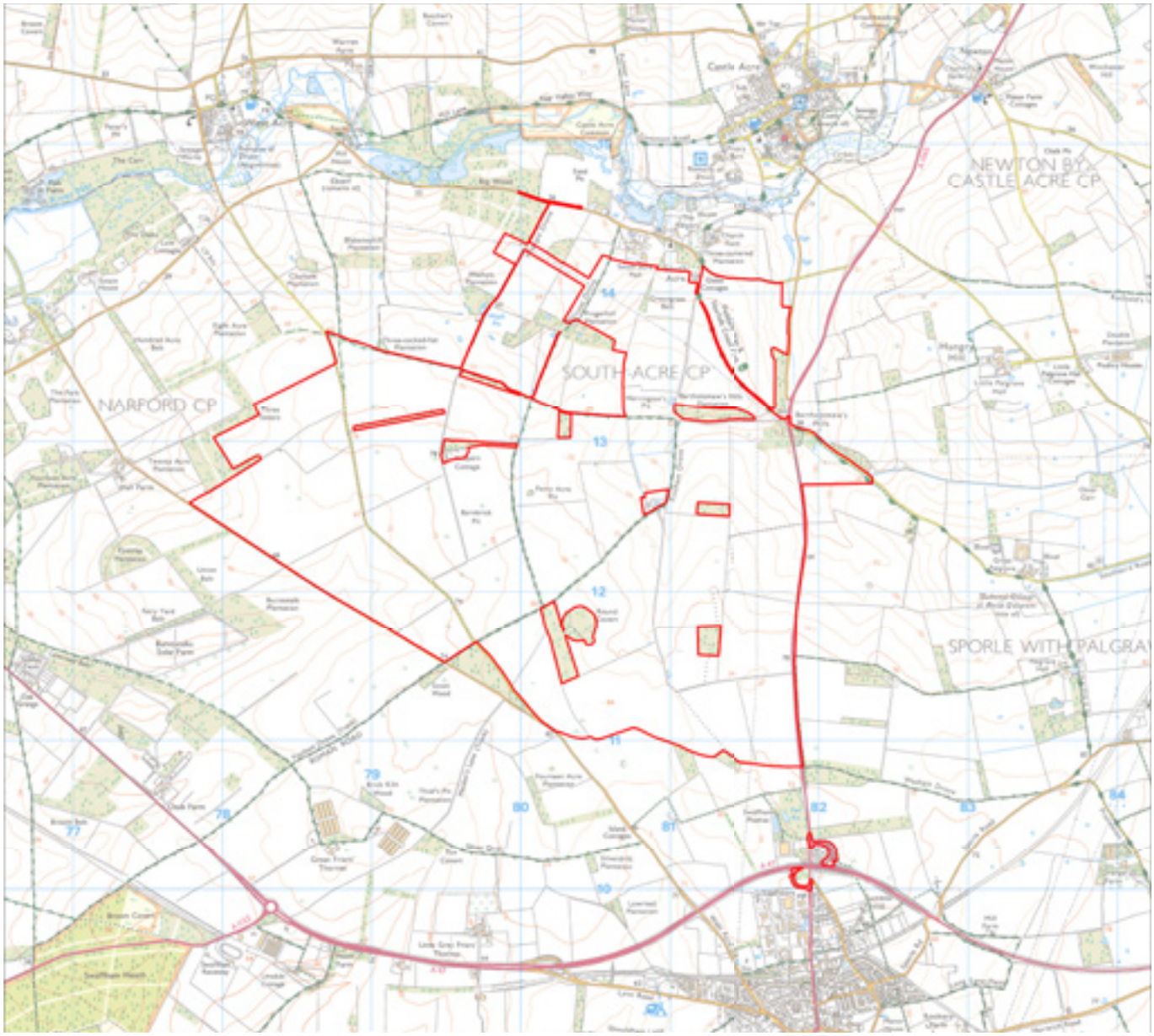


Figure 1.3: Order limits

4.1.3 Field reference numbers are shown in **ES Figure 3.3: Field Numbering Plan [APP/6.3]** and provided at Figure 1.4 next page.

4.1.4 The land within the Site is predominantly characterised by agricultural fields, grassland margins, hedgerows and tree belts and scattered trees and woodland. Marl pits (former pits for clay extraction) are located within the Site.

4.1.5 Existing farm tracks, Public Rights of Way and a series of droves, namely Fincham Drove, Petticoat Drove and Washpit Drove, extend within the Site.

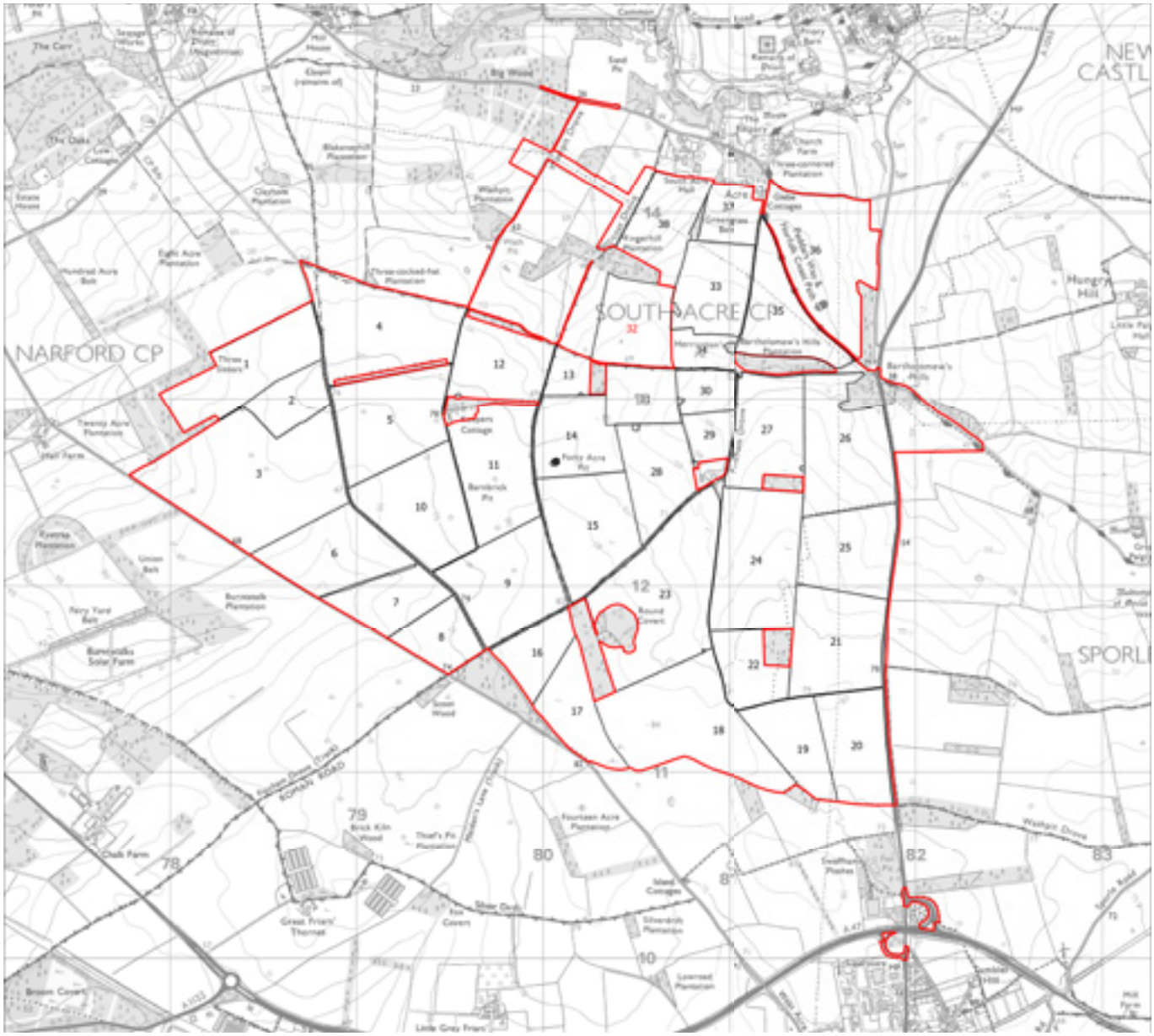


Figure 1.4: Field Numbering Plan

4.1.6 An existing 400kV overhead line (OHL) and associated transmission pylons pass through the north-eastern part of the Site. Further existing overhead utilities and existing underground utilities exist within the Site.

4.1.7 It is worth noting that the Site is relatively compact, spanning field parcels contiguous with one another, largely contained by Narford Lane to the south, the A1065 to the east, and the River Nar valley and valley slopes to the north.

4.1.8 The following sections provide a high-level summary of the existing physical, environmental, social and cultural context of the Site, which has informed the design of the Scheme. A more detailed description of the baseline environment is provided in the relevant chapters of the **ES [APP/6.1 – 6.5]**.

4.2 Topography

4.2.1 The topography of the Site and the surrounding area is provided at Figure 1.5, which shows a contrast between a plateau of high ground that encompasses the core of the Site and extends southwards to Swaffham; and the valley of the River Nar to the north, along and within which are a sequence of villages, including Castle Acre, South Acre and West Acre.

4.2.2 Descending from the plateau are a series of dry valleys, creating an expansive, undulating landscape set above the river corridor. At the northern edge of the plateau, encompassing the Site's northern extents, the terrain transitions from the plateau to the Nar valley slopes and a relatively narrow valley floor, where the river flows from east to west before it begins to broaden to a lower lying, level landscape that extends to King's Lynn and the Wash beyond.

4.2.3 The transition between the landscapes is noticeable when travelling along routes at the edge of the plateau that descend into the valley, most notably from River Road, Narford Lane and South Acre Road, and from Public Rights of Way West Acre RB7 and South Acre RB7, where the break of slope often affords views across the valley corridor in a northerly direction.

4.2.4 The topography of the Site ranges between approximately 85m above ordnance datum (AOD) within the southern parts of the Site near Swaffham; and approximately 28m AOD where the northern parts of the Site meet Low Road in the river valley. Most of the Site is located on land which is flat or has limited gradients.

4.2.5 Topography, which is generally flat or gently undulating, is most suitable for solar from both a constructability and operational perspective to ensure that the Site can produce a large amount of electricity. The general topography of the Site is flat or has limited gradients, making it particularly suitable for solar energy.

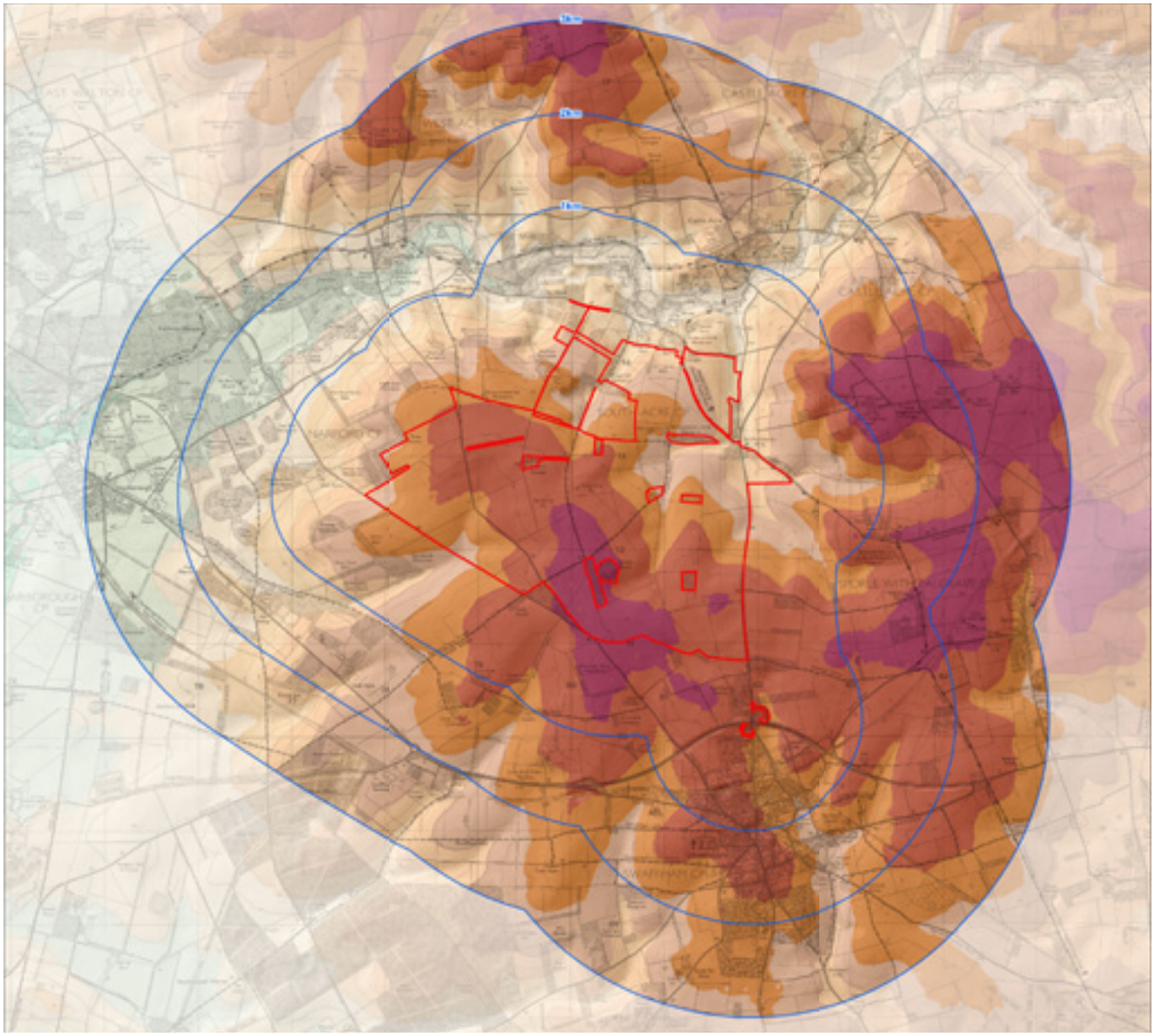


Figure 1.5: Topographical context

4.3 Landscape & Visual

Landscape Designations

4.3.1 No part of the Site or its immediate surrounding context falls within a national or locally designated landscape. The nearest National Landscape is the Norfolk Coast, located approximately 14km to the north-west beyond King's Lynn.

Landscape Character

4.3.2 Landscape Character describes a distinct, recognisable and consistent pattern of elements in the landscape that makes one landscape different from another. Landscape Character Assessment is undertaken at a National, Regional and Local scale and is defined as the process of identifying and describing variation in the character of the landscape, using this information to assist in managing change in the landscape.

4.3.3 At the national level, the Site is situated within National Character Area (NCA 85): The Brecks, described as "a largely open, gently undulating landscape with a low-lying, dry plateau that rises to the north. Subtle long slopes lead to alluvial flats containing shallow, meandering wooded river valleys".

4.3.4 At the regional level, the Norfolk and Suffolk Brecks Landscape Character Assessment (2013) describes the region as "a landscape of heaths, conifer plantations and farmland on part of the chalk plateau in south-west Norfolk and north-west Suffolk". The Site is situated within an area characterised as 'Rolling Clay Farmland', which encompasses land to the north, northeast and south of Swaffham.

4.3.5 National and Regional Character Assessments provide useful context, but Local Character Assessments are more helpful in understanding local influences.

4.3.6 At the local level, the Breckland Landscape Character Assessment (2007) covers the Site and large parts of the surrounding landscape. As shown in Figure 1.6, the majority of the Site is located within the D1: Swaffham Heath Landscape Character Area (LCA), which is part of the Brecks – Heathland with Plantation Landscape Character Type (LCT). Central and southern parts of the Site fall within E6: North Pickenham Plateau LCA, part of the Plateau Farmland LCT. A small portion of the Site's north-east corner falls within B7 – River Nar Tributary Farmland LCA, part of the Settled Tributary Farmland. The River Nar Valley LCA, part of the Chalk Rivers LCT, is shown to border the Site's northern edge.

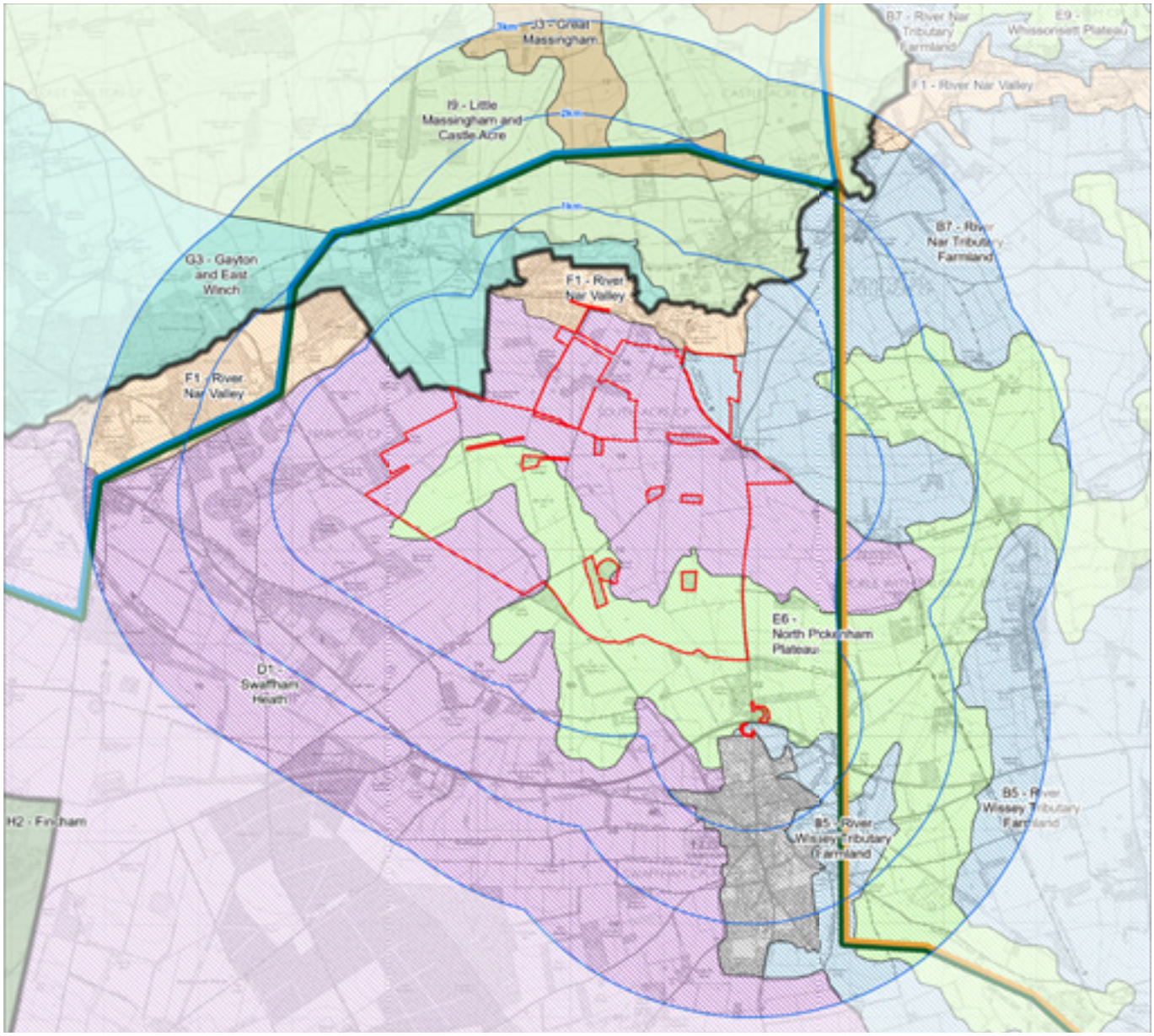


Figure 1.6: Landscape Character

Fincham Drove to the west of the Site

4.3.7 D1: Swaffham Heath LCA is described as “a large area of the Breckland Heathland with Plantation landscape type located to the north-west, west and south west of Swaffham, with character defined primarily by the land use of arable farmland, historic parklands and plantation woodland and distinctive Scot’s pine belts. To the north the character area boundary is marked by the adjacent River Nar character area and to the west by the district boundary and a change in character to a more settled area of farmland and plantations. To the south and east the landform falls towards the River Wissey.”

4.3.8 Key characteristics of the character area are as follows:

- Drift deposits of sand, clay and gravel create a gently undulating landscape, with topography ranging from 10-70m AOD across the character area
- Free draining sandy soils support the functional land cover of arable cultivation, pig farming and plantation woodland
- Ancient, contorted scots pine shelterbelts and screening belts of trees provide shelter to the easily eroded brown soils and are a prominent landscape feature
- At Cockleycley Heath and Swaffham Heath, the woodland plantation blocks create a visually prominent feature in the landscape
- The large scale arable fields are delineated by hedgerows in variable condition from occasional species rich intact hedgerows with hedgerow trees, thorn hedges and pine lines
- Breckland Farmland SSSI covers a large part of the character area – the cultivated land proving a habitat for stone curlew. A smaller area of Breckland Forest SSSI also covers part of the area
- A large scale landscape, with an open, windswept character, quiet and seemingly remote in places
- Historic parklands and parkland features such as lodge houses, rides/ long vistas and parkland species are evident in the landscape

- Sparsely populated – the settlement pattern is characterised by scattered Halls, farm buildings and a small number of nucleated villages and hamlets. Churches are often isolated
- Distinctive building materials of knapped flint, clunch and brick; and
- The areas of open access land associated with plantations at Swaffham Heath and Coldharbour Wood provide opportunities for recreation.

4.3.9 E6: North Pickenham Plateau LCA is described as “encircling Swaffham from the northwest to the south, creating an elevated, arable plateau backdrop to the settlement. This largely flat, open landscape contrasts with the more undulating Wissey Settled tributary farmland and more wooded Swaffham Heath character areas that bound it.”

4.3.10 Key characteristics of the character area are as follows:

- Thick Lowestoft Till glacial deposits underlie the character area, creating its elevated position
- A largely flat landscape defined by 70-75m contours
- Due to the elevated position affords views across the adjacent Settled tributary farmland and Heathland with Plantation landscape types are possible. Church towers within adjacent character areas are distinctive and prominent in views across the character area
- The turbines on the ridge directly north of Swaffham are visually prominent vertical structures
- Predominantly arable agricultural land cover, with some areas of mature mixed plantation woodland in the southern part of the character area
- Geometric/rectilinear field pattern, of large scale, defined by low, flailed hedges, with more extensively treed hedges to the network of lanes traversing the character area
- Former marl pits are a feature of the plateau
- Occasional osier beds are interspersed with the field network
- Remote character with little evidence of settlement, other than isolated farms and network of semi enclosed and enclosed rural roads and lanes
- The character area is defined by muted colour and is strongly rural. The landscape of the character area is relatively remote and peaceful, with little movement
- Runways, disturbed ground and industrial premises associated with the former North Pickenham Airfield are apparent in the southern part of the character area; and
- The historic way marked route of the Peddars Way bisects the character area in the east, together with other waymarked routes such as Procession Lane. There is a network of footpaths and bridleways across the character area.

4.3.11 Further details of the landscape and visual baseline are provided in **ES Chapter 6: Landscape and Visual [APP/6.2].**

Fincham Drove along the southern boundary of Field 8

Visual Environment of the Site

4.3.12 Visibility towards the Site is well contained due to a combination of the local plateau and valley topography, the presence of scattered woodland blocks within and close to the Site and the well vegetated nature of local lanes and highways; all of which serve to filter views and restrict direct visibility into the centre of the Site.

4.3.13 Within the centre of the Site there is a relatively high degree of visual enclosure, predominantly due to the presence of existing mature woodland, hedgerow and hedgerow trees, restricting intervisibility between field parcels. Droves and footpaths within the centre of the Site, such as PRoW South Acre RB6, (as shown on Figure 1.12) exhibit varying degrees of visual containment. The central and eastern lengths of PRoW South Acre RB6 are well enclosed by hedgerow and trees, however along lengths of this PRoW to the west there are more open views north and south close to River Road, predominantly due to the complete loss of hedgerow.

4.3.14 The southern Site area also exhibits some degree of visual enclosure, south of Round Covert. However, where there are gaps in hedgerows and local undulations in landform, such as along the A1065, there are mid to longer distance views out of the Site to the east towards Palgrave.

4.3.15 The plantation woodland shelter belts situated within the vicinity of the northern part of the Site (notably Batholomew's Hills Plantation) form an effective visual screen and restrict intervisibility between the Site and the valley landscape to the north. As such, intervisibility between the plateau landscape within the Site and existing settlements to the north of the Site, within the Nar Valley, such as Castle Acre, West Acre and South Acre is generally limited.

Fincham Drove

4.3.16 From PRoW South Acre RB2, views northwards across the valley landscape are in most part restricted due to the aligning hedgerow north of the PRoW. The intactness and condition of this hedgerow is generally good and therefore restricts views northwards effectively. Occasional views to the north are available where there are gaps in hedgerow or site access points to connected field parcels. The southern side of this PRoW is less enclosed due to it only being partly vegetated by varying lengths of woodland, hedgerow and hedgerow trees. Relatively long stretches of this PRoW have no vegetation directly to the south and therefore views across adjacent field parcels are available, albeit contained by the next vegetated field boundary along and restricting views further south into the Site.

4.3.17 Along the periphery of the Site, there are direct views towards existing development within the immediate context of the Site, such as highway infrastructure and associated passing traffic along the A1065, to the east. The existing overhead lines and towers are visually dominant in the northern extents of the Site, along with views of wind turbines to the south of the Site.

4.3.18 There are a limited number of glimpsed middle distance views towards the Site from rising landform north of the Nar Valley and West Acre. From these locations, the well-wooded plateau edge within the Site is a prominent feature on the skyline. There are visual gaps between the woodland blocks from certain angles; however, visibility does not extend much further into the Site due to flattening topography and other vegetation associated with field parcels beyond the woodland.

Site Character

4.3.19 Whilst there are predominantly two character areas that fall within the Site, the distinction between these two areas is largely derived from the elevated landform associated with the plateau landscape. In many other respects, the landscape character of the Site, across both character areas, is similar. These mutual characteristics provide opportunities for the conservation and enhancement of Breckland's landscape character. Key characteristics of the landscape demonstrated across the Site are as follows:

- Large scale arable fields delineated by hedgerows in variable condition, including species rich hedgerows with hedgerow trees. The historic field pattern has, for the most part, remained largely intact, despite degradation of hedgerow condition and loss in a few locations
- Woodland plantation blocks and tree belts are visually prominent features in the landscape, particularly at the Site's northern and western boundary, where a sequence of woodland blocks and tree belts mark the edge of the Nar valley slope, defining the skyline and acting as a visual barrier when looking into the site from adjacent landscape character areas to the north and providing a sense of containment from within the Site
- Some views into adjacent landscapes, particularly at the break of slope towards the northern edge of the plateau. These views extend into the River Nar Valley, where the change in character is appreciable, and glimpsed views of heritage features (church towers) are possible

- Views of overhead power lines and pylons are apparent within the northern reaches of the Site; and the wind turbines adjacent to Swaffham are prominent vertical structures in views to the south
- A network of lanes and rural roads traverse or border the Site, that are often enclosed or semi-enclosed, albeit some have become more open due to hedgerow and hedgerow tree loss
- A network of public rights of way, in particular a sequence of former droves that follow the alignment of public rights of way
- Sparse settlement within the Site and immediate surroundings, with only a small number of isolated dwellings and farm buildings either within or in the Site's vicinity. Nucleated villages are located within the Nar Valley to the north; and the larger settlement of Swaffham is located at the edge of the plateau landscape to the south; and
- Former marl pits and clay ponds dot the plateau and the Site.

4.3.20 Further details on the landscape baseline are provided in **ES Chapter 6: Landscape and Visual [APP/6.2].**

Nar Valley looking south to wooded plateau edge

4.4 Ecology and Biodiversity

4.4.1 The Site has been subject to baseline surveys, which include desk-based assessment, environment record searches, walkover survey, and species surveys.

Designations

Statutory Designations

4.4.2 Statutory ecological designations (including those of an international and national level importance), identified within the Study Areas, are shown on Figure 1.7 and summarised below, with full details within **ES Chapter 7: Ecology and Biodiversity [APP/6.2]**:

- The Site does not contain, nor is it located immediately adjacent to, any statutory ecological designations; and
- The closest designation is the River Nar Site of Special Scientific Interest (SSSI), which is located approximately 0.27km north of the Site and is notified on the basis of the habitats and species it supports, including terrestrial and wetland habitats, and Lapwing respectively.

Non-Statutory Designations

4.4.3 Non-statutory ecological designations are summarised below with full details within **ES Chapter 7: Ecology and Biodiversity [APP/6.2]**:

- A single Roadside Nature Reserve (RNR, ref U33086) is located along River Road within the Site boundary (as shown at **ES Figure 7.1: Ecological Designations [APP/6/3]**); and
- A further RNR is located along River Road, approximately 0.05km north of the Site boundary, whilst all other identified ecological designations are situated over 0.2km from the Site boundary.

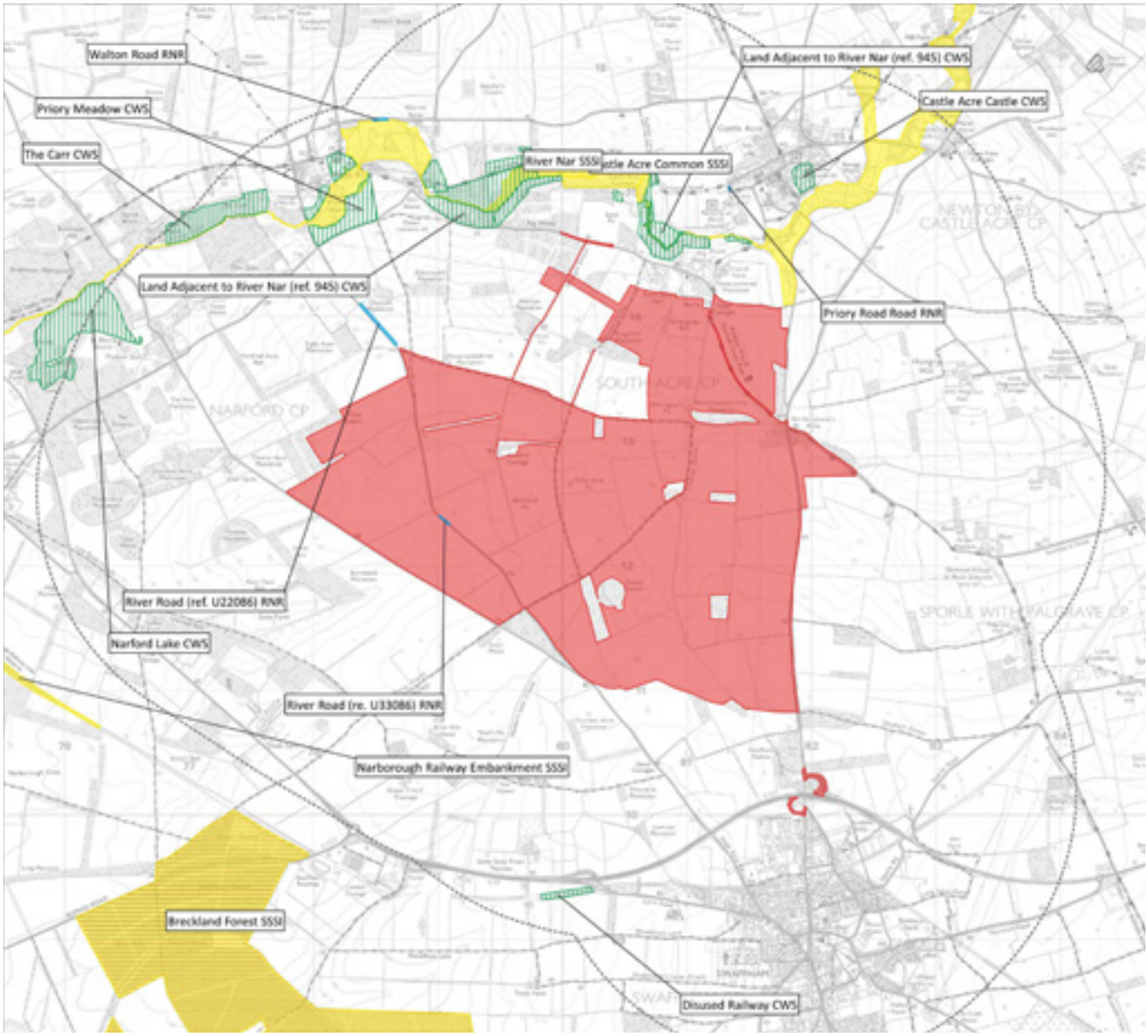


Figure 1.7: Ecological Designations

Habitats

4.4.4 The predominant habitat within the Site is intensively managed arable fields, with areas under rotation for pig and poultry grazing. Field boundary features include hedgerows, tree lines and scattered trees. A number of additional habitats are found within the Site, including woodland, scattered scrub, improved and semi-improved grassland and ponds. A summary of other key ecological habitats is shown in Figure 1.8 and provided below:

- No Ancient Woodland has been identified within the Site but a number of potential veteran trees do exist within the Site and represent irreplaceable habitat if confirmed to be present
- Blocks of woodland including coniferous plantation, broad-leaved woodland and mixed woodland present in varying condition
- The majority of field boundaries are marked by hedgerows, forming vegetated corridors, albeit the majority of these are species-poor; and
- Ponds present within or immediately adjacent to the Site were recorded to be in relatively poor condition, predominantly linked with game management.

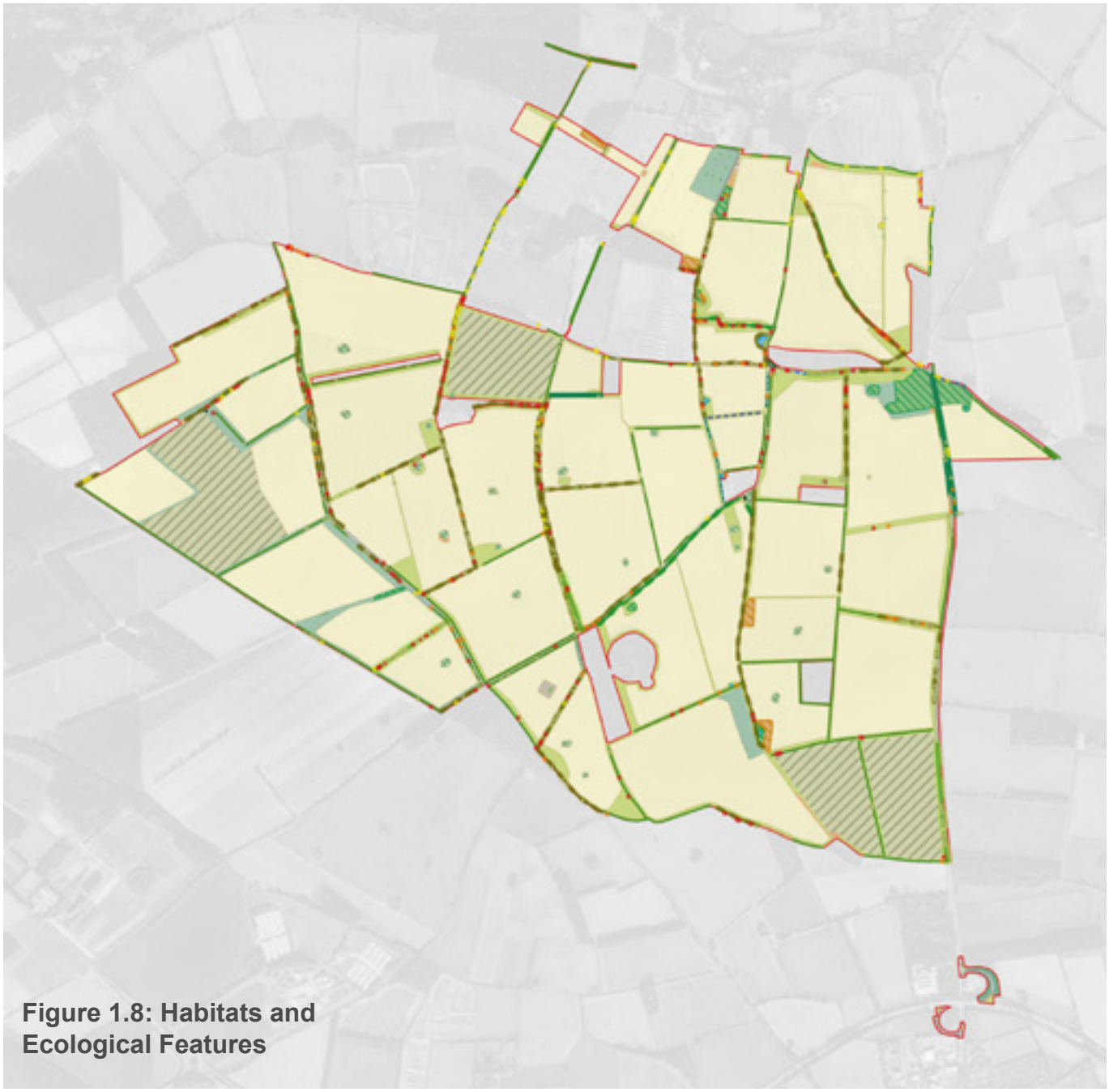


Figure 1.8: Habitats and Ecological Features

Species

4.4.5 Specific faunal survey work was undertaken at the Site during 2024 and 2025 in regard to bats, badger, breeding and wintering birds, reptiles and Great Crested Newt. In addition, general observations were made of any faunal use of the Site with particular attention paid to the potential presence of protected or notable species. A high level summary of the results are as follows:

Bats (Roosting):

4.4.6 A small number of buildings and suitable structures are present within and immediately adjacent to the Site which includes buildings suitable for roosting bats (with roosting activity confirmed for a single building adjacent to the Site). In addition, a substantial number of mature trees are present across the Site (located within field boundary vegetation) which provide suitable features for use by roosting bats

Bats (Foraging/Commuting):

4.4.7 The vast majority of bat activity recorded across the Site was composed of Common Pipistrelle and Soprano Pipistrelle, albeit other bat species were recorded at the Site, including in particular numbers of Barbastelle registrations

Badger:

4.4.8 A small number of badger setts were identified, in particular within the south west of the Site, albeit evidence of badger activity was recorded to be lacking across substantial areas of the Site

Birds:

4.4.9 Fourteen Priority bird species were confirmed to be breeding within the Site (including four Red List species), with a further 10 probably breeding and 6 possibly breeding. Many of the breeding territories are associated with the mature boundary hedgerows and trees, and associated with the field margins, albeit 121 Skylark territories were recorded within the arable fields, whilst livestock units were recorded to be used by a number of bird species including two probable breeding pairs of Curlew and

4.4.10 Of all the bird species recorded during the Wintering Bird Surveys, 53 are Birds of Conservation Concern (BoCC red or amber listed), species listed as Schedule 1 of The Wildlife and Countryside Act 1981, or UK Biodiversity Action Plan species. Large numbers of Northern Lapwing (Vanellus Vanellus) were recorded to be using the Site. Some parts of the Site consistently held more birds than others, namely areas of production (notably the various livestock units and winter cereal fields) or discrete agricultural landscape features created or maintained for wildlife such as mature boundary hedges, scrub, cultivated margins, bird seed plots, or pits.