Springwell Solar Farm

Design Approach Document

APFP Regulation 5(2)(q)

Planning Act 2008

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

EN010149/APP/7.3
November 2024
Springwell Energyfarm Ltd

Contents

Key Terms

Concept Masterplan – A plan showing the early design of the Proposed Development presented at Non-Statutory (Phase One) Consultation.

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 project.

Design Commitments – A Control Document which sets outs specific design commitments for the detailed design of the Proposed Development **[EN010149/APP/7.4]**.

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.

Illustrative Masterplan – An illustrative layout showing one way the Proposed Development could be carried out within the constraints of the DCO Application.

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

Order Limits – The maximum extent of land potentially required temporarily and/or permanently for the construction, operation and decommissioning of the Proposed Development.

Outline Landscape and Ecology Management Plan (oLEMP) - A Control Document setting out the framework for how Green Infrastructure will be managed throughout the construction and operational phases of the development **[EN010149/APP/7.9]**.

Permissive Paths – Informal paths signed as permissive that the landowner allows the public to use for the operational period of the Proposed Development.

Project Principles – Project level design principles used to guide design related decision making and deliver good design.

Solar Photovoltaic (PV) development – This comprises the Ground Mounted Solar PV generating station, Balance of Solar System (BoSS) and distribution cables, access tracks and ancillary works.

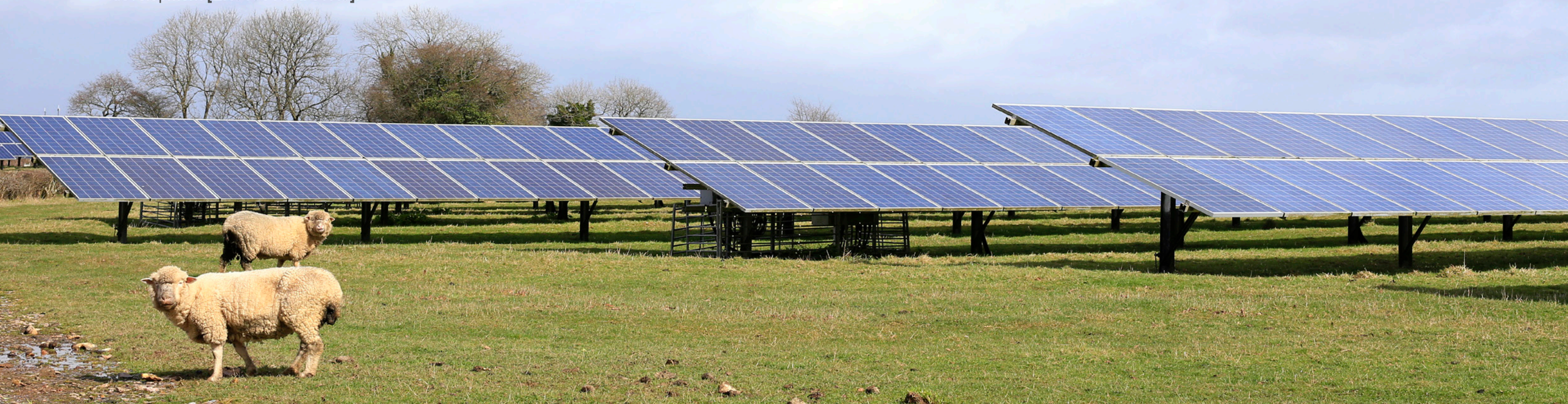
Solar Photovoltaic (PV) modules – Panels comprised of photovoltaic cells beneath a layer of toughened glass that convert sunlight into electrical current.

Springwell Substation – A compound containing electrical equipment to enable connection to the National Grid Navenby Substation.

Strategic Principles – Strategic level design principles, informed by guidance, used to guide the early stages of design and establish Project Principles.

The Proposed Development – a solar photovoltaic (PV) farm and battery storage facility with associated infrastructure that will generate energy for export to the National Grid.

Works Plans – A Control Document which demonstrates the relationship between the location of the Proposed Development and the limits of deviation within which the development and works may be carried out **[EN010149/APP/2.3]**.



Executive Summary

Springwell Solar Farm (the Proposed Development) 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 Proposed Development 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 Design Approach Document (DAD) demonstrates how the Proposed Development would fulfil the requirement for good design, both in terms of good design as a process and good design outcomes. It sets out how good design aspirations and intentions have cascaded through the design process and how these tangibly manifest themselves as good design outcomes that support sustainable development.

Good design has been embedded into the Proposed Development via a clear design framework from the outset of the design process and has included the evolution and application of Project Principles. The Project Principles have set the framework of design and been continually tested and improved in response to further baseline survey work, design evolution, environmental assessment and stakeholder feedback to deliver good design outcomes.

Throughout the design process the Applicant has sought to respond sensitively and transparently to matters raised and develop a sensitive, well-designed proposal that delivers benefits beyond clean, renewable energy.

1. Introduction

1.1 Purpose of Document

1.1.1 This Design Approach Document (DAD) has been prepared on behalf of Springwell Energyfarm Limited ('The Applicant') to support the application for a Development Consent Order (DCO) for the construction, operation and decommissioning of the proposed Springwell Solar Farm (hereinafter referred to as the 'Proposed Development').

1.1.2 The document is prepared pursuant to Regulation 5(2)(q) of The Infrastructure Planning (Applications: Prescribed Forms and Procedures) Regulations 2009 (APFP Regulations) **[Ref 1]** and forms part of a suite of supporting documents for the DCO Application.

1.1.3 The primary purpose of the DAD is to demonstrate how the Proposed Development 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) **[Ref 2]** and the NPS for Renewable Energy Infrastructure (EN-3) (2023) **[Ref 3]**.

1.1.4 This document explains how good design has been embedded into the Proposed Development from the outset of the design process via a clear design framework and how this has provided a shared understanding of desired outcomes for the Proposed Development and informed decision making. It explains the way in which the design has evolved since inception, the rationale for the proposals contained within the DCO application, and the mechanism by which good design would be secured post-consent.

1.1.5 This document also highlights the important role played by consultation and engagement and how this has influenced the layout and design of the Proposed Development.

1.2 Document Structure

1.2.1 This report has been subdivided into the following sections:

Policy Context for Good Design

Provides a summary of the policy and guidance for achieving good design for infrastructure.

Site Context

Provides an overview of the physical, environmental, social and cultural context of the Proposed Development which has informed the design.

Design Approach

Establishes the approach to delivering good design via a clear design framework and the mechanisms by which it will be secured at detailed design.

Design Evolution

Explains the evolution of the design from inception to DCO application.

Proposed Design

Summarises the operational design of the Proposed Development and demonstrates how it has responded to each of the Project Principles.

Conclusion

Provides a summary of the design proposals and how they fulfil the requirement for good design.

1.3 Project Overview / Description

1.3.1 A description of the key components of the Proposed Development, as well as details of how it would be constructed, operated, maintained and decommissioned is provided in **ES Chapter 3: Project Description [EN010149/APP/6.1]**.

1.3.2 The Proposed Development comprises a photovoltaic (PV) electricity generating and battery storage facility with associated infrastructure which would allow for the generation and export of electricity exceeding 50 megawatts (MW).

1.3.3 The location of the Proposed Development is shown in **Figure 1.1** and encompasses approximately 1,280 hectares (ha) of land in North Kesteven, Lincolnshire (hereafter referred to as the 'Site' or 'Order Limits')

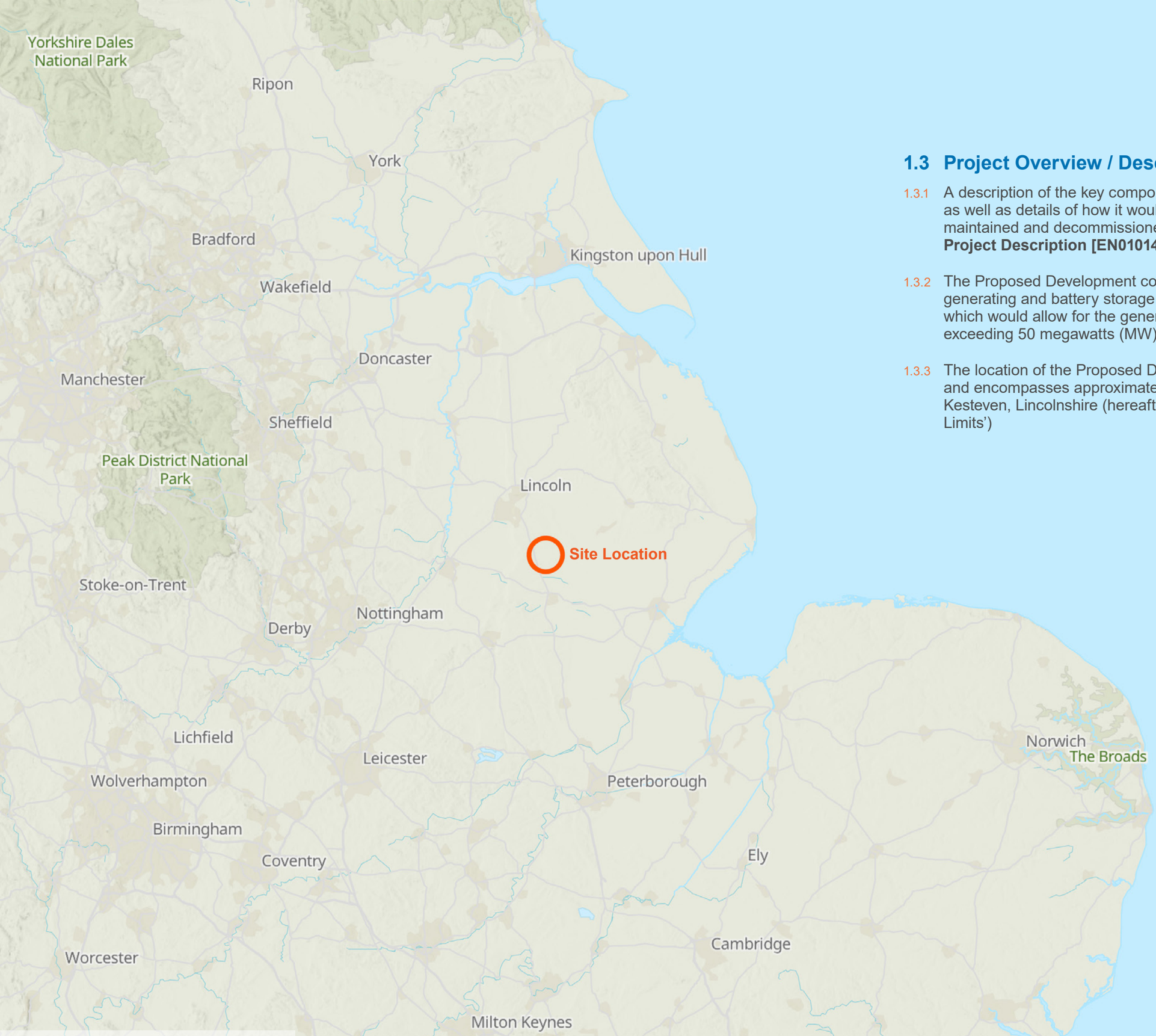


Figure 1.1: Site Location

1.3.4 The main components of the Proposed Development comprise the following:

- Solar PV development including:
  - Ground-mounted Solar PV generating station. The generating station will include Solar PV modules and mounting structures;
  - Balance of Solar System (BoSS), which comprises inverters, transformers, and switchgear;
- 400kV Grid Connection Corridor to connect the Springwell Substation and proposed National Grid Navenby Substation;
- Satellite Collector Compounds comprising switchgear, transformers, ancillary equipment and operation, maintenance, security and welfare units;
- A project substation (the 'Springwell Substation') compound, which will include substation, main collector compound, switching and control equipment, office/control/welfare/ security buildings, storage areas, and provisions for vehicular parking and material laydown;
- Battery Energy Storage System (BESS) compound, including batteries and associated inverters, transformers, switchgear and ancillary equipment and their containers, enclosures, monitoring systems, air conditioning, electrical cables, fire safety infrastructure and operation, maintenance, security and welfare facilities;
- Underground cabling will connect the Solar PV modules and BESS compound to the BoSS, collector compounds, and the Springwell Substation.
- Ancillary infrastructure works, including boundary treatments, security equipment, earthing devices, fencing, lighting, earthworks, surface water management, internal tracks and any other works identified as necessary to enable the development;
- Landscaping, habitat management, biodiversity enhancement and amenity improvements; and
- Works to facilitate vehicular access to the Site.
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- Works to facilitate vehicular access to the Site.

1.3.5 A schematic diagram showing the main elements of the Proposed Development is shown in **Figure 1.2**.

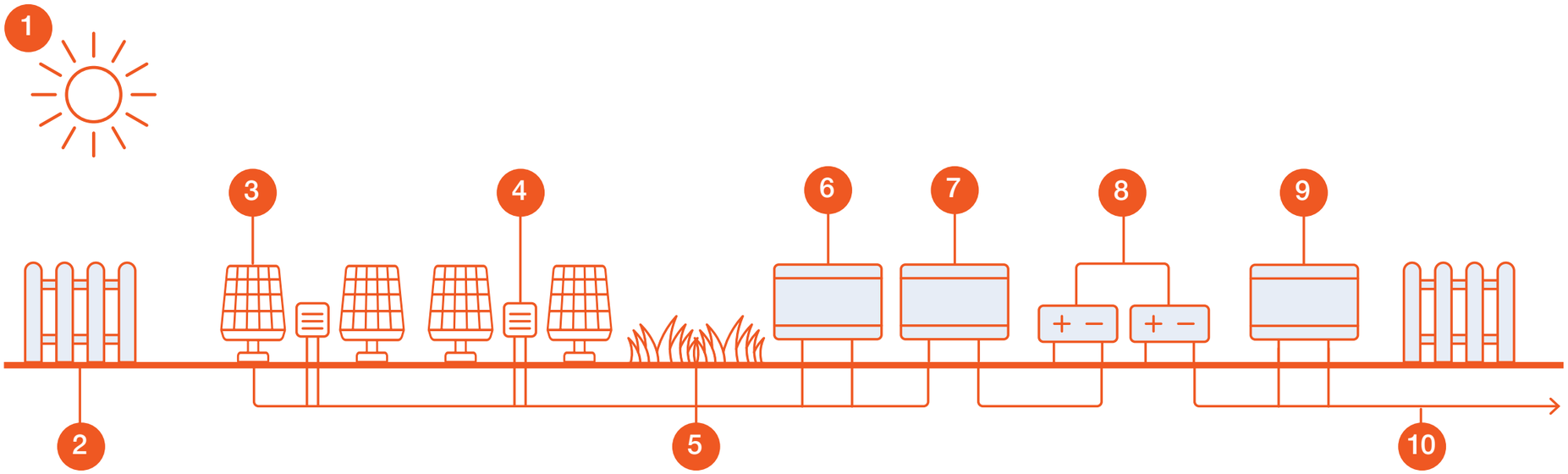


Figure 1.2: Schematic diagram showing the main elements that typically make up a solar farm

Not to scale and for indicative purposes only

Battery storage is important because renewable technologies like wind and solar do not generate electricity at a constant rate - and the times electricity is generated is not always when electricity demand is highest. Batteries store energy for when it is most needed, and is considered by National Grid as a technology that has a key part to play in ensuring homes and businesses can be powered by green energy.

Solar panels don't need direct sunlight to work and can produce power all year round. Even in winter, solar technology is powerful and effective. At one point in February 2022, solar provided more than 20% of the UK's electricity.[1]

1. Solar Energy
2. Fencing
3. Solar Panels
4. Inverters
5. Landscape and Biodiversity Areas
6. Collector Compounds
7. Solar Farm Substation
8. Battery Storage
9. National Grid Substation
10. Cables

[1] Briefing | Fact Checker (solarenergyuk.org)

Section 2

Good Design

2. Good Design

2.1 Policy Context for 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 In England the design of infrastructure projects is the subject of key policy documents and guidance notes, which have been used to help inform the principles of 'good design'. These include NPS EN-1 **[Ref 2]**, EN-3 **[Ref 3]** and the National Infrastructure Commission's (NICs) 'Design Principles for National Infrastructure' report **[Ref 4]**.

2.1.3 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).

2.1.4 Paragraph 4.7.3 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"*.

2.1.5 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"*.

2.1.6 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"*.

2.1.7 EN-3 **[Ref. 3]** also sets expectations on 'good design' and the application of the mitigation hierarchy in relation to renewable energy infrastructure. Section 2.1 states:

2.1.8 *"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)

2.1.9 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."*

2.1.10 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"*.

2.1.11 The NIC's 'Design Principles for National Infrastructure' **[Ref. 4]** 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. These 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.

2.1.12 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. 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."*

2.1.13 Local policy on design is set out within the Central Lincolnshire Local Plan **[Ref. 6]** and in particular Policy S53: Design and Amenity. Policy S53 advocates: *"high quality sustainable design that contributes positively to local character, landscape and townscape, and supports diversity, equality and access for all"* (page 116). The policy is aligned to the National Design Guidance **[Ref. 7]**, and while not specifically relating to renewables, identifies key themes that are applicable to the Proposed Development including context, identity, nature, uses and lifespan.

2.1.14 New advice on good design for Nationally Significant Infrastructure Projects (NSIP) **[Ref 8]** has been issued by the Planning Inspectorate shortly before submission of the DCO Application. The Applicant has undertaken an initial review of the advice and considers that the development of the Proposed Development broadly aligns with it.

2.1.15 Good design has been a fundamental consideration from the outset of the Proposed Development. This DAD demonstrates how good design has been embedded to the Proposed Development via a clear set of project level design principles, how they have provided a shared understanding of desired outcomes for the Proposed Development, provided a framework for decision making, and ultimately driven good design outcomes that would be secured by the **draft Development Consent Order (DCO) [EN010149/ APP/3.1]**.

Section 3

Site Context

3. Site Context

3.1 Site Overview

3.1.1 The Site is located within the administrative boundary of North Kesteven District Council, in the county of Lincolnshire. It is located in close proximity to the settlements of Blankney, Scopwick, Kirby Green, and Ashby de la Launde. The Royal Air Force (RAF) Digby Station is also located adjacent to the Site.

3.1.2 The Site encompasses an area of approximately 1,280ha of land, centred approximately at OS grid reference TF055566, and extends across three distinct land parcels (referred to as ‘Springwell West’, ‘Springwell Central’ and ‘Springwell East’). The Order Limits and three land parcels are presented in **Figure 3.1**.

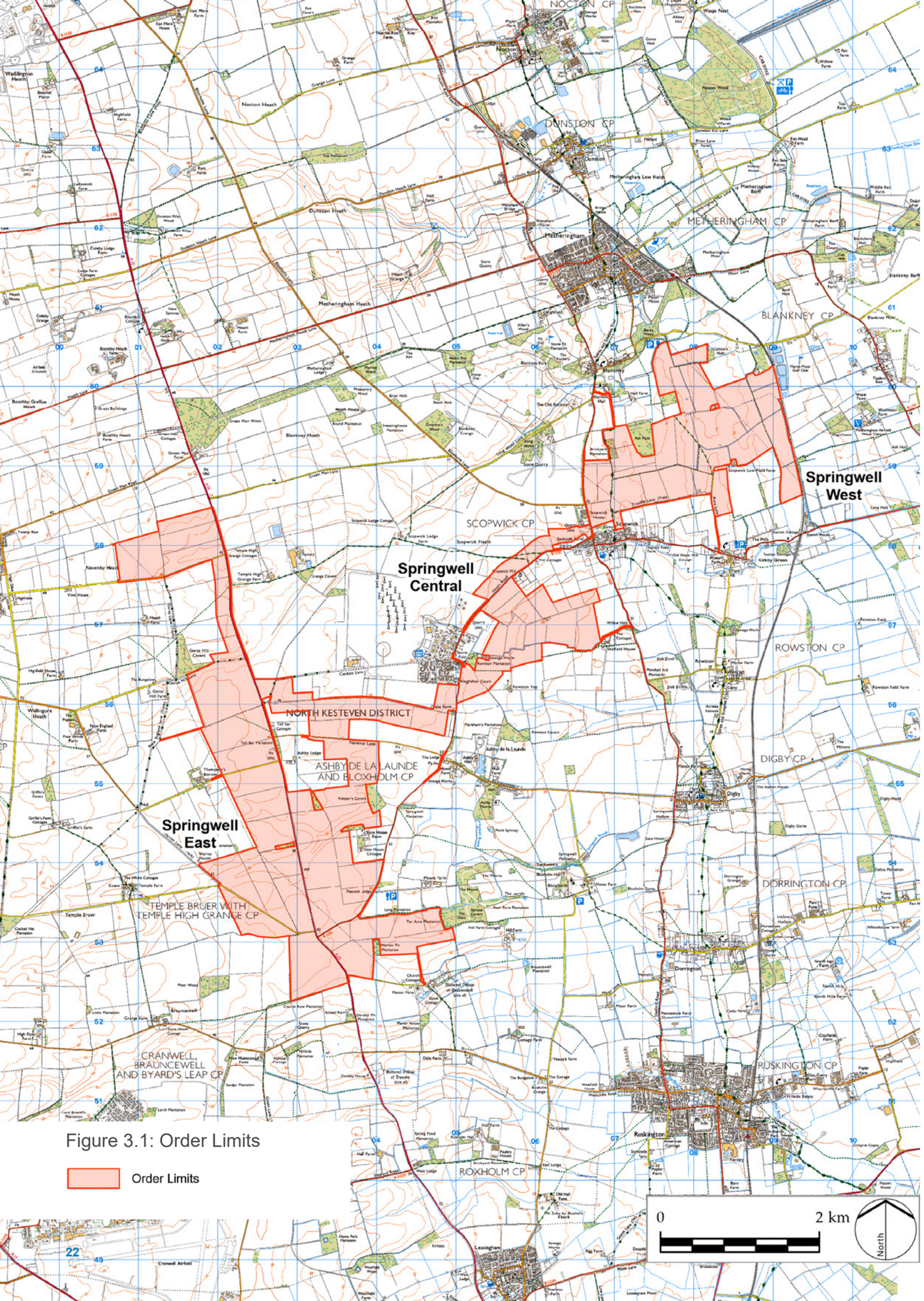


Figure 3.1: Order Limits

3.1.3 The land within the Order Limits predominantly consists of agricultural fields, interspersed with hedgerows, small woodland blocks and farm access tracks. The characteristics of each land parcel, and the features surrounding them, vary and are described below with typical site photographs presented in **Figure 3.2.**

Springwell West:

Springwell West forms the westernmost part of the Site and is bisected by the A15. This parcel is characterised by a relatively large scale, open agricultural landscape. It is located adjacent to the Bloxham Wood Nature Reserve in the south-east and Gorse Covert in the north-west.

Springwell Central:

Springwell Central is located in the centre of the Site, providing connectivity between Springwell West and Springwell East. The parcel lies adjacent to RAF Digby and the B1191 (Heath Road) to the north-west, Ashby de la Launde to the south and relatively open agricultural fields to the south-east.

Springwell East:

Springwell East is bounded by Scopwick to the south, Kirkby Green to the south-east, Blankney to the north, the B1188 (Lincoln Road) to the west and a railway line to the east. The parcel is interspersed with small woodland plantations and hedgerows and has a smaller scale and more intimate character compared to other parcels.

Figure 3.2: Site photographs of each land parcel

3.1.4 The following sections provide a high-level summary of the existing physical, environmental, social and cultural context of the Site where it has informed the design of the Proposed Development. A more detailed description of the baseline environment is provided in the relevant chapters of the **Environmental Statement [EN010149/APP/6.1]**.

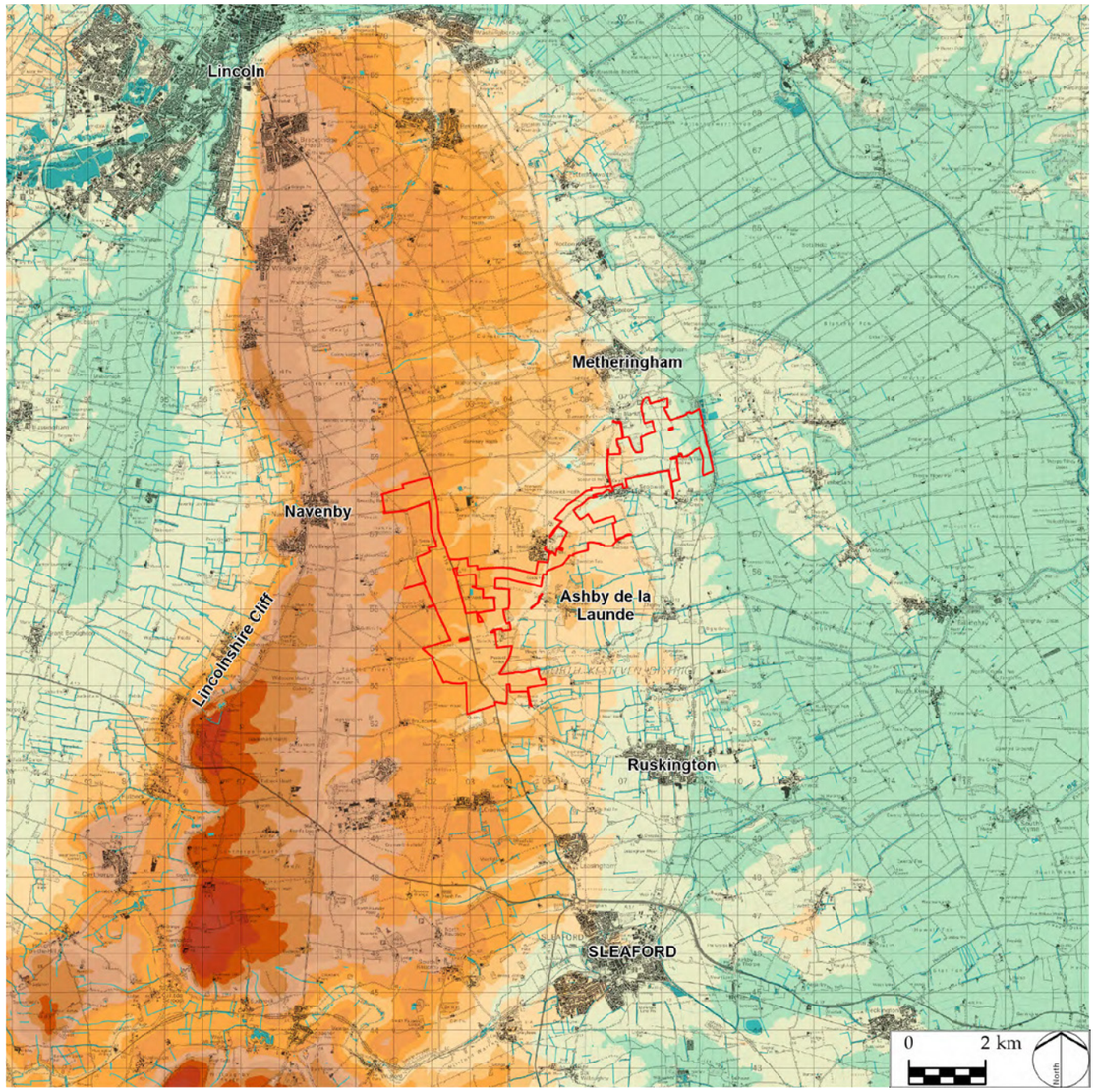


Figure 3.3: Topography

Figure 3.4: Topographical features within the Site: ridge across the A15 (top), ridge south of B1191 (bottom)

3.2 Topography

3.2.1 The topography of the Site and the surrounding area is shown in **Figure 3.3**. The key topographical landform in the wider landscape is the 'Lincolnshire Cliff', a dramatic, north south escarpment running from Grantham in the south to the Humber Estuary in the north. The Site is located on a broad 'plateau' to the east of the Cliff on a dip slope that undulates gently towards the edge of the fens in the east.

3.2.2 The three land parcels (Springwell West, Springwell Central and Springwell East) extend across the plateau in a broadly west-east orientation. The topography of the Site ranges between 60–6m above Ordnance Datum (AOD), with the highest elevation at the north-western boundary of the Site and the lowest elevation at the eastern boundary.

3.2.3 Landform across the plateau is gently undulating. Ridges and dips run across the plateau in an east-west direction following shallow 'dry' valleys. This is particularly apparent when travelling along the A15, which falls and rises with the topography, and to the south of the B1191 (Heath Road) between RAF Digby and Scopwick where there is a gentle ridge to the south of the road (refer to **Figure 3.4**).

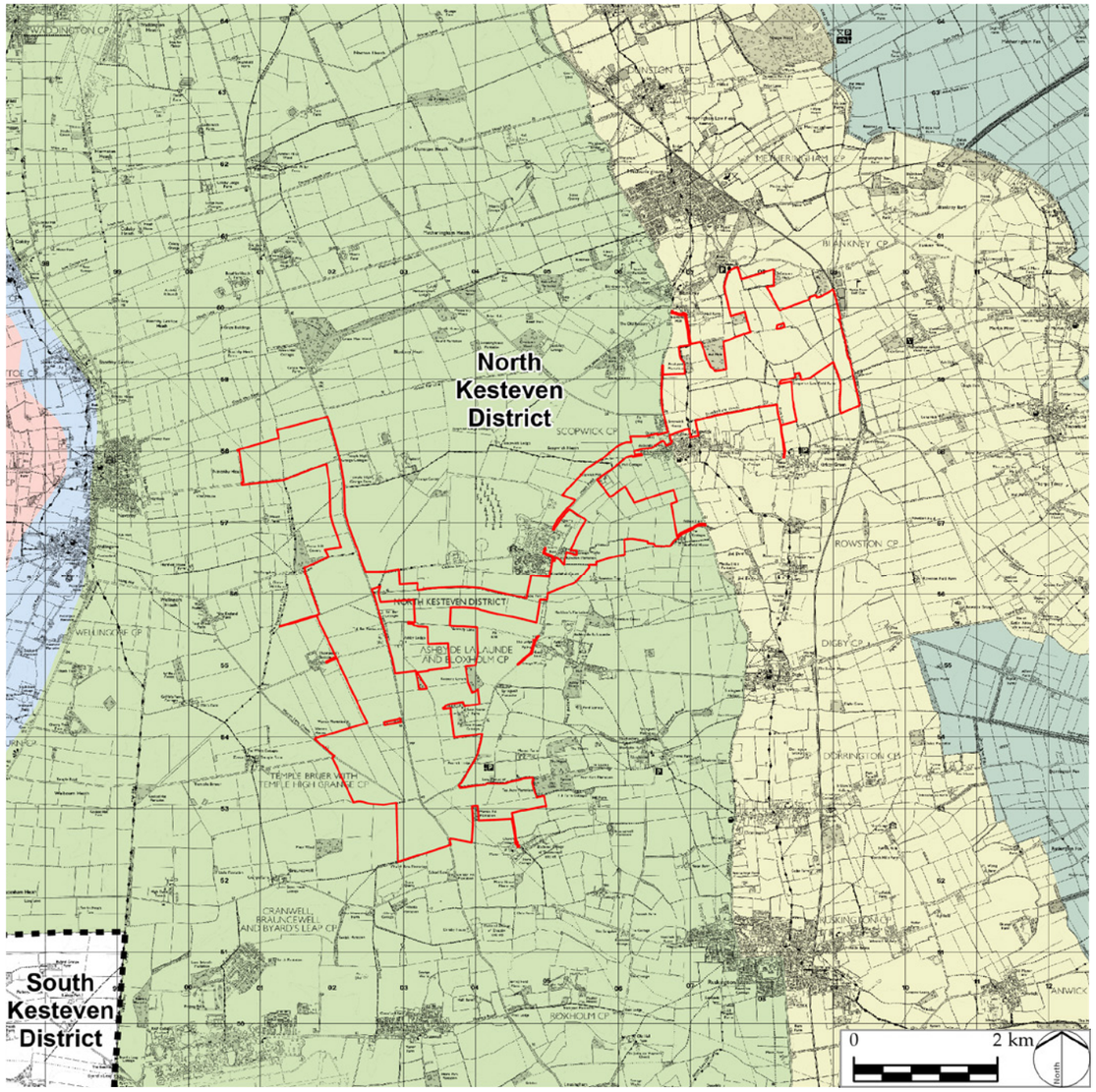


Figure 3.5: Landscape Character Areas

Order Limits

District Boundary

Local Character Area

Central Clays and Gravels

Fenland

Limestone Heath

Lincoln Cliff

Witham Brent Vales

3.3 Landscape

3.3.1 No part of the Site or its immediate surrounding context falls within a statutory designated landscape. The nearest National Landscape (formerly Area of Outstanding Natural Beauty (AONB)) or National Park to the Site is the Lincolnshire Wolds National Landscape which is located more than 20km to the north-east.

3.3.2 There are no Registered Parks and Gardens within 5km of any part of the Site; the nearest is located just over 6.5km to the north-west. There are also no local landscape designations covering any part of the Site. The nearest local designation is the Lincoln Cliff Area of Great Landscape Value (AGLV); an escarpment west of and parallel to the A607 between Grantham and Lincoln located approximately 3km to the west of Springwell West. There is no intervisibility between the Site and the AGLV.

3.3.3 The plateau has a history of use for airfields and RAF airbases (notably RAF Digby) and a number of operational and remnant airfields exist along it. Modern large scale arable farming now sits alongside an older, sparse settlement pattern of small-scale hamlets and isolated farmsteads.

3.3.4 The Site is located in National Character Area 47 - the Southern Lincolnshire Edge **[Ref 9]**. At a district level, the North Kesteven Landscape Character Assessment (NKLCA) **[Ref 10]** records that the full extent of the Site falls within the 'Central Plateau' landscape character type (LCT). The assessment further subdivides the LCTs into Landscape Character Sub-Areas (LCAs). Springwell West and Springwell Central fall within the Limestone Heath LCA, while Springwell East falls within the Central Clays and Gravels LCA (refer to **Figure 3.5**).

3.3.5 There are notable differences in the landscape character across the three identified parcels of land. The landscape within Springwell West and Springwell Central is more open with limited mature vegetation structure whereas the landscape within Springwell East is more enclosed with more dense and established vegetation. Site photographs of each land parcel are shown on **Figure 3.7** and **3.10**.

3.3.6 Key characteristics of the Limestone Heath LCA which are applicable to Springwell West and Springwell Central include:

- *"This is a large landscape character sub-area situated in the centre of the District between the ridge of the Lincoln Cliff and the Central Clays and Gravels to the east.*
- *Its position on the upper reaches of the cliff's dip slope gives it a feeling of relative elevation and exposure.*
- *It is predominantly an empty, open landscape with wide views to the skyline in all directions.*
- *The landform is a gently undulating plateau which dips gently towards the east.*
- *Generally the whole area is dry, with no obvious surface drainage as a consequence of the underlying limestone geology.*
- *Scattered woodland copses pepper the whole of the sub-area, which although relatively small are prominent features because of the openness of the landscape.*

- *Roadside hedgerows are often found with mature trees within.*
- *Limestone dry stone walls are apparent along roadside and some field boundaries, but are generally in poor condition.*
- *Fields are very large and rectilinear. Field boundaries are often absent, broken or delineated by a strip of rough grass or remnant hedgerow or wall.*
- *The soil colour is a striking reddish brown colour with visually prominent stone content giving it a rough texture.*
- *Intensive arable agriculture dominates land use with wheat and root crop common.*
- *The central plateau area is generally unsettled except for isolated farmsteads and occasional ribbon development along the A15. Larger settlements are situated on the edge of the sub-area characterised by having historic cores with limestone buildings but often surrounded by significant levels of 20th Century development.*
- *Utility Infrastructure, which although sparse, makes an impact on the landscape including prominent pylons and the main A15 running north to south.*
- *RAF installations have made a significant impact on the landscape sub-area with several large bases and training centres.*
- *Mineral working is a feature of the sub-area with several large limestone quarries.*
- *Pressures for change on the Plateau predominately relate to minerals operations, decline of field boundaries, particularly walls, and intensive agricultural practices.*
- *Opportunities for landscape strengthening and enhancement mainly lie in field boundary reinstatement, particularly of dry stone walls and for more appropriately designed development on the outskirts of settlements."*

3.3.7 Key characteristics of the Central Clays and Gravels LCA which are applicable to Springwell East include:

- *"Landscape sub-area runs the entire length of the District.*
- *The western edge is defined by the Limestone Heath, whilst the Fens lie to the east along its full extent.*
- *A gently undulating lowland, edged by areas of woodland in the north.*
- *Fields are generally smaller and more varied in shape than on the adjacent limestone plateau with some grazing land as well as arable.*
- *Surface water drains into small streams running from west to east and drainage ditches run by the sides of the fields.*
- *Well kept hedgerows along roadsides and sometimes between fields.*
- *Dark brown coloured soil.*
- *Small copses of broadleaved woodland throughout the sub-area and larger areas of woodland on the eastern edge.*
- *Three distinctive lines of settlements – the limestone villages following the spring lines coming off the limestone plateau; the line of villages on the clay strip; and the villages edging the fens to the south.*
- *Road network orientated with the main roads running from north to south (Lincoln to Sleaford) with smaller roads running west to east.*
- *Pressures for change in the sub-area relate to inappropriate development on the edge of villages and the loss of hedgerows and tree cover.*
- *Opportunities for landscape enhancement mainly rest with increased hedgerow and tree planting and maintaining the character of the villages"*

3.3.8 Further details of the landscape and visual baseline are provided in **ES Volume 1, Chapter 10: Landscape and Visual [EN010149/APP/6.1]**.

Site photograph looking south from the B1191 (Heath Road) towards Springwell Central

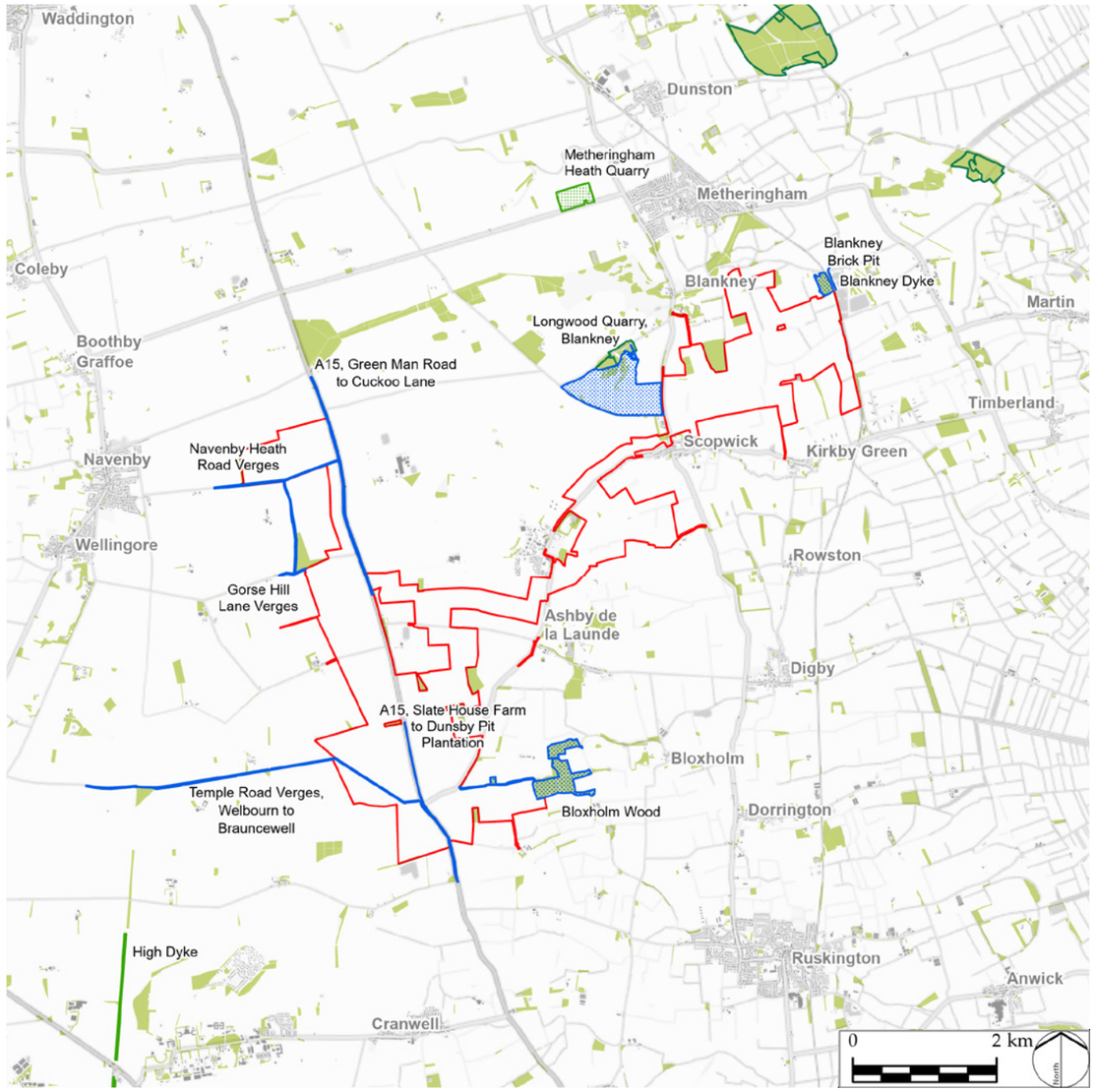


Figure 3.6: Biodiversity features

Order Limits
Woodland
Ancient Woodland
Site of Special Scientic Interest (SSSI)
Local Wildlife Sites

3.4 Biodiversity

3.4.1 The Site is not covered by any statutory ecological designations. 'The Wash' Ramsar/Special Protection Area (SPA)/ Special Area of Conservation (SAC) is the closest European designated site (Natura 2000 site), which is designated for wading birds and estuarine habitats and is located approximately 35km east of the Site. There are no nationally designated nature conservation sites within 2km nor any sites within 10km which are designated for bats and/or birds.

3.4.2 The predominant habitat within the Site is arable farmland, cropped on rotation, with some improved grassland and grass leys, bordered by hedgerows and arable field margins with small blocks of woodland and connecting wet and dry ditches.

3.4.3 There are five non-statutory designated Local Wildlife Sites (LWS) located within the Order Limits as shown in **ES Volume 2, Figure 7.1 Local Wildlife Sites and Areas Shown for Vegetation Removal [EN010149/ APP/6.2] and Figure 3.6**. These are all located within Springwell West and comprise calcareous grassland road verges. They include:

- Temple Road Verges, Welbourn to Brauncewell LWS;
- A15, Slate House Farm to Dunsby Pit Plantation LWS;
- A15, Green Man Road to Cuckoo Lane LWS;
- Navenby Heath Road Verges LWS; and
- Gorse Hill Lane Verges LWS.

3.4.4 Other LWS located adjacent to the Order Limits include:

- Blankney Brick Pit LWS located adjacent to the Order Limits at the north-eastern extent of Springwell East; and
- Bloxham Wood LWS, which is also a Lincolnshire Wildlife Trust reserve, located adjacent to the Order Limits at the southern extent of Springwell West.

3.4.5 No ancient woodland has been identified within the Order Limits. 'The Long Wood' ancient woodland is located adjacent to Longwood Quarry, approximately 500m to the west of the Site (Springwell East). There are several small broadleaved woodland plantations immediately adjacent to the Order Limits. Woodlands have been excluded from the Order Limits except for part of one small broadleaved woodland (Brickyard Plantation), just north of Scopwick.

3.4.6 Hedgerows within the Order Limits vary in structure and species-richness which has been confirmed through field survey. The woody species component is predominantly hawthorn (*Crataegus monogyna*) and blackthorn (*Prunus spinosa*). Also frequently found are field maple (*Acer campestre*), wych elm (*Ulmus glabra*), elder (*Sambucus nigra*), dog rose (*Rosa canina*) and ash (*Fraxinus excelsior*). Occasional species include dogwood (*Cornus sanguinea*), wild cherry (*Prunus avium*), wild privet (*Ligustrum vulgare*) and hazel (*Corylus avellana*). Hedgerow trees, where present, are mostly ash and common oak (*Quercus robur*). Beech (*Fagus sylvaticus*), sycamore (*Acer psueudoplatanus*) and poplar sp. (*Populus sp.*) are occasional. Other hedgerow trees less often found include sweet chestnut (*Castanea sativa*) and lime spp. (*Tilia spp.*).








Figure 3.7: Site photographs of Springwell West (top four) and Springwell Central (bottom four)

3.4.7 The Site is considered of at least County importance for the farmland bird assemblage present as it supports a range of species including skylark (*Alauda arvensis*), corn bunting (*Emberiza calandra*), and grey partridge (*Perdix perdix*), all of which have undergone significant declines in recent decades. Grassland fields and hedgerows are of greatest value to breeding birds, particularly skylark and grey partridge, whilst arable fields are used by yellow wagtails. Barn owl (*Tyto alba*) have been identified nesting adjacent to the Site (north-east edge of Springwell East) and use the Site for foraging.

3.4.8 The Site is also considered of up to District importance for wintering birds based on the diversity of species recorded during surveys, although no qualifying bird species of the Wash SPA/Ramsar were found to be using the Site.

3.4.9 Field survey has confirmed the Order Limits supports a [redacted] considered to be present within Lincolnshire having been positively identified.

3.4.10 The majority of [redacted]

3.4.11 The assemblage of bat species within this geographic region of the UK is considered of up to National importance due to the diversity of [redacted].

3.4.12 Biodiversity Opportunity Mapping Areas for the creation of new habitat are identified within the Site in Springwell West and Springwell Central between the A15 and RAF Digby, and adjacent to the railway line in Springwell East. These were identified through historic 'Biodiversity Opportunity Mapping' by the Greater Lincolnshire Nature Partnership **[Ref 11]** and include the opportunity for calcareous grassland creation within Springwell West.

3.4.13 Desk study and field surveys have been conducted in addition to analysis of existing records and information on designated sites and protected or otherwise notable species within the local area. Further details on the biodiversity baseline and these surveys are provided in **ES Volume 3, Appendices 7.1 – 7.13 [EN010149/APP/6.3]**. Discussion of the baseline and details on the impact assessment and mitigation is in **ES Volume 1, Chapter 7: Biodiversity [EN010149/APP/6.1]**.

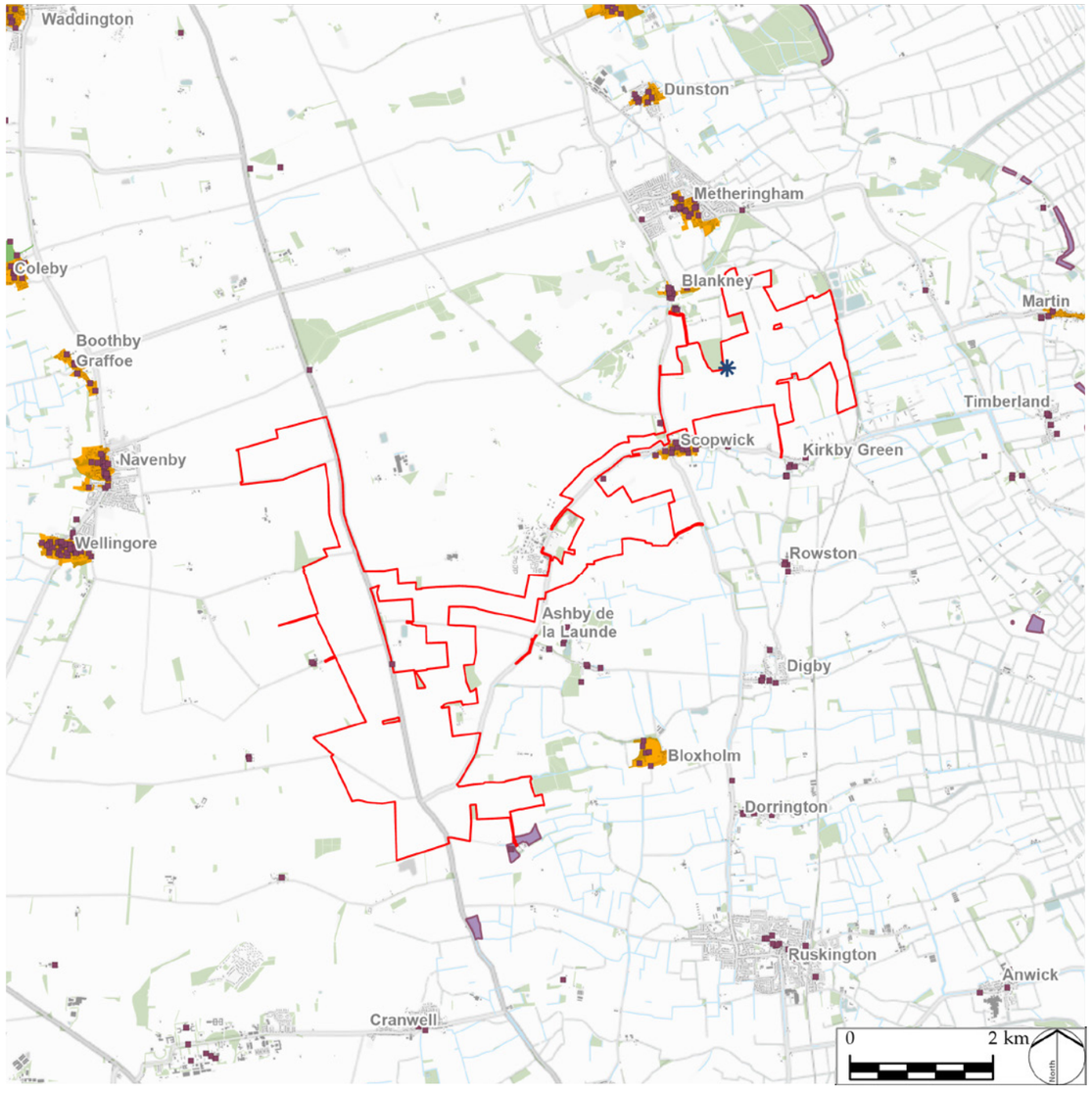


Figure 3.8: Cultural heritage features

Figure 3.9: Church of St Oswald Grade II*, Blankney (top) and Scopwick Mill, Scopwick (bottom)

3.5 Cultural Heritage

3.5.1 There is one Grade II listed building, Mile Post (20m south of Ashby Farm Lodge), located within the Order Limits. There are a number of designated heritage assets within 5km of the Order Limits (refer to **Figure 3.8**), comprising

- 11 Grade I listed buildings;
- 11 Grade II* listed buildings;
- 207 Grade II listed buildings; and
- 17 scheduled monuments including Brauncewell Medieval Village (located approximately 500m to the south of Springwell West).

3.5.2 The Scopwick Conservation Area and Blankney Conservation Area are located directly adjacent to the Order Limits. There are three other Conservation Areas located within 3km of the Order Limits; Bloxham, Metheringham and Martin.

3.5.3 There are no Registered Parks and Gardens within 5km of the Order Limits. There are no Registered Battlefields or World Heritage Sites within 3km of the Order Limits.

3.5.4 In addition, there are two Military Crash sites, which are non-designated heritage assets. These are the Avro Lancaster Crash Site and the Hawker Hurricane Crash Site, located in Field By22 in Springwell East. There are three designated heritage assets, 71 previously recorded non-designated heritage assets and eight non-designated heritage assets within the Site that have been identified during cultural heritage assessment.

Figure 3.10: Site photographs of Springwell East

3.5.5 The Brauncewell medieval village scheduled monument (NHLE 1018397) is partly within the Site at the southern edge of Springwell West.

3.5.6 The Blankney Conservation Area includes a portion around St Oswald's Church that extends south of Oswald's Lane into the Site.

3.5.7 The Grade II listed milepost on the A15 (NHLE1061824) lies within the Site and is of medium importance for its architectural and historic interest. It appears to have been relocated at some point in the past as the listed building description notes that the inscriptions detailing the distances between Sleaford and Lincoln are on the opposite sides of the milepost to the corresponding directions.

3.5.8 With the exception of two World War II era aeroplane crash sites (Avro Lancaster crash site (Lincolnshire County Council HER Ref: MLI25416) and Hawker Hurricane crash site (Lincolnshire County Council HER Ref: MLI25417), the non-designated heritage assets within the Site are considered to be of at most low importance. Full details of the known and potential heritage assets within the Site are presented in **ES Volume 3, Appendix 9.1: Archaeological Desk-Based Assessment and Stage 1 Setting Assessment, Appendix 9.3: Aerial Investigation Report, Appendix 9.4: Geophysical Survey Report** and **Appendix 9.5: Archaeological Trial Trenching Report [EN010149/APP/6.3]**.

3.5.9 The aerial investigation and mapping (**ES Volume 3, Appendix 9.3: Aerial Investigation Report [EN010149/APP/6.3]**) identified two previously unrecorded heritage assets within the Site. These were a possible barrow and an undated square enclosure. The geophysical survey identified a generally low density of archaeological remains within the Site with concentrations of anomalies suggestive of settlement remains in Springwell Central and Springwell East.

3.5.10 All of these heritage assets are shown in **ES Volume 2, Figure 9.2: Heritage assets within the Order Limits [EN010149/APP/6.2]**.

3.5.11 The Site overlaps with the mapped extent of Scopwick Conservation Area, however this is considered to be due to differences in the map scale at which this was digitised as it follows property boundaries for buildings which are not part of the Site.

3.5.12 Further details of the cultural heritage baseline are provided in **ES Volume 1, Chapter 9: Cultural Heritage [EN010149/APP/6.1]** and **ES Volume 3, Appendix 9.1: Archaeological Desk-Based Assessment and Stage 1 Setting Assessment [EN010149/APP/6.3]**.

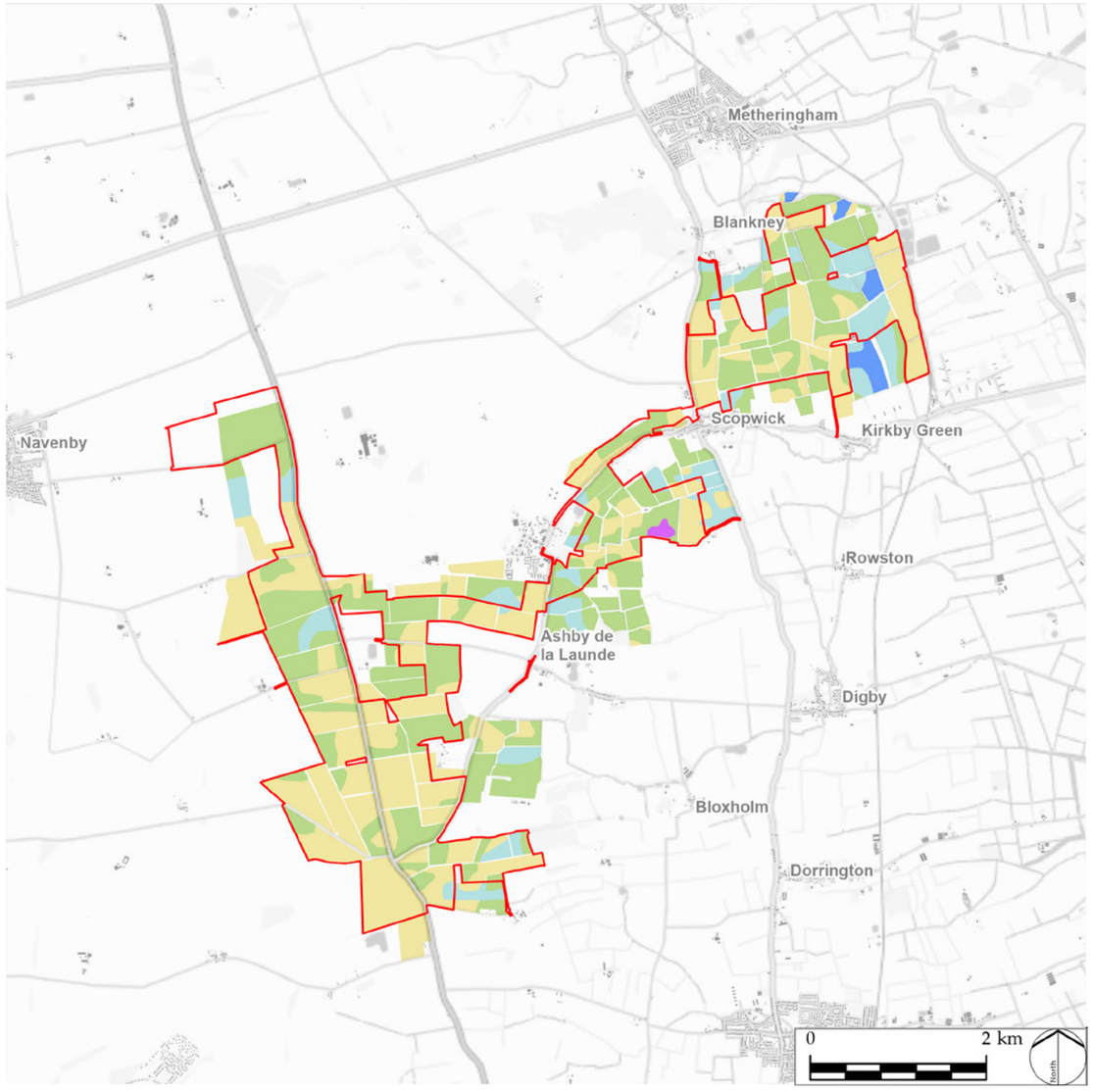


Figure 3.11: Agricultural Land Classification

Order Limits

Agricultural Land Classification (ALC)

Grade 1

Grade 2

Grade 3a

Grade 3b

Grade 4

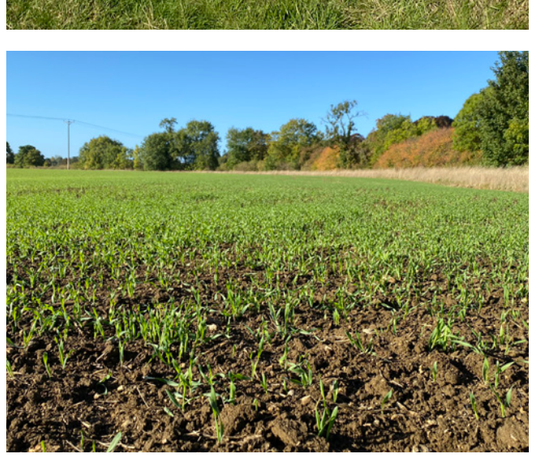


Figure 3.12: Site photographs of arable land

3.6 Agricultural Land

3.6.1 Under EN-1 **[Ref 2]** and Natural England Guidance **[Ref 12]**, Best and Most Versatile Agricultural Land (BMV) is defined as land in Grades 1, 2 and 3a. Poorer quality land is defined as land in Grades 3b, 4 and 5. The percentage of BMV land within Lincolnshire is 71.2%.

3.6.2 An Agricultural Land Classification (ALC) survey of the Site is shown on **Figure 3.11** and shows that the majority of Site is classified as Grade 3a or 3b, with pockets of Grade 1, 2 and 4. The percentage of the Site covered by BMV land is 42.3%.

3.6.3 There are notable differences in the classification of soils across the three land parcels. Springwell East is the only parcel to contain areas of Grade 1 land and also has the greatest area of Grade 2 land. This includes a group of fields which run across the parcel in a north-south orientation and comprise predominantly Grade 1 and 2 land. Springwell West contains the greatest area of Grade 3b (non-BMV) land.

3.6.4 Further details of the land, soils and groundwater baseline are provided in **ES Volume 1, Chapter 11: Land, Soil and Groundwater [EN010149/APP/6.1]**.

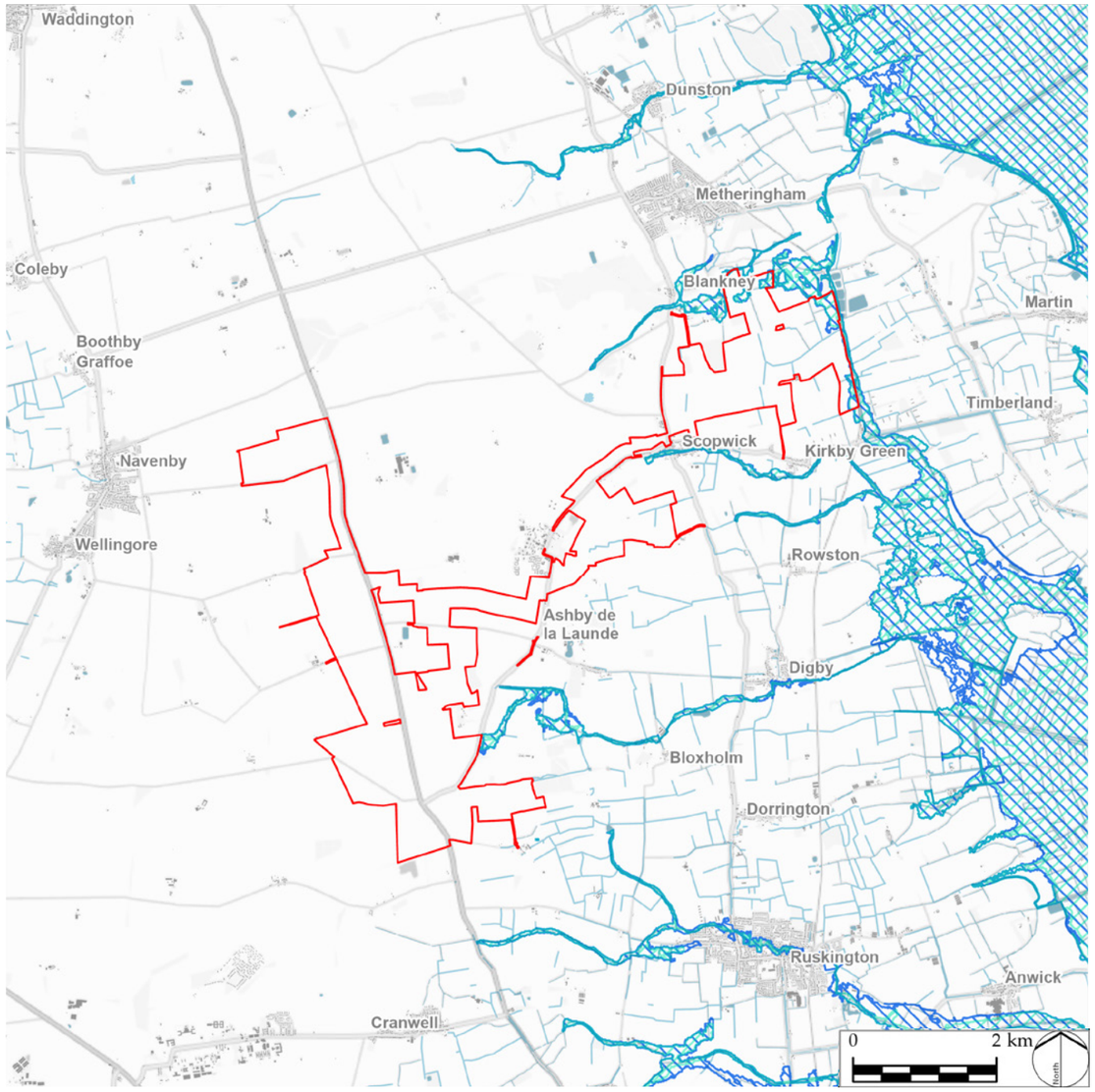


Figure 3.13: Flood zones

Figure 3.14: Site photograph of drainage ditch

3.7 Water Resources

3.7.1 There are two main rivers that are located in close proximity to the Site, Springwell Brook and New Cut Drain, and also several small field drains and drainage ditches which are classified as ordinary watercourses. The upstream main river extent of Springwell Brook is located to the east of Springwell West and flows from Bloxholm in an easterly direction until it reaches Dorrington Dike. New Cut Drain, located south of Springwell East, is located to the west of Kirkby Green. The majority of the Site is predominantly within Flood Zone 1, though some fields, particularly at the north-eastern extent of Springwell East are located in Flood Zone 2 and 3 (refer to **Figure 3.13)**.

3.7.2 The Site largely falls outside of any Source Protection Zone (SPZ), except for a small area to the west of Scopwick. This area falls within a localised inner zone (SPZ 1) which provides protection around a groundwater abstraction source located to the west of Scopwick, adjacent to Springwell Central. There are no outer catchments associated with this SPZ 1. There is also a total catchment zone (SPZ 3) located across the southern extent of Springwell West.

3.7.3 Further details of the water baseline are provided in **ES Volume 1, Chapter 15: Water [EN010149/APP/6.1]**.

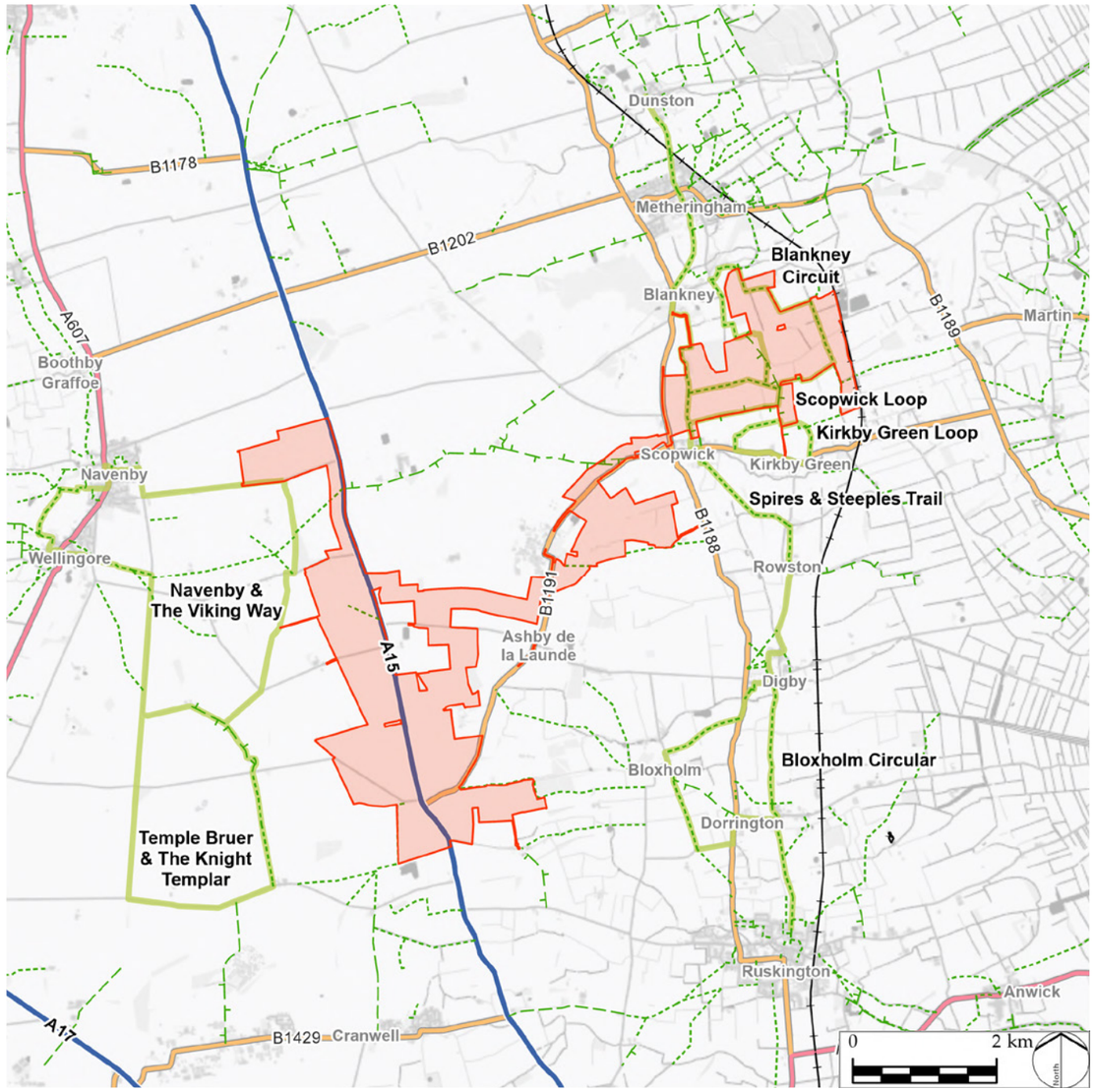


Figure 3.15: Roads and PRoW

Order Limits
Railway Line

Roads
Primary Road
A Road
B Road

Public Rights of Way (PROW)
Bridleway
Byway open to all traffic
Footpath
Restricted Byway
Other routes with Public Access
Stepping Out Routes

Figure 3.16: Site photographs of PRoW and permissive paths

3.8 Access and Recreation

3.8.1 The A15 (Sleaford Road) connects Sleaford to Lincoln and bisects Springwell West on a north-south alignment. The B1191 (Heath Road) connects to the A15 in Springwell West and is an important local road connecting Springwell Central and Springwell East including the local settlements of RAF Digby and Scopwick.

3.8.2 The Peterborough to Lincoln railway is adjacent to the eastern boundary of the Site with the closest stations located at Ruskington to the south and Metheringham to the north of the Site. An improved cycling route between Scopwick and Meatheringham station is identified as a community aspiration within the Scopwick & Kirkby Green Neighbourhood Plan **[Ref 13]**.

3.8.3 There is an extensive network of Public Rights of Way (PRoW) within the Site which link with the surrounding settlements as shown in **Figure 3.15**. The distribution of PRoW varies across the land parcels and there is a notably higher concentration of PRoW in Springwell East, compared to Springwell West and Springwell Central.

3.8.4 The Spires and Steeples Trail (a regionally promoted recreation walk) runs north to south through Springwell East connecting Blankney and Scopwick. In addition, a series of locally promoted ‘Stepping Out Walks’ pass through Springwell East including: The Spires and Steeples Trail, The Scopwick Loop, Around Kirkby Green and The Blankney Circuit. Permissive routes are also present.

3.8.5 Other walking routes in the ‘Stepping Out Walks’ series near to the western edge of the Site include the Navenby and the Viking Way and the Temple Bruer and the Knights Templar.

3.8.6 Bloxholm Woods layby and Nature Reserve Walk are located adjacent to the Order Limits near Springwell West and includes a PRoW through the woodland.

3.8.7 Further details of the access and recreation baseline are provided in **ES Volume 1, Chapter 10: Landscape and Visual**, **Chapter 13: Population** and **Chapter 14: Traffic and Transport [EN010149/APP/6.1]**.

Section 4

Design Approach

4. Design Approach

4.1 Introduction

4.1.1 In accordance with policy requirements, the approach to achieving good design was considered at the outset of the project and a framework for good design was developed by the Applicant.

4.1.2 This section provides an overview of the design framework (illustrated in **Figure 4.1**) and demonstrates how good design aspirations and intentions have cascaded through the project and will be secured as good design outcomes within the detailed design of the Proposed Development.

4.1.3 If DCO consent is given, the detailed design for the Proposed Development would be submitted for approval by the relevant planning authorities post-consent. Securing the detailed design post-consent is necessary to achieve technological and design flexibility for the proposed development because technology is rapidly evolving, such as the output of the individual Solar PV modules and the capacity of the inverters and transformers.

4.1.4 The Proposed Development seeks to allow provisions in the DCO for technological innovation and improvements that may be realised during the procurement and construction phase. This will ensure the Proposed Development can prioritise sustainable techniques and technologies in construction and operation and positively contribute to delivering the UK to net zero by 2050.

4.1.5 Good design outcomes will be secured in the detailed design of the Proposed Development, in accordance with the ES assessment, via Control Documents contained within the **draft DCO [EN010149/APP/3.1]**. Adherence to the Control Documents will secure good design outcomes, uphold the conclusions of the ES and provide for flexibility. A full list of Control Documents is set out in the **Guide to the Application [EN010149/APP/1.2]**.

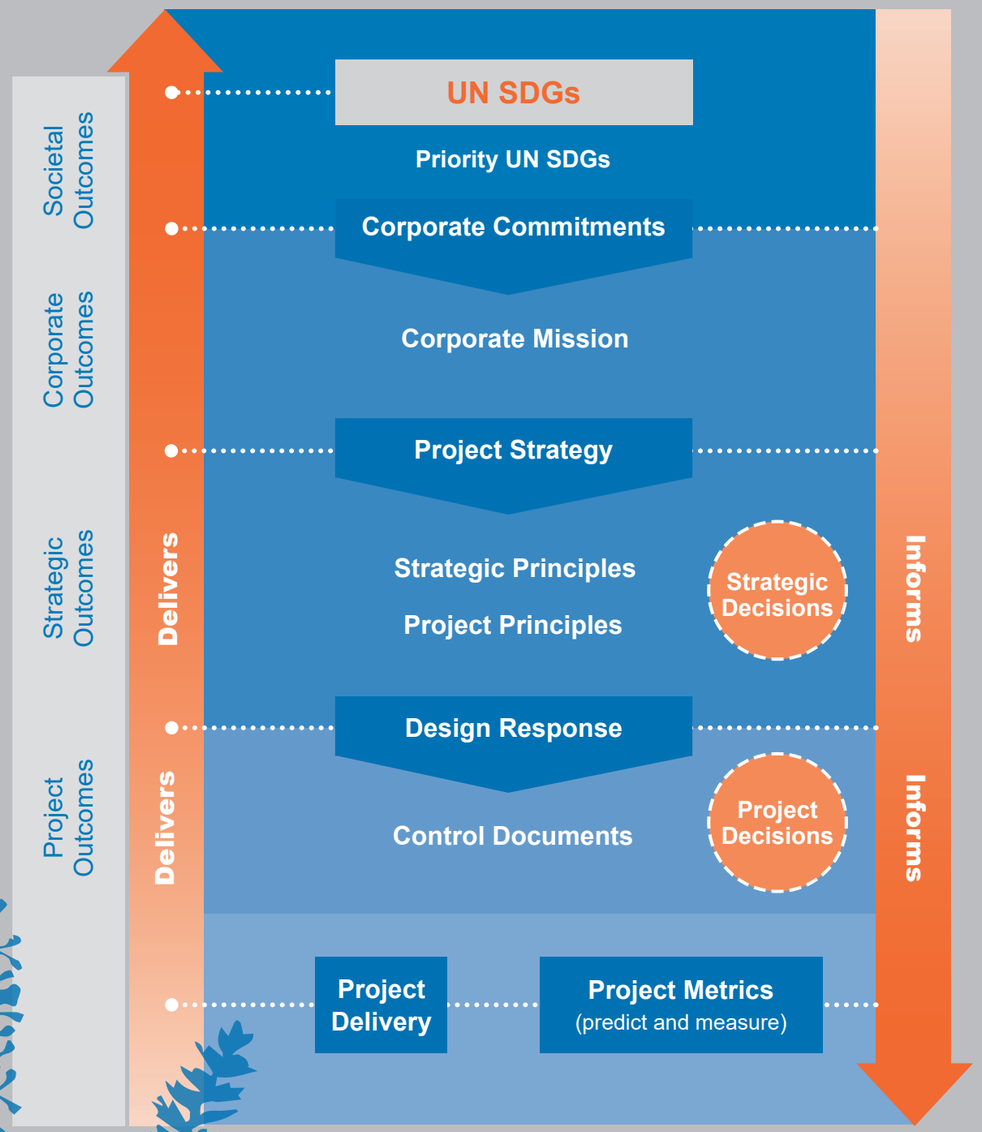


Figure 4.1: Design framework

4.2 Corporate Commitments

4.2.1 The Proposed Development is a joint venture between EDF Renewables UK and Luminous Energy.

4.2.2 EDF Renewables UK is part of the EDF Group which has been a participant of the UN Global Compact **[Ref 14]** since 2001, a voluntary initiative based on commitments by business leaders to implement sustainability and advance sustainable development principles and take steps to support the United Nations (UN) Sustainable Development Goals (SDGs) **[Ref 15]**. As a result, the EDF Group and its companies has a comprehensive foundation of sustainable development commitments that flow to its activities. This includes Springwell Energyfarm Limited (the Applicant).

4.2.3 In accordance with EDF Renewables UK's mission statement that 'sustainable development underpins all activities' in relation to its DCO scaled solar projects, the Applicant has developed a design framework that seeks to achieve a genuine and robust connection between the Proposed Development and the achievement of outcomes that support the delivery of the UN SDGs.

4.3 Strategic Principles

4.3.1 The Applicant adopted 10 Strategic Principles to guide the design of the Proposed Development at the early stages of the project. The Strategic Principles were developed by EDF Renewables UK and are informed by the UN SDGs and NIC guidance. They are intended to bring multiple disciplines together through a common set of principles to deliver sustainable development outcomes. Each Strategic Principle is mapped to the UN SDGs and includes a series of actions that all projects are expected to comply with. They are:

- Design places that support and enhance local communities.
- Lead with the landscape.
- Increase biodiversity appropriate to the landscape character and connect nature.
- Make efficient use of the land, touch it lightly.
- Provide new ways to enjoy the countryside that go beyond the lifetime of the scheme.
- Improve economic resilience through education and by boosting the UK supply chain.
- Manage water, improve quality, reduce pollution.
- Support agricultural productivity.
- Build resilience in a changing climate.
- Ensure responsible construction, ongoing maintenance and decommissioning.

4.4 Project Principles

4.4.1 In accordance with the criteria for good design set out in EN-1 (refer to Section 2), project level design principles (hereby referred to as 'Project Principles') were subsequently developed by the Applicant to facilitate the practical application of the Strategic Principles at the project level.

4.4.2 The Project Principles use the Strategic Principles as a framework and are based on an understanding of the Proposed Development's local context, the people it would affect, and the potential benefits and outcomes it can deliver. The Project Principles are used to drive design related decision making throughout the lifecycle of the Proposed Development and are continually tested and improved in response to further baseline survey work, design evolution, environmental assessment and stakeholder feedback to secure the best outcomes at detailed design.

4.4.3 Development of the Project Principles has included engagement with several statutory consultees including North Kesteven District Council, Lincolnshire County Council, Natural England, Historic England, Lincolnshire Wildlife Trust and the Environment Agency.

4.4.4 Future information on how the Project Principles have shaped the design of the Proposed Development is provided in **Sections 5 (Design Evolution)** and **Section 6 (Proposed Development**).

4.4.5 The Project Principles for the Proposed Development are set out on the following pages under each of the Strategic Principles.

Strategic Design Principles

Design places that support and enhance local communities

Improve economic resilience through education and by boosting the UK supply chain

Lead with the landscape

Manage water, improve quality, reduce pollution

Increase biodiversity appropriate to the landscape character and connect nature

Support agricultural productivity

Make efficient use of the land, touch it lightly

Build resilience in a changing climate

Provide new ways to enjoy the countryside that go beyond the lifetime of the scheme

Ensure responsible construction, ongoing maintenance and decommissioning

* Each of the Strategic Principles has been mapped against the relevant UN SDGs as indicated by the square symbols under each principle.

Project Principles 1.1 - 1.5

Design places that support and enhance local communities

1.1: Engage openly, transparently and meaningfully with stakeholders taking their feedback into account and making use of local knowledge to improve the Proposed Development.

1.2: Provide appropriate offsets to local settlements and dwellings on a case-by-case basis, respecting their individual amenity.

1.3: Consider sequential views and the experience of people using Heath Road and other local roads.

1.4: Work with Blankney Estates and other landowners to secure the long-term management of both the agricultural landscape and benefits provided by the Proposed Development.

1.5: Identify opportunities for wider community benefits in consultation with local stakeholders.

Project Principles 2.1 - 2.5

Lead with the landscape

2.1: Retain existing vegetation wherever reasonably possible to retain the fabric of the Site and aid assimilation of development into its context.

2.2: Design the Proposed Development to respond to the distinctive and unique local character of the site, informed by relevant local studies such as the North Kesteven North Kesteven Landscape Character Assessment.

2.3: Maintain the rural separation between the villages of Ashby de la Launde, RAF Digby, Scopwick, Kirkby Green and Blankney.

2.4: Conserve the significance of heritage assets including Scopwick Mill and Ashby Walled Gardens.

2.5: Protect the setting of the Scopwick and Blankney Conservation Areas.

Project Principles 3.1 - 3.6

Increase biodiversity appropriate to the landscape character and connect nature

3.1: Extend and enhance existing local wildlife sites and priority habitats, including the creation of calcareous grassland adjacent to the A15.

3.2: Create a mosaic of habitats, such as new grassland and arable margins, to support farmland birds such as skylark and grey partridge and species such as brown hare.

3.3: Use locally native species wherever possible to create new habitats, increase the number of pollinator species and create food sources for birds such as skylark and yellow hammer during winter months.

3.4: Use land under and between Solar PV modules to deliver biodiversity benefit for pollinators and farmland birds.

3.5: Establish new planting and landforms at the earliest practicable opportunity.

3.6: Deliver a substantial Biodiversity Net Gain beyond the minimum of 10%.

Project Principles 4.1 - 4.5

Make efficient use of the land, touch it lightly

4.1: Optimise generation and export capacity of the Proposed Development within the constraints of the Site to make the most efficient use of the land and available grid connection.

4.2: Internal access tracks and cable routes will use existing tracks, crossings and / or gaps in the hedgerows wherever practicable.

4.3: The grid connection route should comprise below ground cables – cabling routes will run alongside access tracks as much as possible to avoid wider excavations.

4.4: Fences will be designed to integrate with the local environment, allow for the movement of wildlife and meet the functional requirements of the Proposed Development.

4.5: Minimise the use of concrete and foundations where practicable.

Project Principles 5.1 - 5.4

Provide new ways to enjoy the countryside that go beyond the lifetime of the scheme

5.1: Retain all PRoW in their existing alignment in the long term.

5.2: Protect the amenity of the Spires and Steeples Trail, avoiding any Solar PV development between the route and the B1188.

5.3: Consider sequential views and the experience of people using the Stepping Out Walks and other local footpaths.

5.4: Enhance the footpath and cycle network by providing new and improved routes to increase connectivity and link local settlements such as RAF Digby, Scopwick and Blankney.

Project Principles 6.1 - 6.2

Improve economic resilience through education and by boosting the UK supply chain

6.1: Foster innovation and extend supply chain to leave a lasting legacy value for Lincolnshire and the UK.

6.2: Provide education and interpretation of the Proposed Development and the Site.

Project Principles 7.1 - 7.2

Manage water, improve quality, reduce pollution

7.1: Slow the flow of water within the Site to improve flood resilience where practicable.

7.2: Apart from Solar PV modules, no built structures (central inverters, substation and collector compounds) will be located within Flood Zones 2 or 3. Solar PV modules will be above the maximum flood height level.

Project Principles 8.1 - 8.3

Support agricultural productivity

8.1: Fields comprising solely of Grade 1 or 2 land within the Site will remain available for arable production.

8.2: Prioritise the use of BMV land for arable production where practicable.

8.3: Prioritise the use on non-BMV land for habitat creation where practicable.

Project Principle 9.1

Build resilience in a changing climate

9.1: Design for resilience and adaptation to future climate change.

Project Principles 10.1 - 10.3

Ensure responsible construction, ongoing maintenance and decommissioning

10.1: Behave as a considerate neighbour through both construction, operation and decommissioning.

10.2: Provide clear lines of communication between the developer and the local community.

10.3: Prioritise sustainable resource management and techniques and minimise carbon emissions throughout the lifecycle of the Proposed Development.

4.5 Design Commitments

4.5.1 Design Commitments have been developed to support the practical application of the Project Principles at detailed design and are secured via requirement in the **draft DCO [EN010149/APP/3.1]**.

4.5.2 Design Commitments are needed to secure elements of the design which are not covered by other Control Documents and include commitments relating to the size, type and colour of elements of the Proposed Development. A full list of commitments is set out in the **Design Commitments [EN010149/APP/7.4]**.

Section 5

Design Evolution

5. Design Evolution

5.1 Introduction

5.1.1 This chapter summarises the design evolution of the Proposed Development and how the extent of the Order Limits and area proposed for development has evolved and reduced through the design process.

5.1.2 It explains how the spatial layout of the Proposed Development has been shaped by the Project Principles and has responded to the environmental assessment process, consultation feedback and engagement with stakeholders via an iterative design process.

5.1.3 The design evolution described within this document specifically relates to the operational phase of the Proposed Development and describes the evolution of the Concept and Illustrative Masterplan presented at each stage of design. Three distinct stages of design are identified (refer to **Figure 5.1**):

- **Design Stage 1:** The initial stage of design following the identification of the Site and the Order Limits. Early plans and proposals showing the Stage 1 design, including a Concept Masterplan, were published in January – March 2023 as part of the Non-Statutory (Phase One) Consultation.

- **Design Stage 2:** This stage of design was undertaken following the Non-Statutory (Phase One) Consultation to take account of the consultation feedback and the emerging results from ongoing environmental surveys. Updated plans and proposals showing the Stage 2 design, including an Illustrative Masterplan, were published in January – February 2024 as part of a Statutory (Phase Two) Consultation and carried out in accordance with a Statement of Community Consultation (“SoCC”).

- **Design Stage 3:** This stage of the design was undertaken following the Statutory (Phase Two) Consultation and targeted consultation held in July – August 2024 to take account of the consultation feedback, ongoing engagement and the outcomes of further environmental assessments. Updated plans and proposals showing the Stage 3 design form the basis of the DCO Application.

Design Evolution

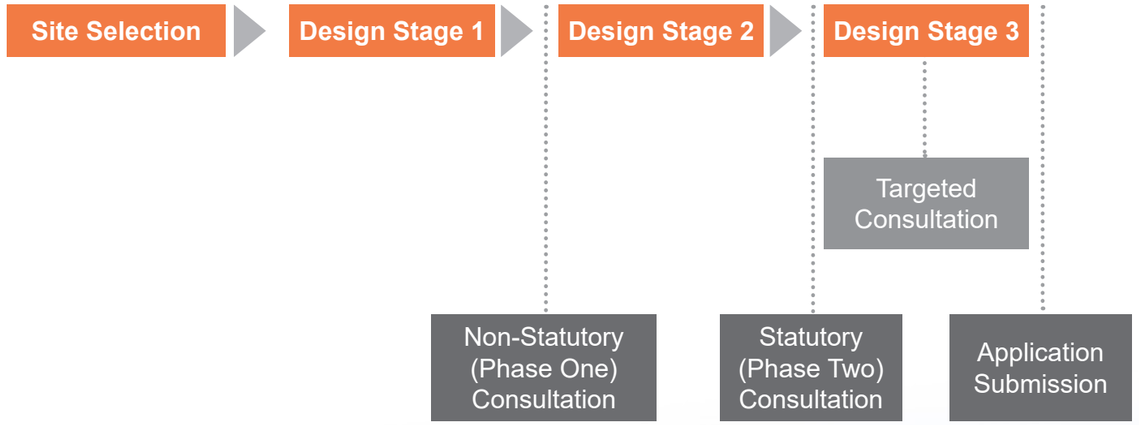
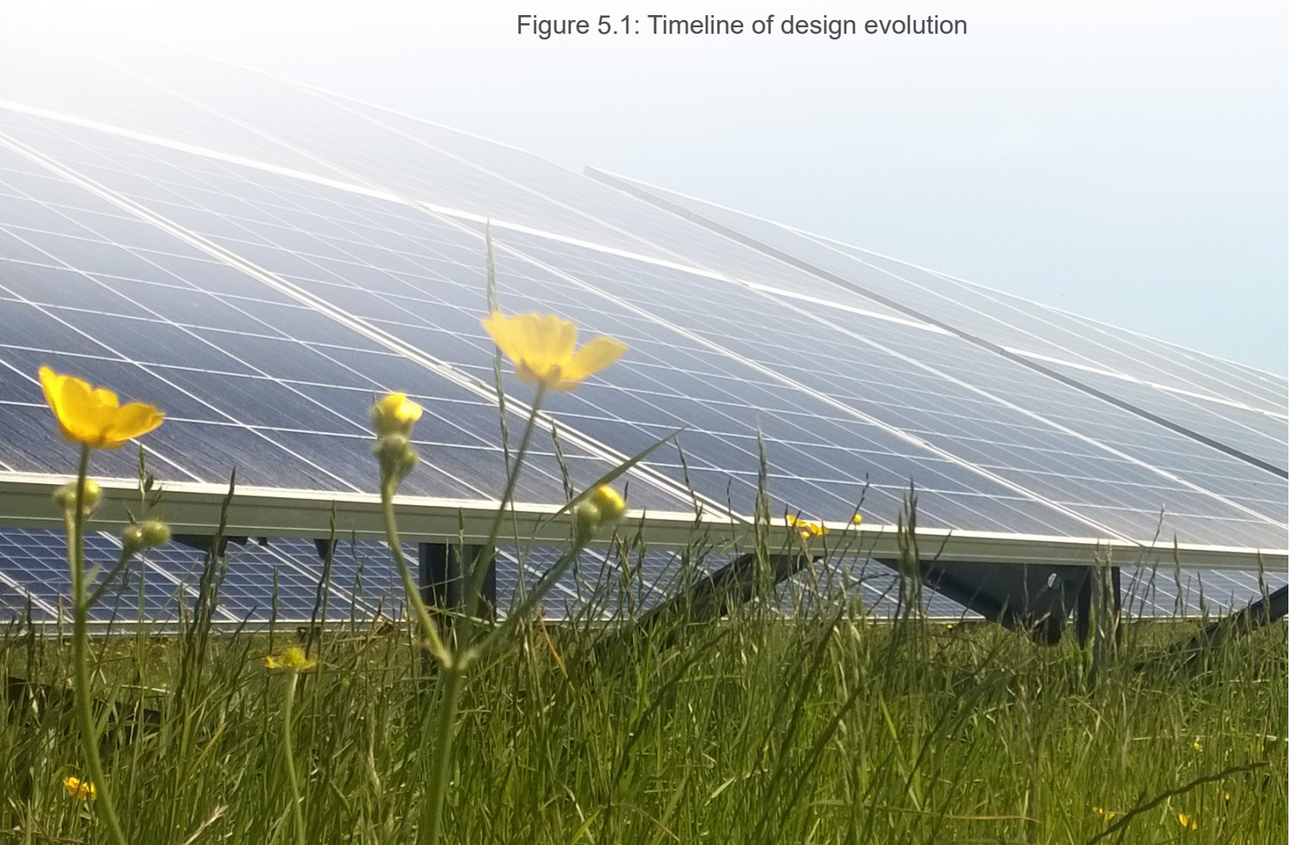


Figure 5.1: Timeline of design evolution



5.1.4 Further information on the reasonable alternatives that have been considered by the Applicant for the Proposed Development, including the initial selection of the Order Limits and the development of the design is provided in **ES Volume 1, Chapter 4: Reasonable Alternatives Considered [EN010149/APP/6.1]**.

5.1.5 It should be noted that Chapter 4 describes the design of the Proposed Development in relation to the maximum parameters that were assessed, whereas the DAD describes the Proposed Development in relation to the Concept and Illustrative Masterplans that was presented at consultation. The purpose of Concept and Illustrative Masterplans was to demonstrates how the Proposed Development could be carried out within the constraints of the assessment parameters, while also considering other opportunities to deliver against the Project Principles. This may result in some variation between the design described in Chapter 4 and the DAD at Stage 1 and 2.

5.1.6 Further information on the consultation process and how it has informed the Proposed Development is provided in the **Consultation Report [EN010149/APP/5.1]**.

5.2 Site Selection

5.2.1 The Applicant undertook a systematic process to determine suitable sites for the Proposed Development which was framed at a macro level by principles of good design. This included consideration of a range of technical, environmental and economic factors based on the site selection principles set out in EN-3. These are set out in the **Planning Statement, Appendix 1: Site Selection Report [EN010149/APP/7.2]** together with a summary of the Proposed Development's approach to them. A summary of the key reasons why the Site was selected, and how it has been informed by considerations of good design, is provided below. The Site:

- Has a grid connection offer which will see energy transported to the national transmission network by 2030;
- Lies within an area of suitable irradiance and favourable topography;
- Includes a proportion of BMV land which is characteristic of the predominating mix in the general locality and less than the Lincolnshire average;
- Has sufficient land to enable the grid connection offer to be maximised while maintaining sufficient offsets to sensitive residential receptors;
- Is located away from key environmental and cultural heritage related designations;
- Is on land which is available and may be voluntarily acquired with a single landowner enabling efficiencies in delivery; and
- Is accessible from the road network and has suitable access to land not immediately adjacent the strategic road network.

5.3 Design Stage 1

5.3.1 Following the initial site selection by the Applicant, the Order Limits and its surrounding context was subject to a preliminary assessment. The purpose of the assessment was to identify the opportunities and constraints of the Site, develop draft Project Principles and identify potential land parcels to accommodate the Proposed Development.

5.3.2 The assessment, which included site visits and desktop analysis, was based on an interdisciplinary approach to design and included consideration of environmental, social and economic factors. The analysis was undertaken at a range of scales and included consideration of areas outside the initial Order Limits to capture the full range of potential opportunities and constraints.

5.3.3 At the end of Stage 1, a Concept Masterplan was developed based on the findings of the preliminary assessment to show the potential areas for Solar PV development, Springwell Substation, BESS, and preferred areas for mitigation and enhancement. The Concept Masterplan is shown in **Figure 5.2** and was presented at the Non-Statutory (Phase One) Consultation. The draft Order Limits shown on the concept masterplan equate to 1,702ha (refer to **Figure 5.3**).

Figure 5.2: Concept Masterplan presented at Non-Statutory (Phase One) Consultation

Order Limits

Existing powerlines and pylons

Existing Public Right of Way

Existing woodland

Existing hedgerows and trees

Potential area for Solar PV development

Potential area for Solar PV development, Springwell substation and/or BESS

Potential area for mitigation, enhancement and/ or retained agricultural land

Potential new permissive footpath

5.3.4 A summary of the design rationale for the masterplan is provided below with reference to the relevant Project Principles that have guided the design.

All Parcels

- All existing woodlands and hedgerows within the Order Limits were identified for retention (**Principle 2.1**).
- All existing PRoW within the Order Limits were retained ion their existing alignment with 15m offsets provided to Solar PV development on either side (**Principle 5.1, 5.2 and 5.3**).

Springwell West

- Springwell West was identified as the preferred location for the Springwell Substation and BESS for a variety of reasons including:
  - Close proximity to the existing National Grid overhead transmission line (**Principle 4.1**).
  - Close proximity to the A15 to facilitate access and avoid impact on the local road network (**Principle 1.3**).
  - The scale of the landscape, which is larger and less intimate than Springwell Central and Springwell East, and therefore more suited to large scale infrastructure (**Principle 2.2**).
  - The presence of existing infrastructure including prominent pylons (**Principle 2.2**).
  - Relatively few sensitive visual receptors compared to Springwell Central and Springwell East (**Principles 1.2, 1.3 and 2.2**).
  - Notably less PRoW compared to Springwell Central and Springwell East (**Principle 5.1 and 5.3**).
- Potential land parcels for accommodating Springwell Substation and BESS were identified in Springwell West based on topography and screening from existing woodlands or tree belts that may help to reduce the landscape and visual impact of these elements (**Principle 2.2**).
- Solar PV development was discounted from land immediately to the north of Brauncewell village to provide an offset (approx. 650m) and reduce the potential impacts on the setting of Brauncewell Medieval village scheduled monument and line of sight to the Grade II listed Brauncewell Church (**Principle 1.2 and 2.4**).
- Solar PV development was offset from either side of the A15 by 25m to reduce potential effects on road users and provide opportunities to conserve and enhance existing LWS along the road verges (**Principles 1.3 and 3.1**).
- A break in Solar PV development was provided at the junction of the A15 and B1191 (Heath Road) to reduce potential effects on road users where vehicle speeds are slower (**Principle 1.3 and 2.2**).
- North of Slate House Farm, Solar PV development was offset from either side of the B1191 (Heath Road) to reduce the potential impacts on local road users and residential properties (**Principles 1.2 and 1.3**).

Figure 5.3: Draft Order Limits presented at Non-Statutory (Phase One) Consultation

- Solar PV development was offset from Ashby Lodge and either side of Navenby Lane to reduce the potential impacts on residential properties and local road users (**Principles 1.2 and 1.3**).
- South of Long Plantation, Solar PV development was offset by 25m from existing woodland to reduce the potential effects on recreational users of Bloxholm Woods Nature Reserve and provide biodiversity benefit (**Principles 5.3 and 3.1**).
- Potential access locations to Springwell West were identified on the B1191 (Heath Road), Temple Road and Navenby Lane to facilitate access from the A15 and reduce the potential impact on local settlements (**Principle 1.2 and 1.3**).
- Preferred areas for mitigation were identified on land to the south of RAF Digby to align with Biodiversity Opportunity Areas (**Principles 3.1 and 3.2**).
- Potential new permissive footpaths were identified to enhance the PRoW network including a link across the A15 and along the western boundary of Springwell West (**Principles 1.5 and 5.4**).

Springwell Central

- Solar PV development was discounted from land to the south of Scopwick to reduce the potential impacts on the setting of the village, residential properties and the Scopwick Conservation Area (**Principles 1.2 and 2.5**).
- Solar PV development was offset from either side of the B1191 (Heath Road), between Ashby de la Launde and Scopwick. This included discounting Solar PV development from all land to the north of the B1191 (Heath Road) between RAF Digby and Scopwick. This was designed to reduce potential impacts on local settlements, residential properties, users of local roads and footpaths, Scopwick Mill, and help maintain a sense of rural separation between villages (**Principles 1.2,1.3, 2.3, 2.4 and 5.3**).
- Solar PV development was offset by 30m to the west of the B1188 (Lincoln Road) to reduce the potential impacts on local road users (**Principle 1.2**).
- Potential access to Springwell Central was shown to the south of RAF Digby on the B1191 (Heath Road) to facilitate access from the A15 and reduce potential impacts on local settlements (**Principle 1.2 and 1.3**).
- Potential new permissive footpaths were identified to enhance the PRoW network including a link between RAF Digby and Scopwick (**Principles 1.5 and 5.4**).

Springwell East

- Solar PV development was discounted from land immediately south of Blankney to reduce the potential impacts on the setting of the village, the Blankney Conservation Area, and a section of the Spires and Steeples Trail (**Principles 1.2, 2.5 and 5.2**).
- Solar PV development was discounted from land directly north of Scopwick. This included no Solar PV development on land to the south of Trundle Lane. This was designed to reduce potential impacts on the setting of Scopwick, the Scopwick Conservation Area, residential properties, Scopwick Cemetery, communal open spaces, and local PRoW including a section of the Spires and Steeples Trail (**Principles 1.2, 2.5 and 5.2**).
- No Solar PV development was proposed in fields immediately north of Kirkby Green to reduce potential impacts on the setting of the village, residential dwellings and local PRoW (**Principle 1.2 and 5.3)**.
- Solar PV development was offset by approximately 100m to the east of the Spires and Steeples Trail to reduce potential impacts on users of the route (**Principle 5.2**).
- Potential access to Springwell East was shown to the north of Scopwick on the B1188 (Lincoln Road) to reduce potential impacts on Scopwick and utilise an existing access (**Principle 1.2 and 2.1**).
- Breaks in Solar PV development were provided to reduce impacts on the Stepping Out Walks and local footpaths (**Principles 5.1 & 5.3**).
- No Solar PV development was proposed on ecologically important habitats to the north of Springwell East (**Principle 3.2**).

5.4 Design Stage 2

5.4.1 Following the Non-Statutory (Phase One) Consultation, the concept masterplan was reviewed and revised to take account of consultation feedback, emerging results from ongoing environmental surveys, and updated technical information. This process involved undertaking a detailed environmental appraisal and targeted engagement with statutory consultees and stakeholders alongside several technical design workshops.

5.4.2 Throughout Stage 2, the Applicant maintained an interdisciplinary approach to design and considered both the opportunities and constraints of the Proposed Development guided by the Project Principles. This enabled the Applicant to understand the complexities of the Site and identify where multiple opportunities and constraints had the potential to stack up with one another to inform design decisions.

Figure 5.4: Illustrative Masterplan presented at Non-Statutory (Phase Two) Consultation

- Order Limits
- Existing powerlines and pylons
- Existing Public Right of Way
- Existing woodland
- Existing hedgerows and trees
- Proposed screening/ planting
- Proposed area for mitigation,enhancement and/or retained agricultural land
- Proposed permissive footpath
- Proposed internal track
- Proposed area for Solar PV development
- Proposed area for Springwell substation, main collector compound and Solar PV development. Preferred location for BESS
- Proposed area for Solar PV development and potential areas for BESS

5.4.3 Key factors influencing the evolution of the design at Stage 2 included: updated information on the proposed site for the National Grid Navenby Substation location, focused workshops with local residents, preliminary environmental surveys including landscape and visual assessment, residential visual amenity assessment, glint and glare assessment, noise assessment, further ecology surveys, geophysical survey, and agricultural land classification surveys.

5.4.4 In addition, the Applicant sought to work with the landowners to understand relative productivity (including accessibility) of the land to focus on areas of land with poorer yield and to determine if fields that were discounted for development would be suitable for continued agricultural use.

5.4.5 Following the Stage 2 design process, an Illustrative Masterplan was produced and presented at Statutory (Phase Two) Consultation (refer to **Figure 5.4**). The Illustrative masterplan showed a greater level of design resolution compared to Stage 1 and included: preferred locations for proposed Solar PV development, Springwell Substation, BESS, strategic planting and revised recreational routes.

5.4.6 At Stage 2 the draft Order Limits increased from 1,702ha to 1,772ha as shown in **Figure 5.5**. The increase was largely due to the addition of land to the north of Springwell West to provide a grid connection corridor to the site selected for the National Grid Navenby Substation. A summary of the key changes for Stage 2 is provided below with reference to the relevant Project Principles that have guided the design.

All Parcels

- The following offsets were incorporated into the design derived from a combination of guidance, good practice, precedence set by other NSIP solar schemes and professional judgement from technical specialists of the project team:
  - A minimum 250m offset from ITS, BESS, Springwell Substation and Collector Compounds to residential properties (**Principle 1.2**).
  - A minimum 15m offset from Solar PV development to existing woodlands (**Principle 2.1**).
  - A minimum 10m offset from Solar PV development to all existing hedgerows (**Principle 2.1)**.
  - A minimum 6m offset from Solar PV development to either side of existing ditches where crossing is not required (**Principle 7.1**).
  - A minimum 20m offset from Solar PV development to LWS (**Principle 3.1**).
  - A minimum 30m offset from Solar PV development to main badger setts (**Principle 3.2**).
  - A minimum 50m offset of ITS from PRoW (**Principle 5.3**).
- Proposed internal access tracks were illustrated across all land parcels. These were designed to utilise existing tracks, crossings and / or gaps in the hedgerows wherever practicable to reduce potential impacts on the landscape (**Principles 2.1 and 4.2**).

Figure 5.5: Draft Order Limits presented at Non-Statutory (Phase Two) Consultation

Springwell West

- The Order Limits were extended to the north of Springwell West to include land for a Grid Connection Corridor to the proposed site for the National Grid Navenby Substation and allow for a cable route crossing of the A15 north of Toll Bar Cottages (**Principle 4.1)**.
- The preference for locating Springwell Substation to the north of Springwell West was shown on the Illustrative Masterplan. Environmental appraisals indicated that this location would be less visually exposed than central land parcels in Springwell West and would have reduced impacts on users of PRoW, Bloxholm Woods Nature Reserve and biodiversity compared to southern parcels in Springwell West. The northern location would also be in close proximity to the proposed National Grid Navenby Substation which would reduce the extent of the 400kV Grid Connection cable route (**Principles 1.2, 1.3 and 4.1**).
- Two potential locations for the BESS were identified in Springwell West. These were located to the north and south of Springwell West due to their proximity to the A15 to facilitate access and the presence of existing screening (**Principles 1.3 and 2.2**).
- Solar PV development was discounted along a visually prominent ridge of land across the A15 in response to the local landscape character, and to reduce potential impacts on road users, allow for ecological connectivity and align with Biodiversity Opportunity Areas (**Principles 1.3, 2.2 and 3.1**).
- Solar PV development was discounted on land immediately south and west of Slate House Cottages and east of the B1191 (Heath Road) opposite Slate House Farm. This was designed to reduce potential impacts on the setting of Ashby de la Launde, residential properties, users of the B1191 (Heath Road), flood risk areas and BMV land. This also helped to maintain a sense of rural separation between villages and provided the opportunity for an ecological corridor linking across the full extent of Springwell West (**Principles 1.2, 1.3, 2.3, 7.2 and 8.2**).
- Solar PV development was discounted from additional areas of land to the south and east of Ashby Lodge to reduce potential impacts on residential properties (**Principle 1.2**).
- Solar PV development was discounted from land to the north of School Cottages to reduce potential impacts on residential properties and a mineral safeguarding area (**Principle 1.2**).
- Solar PV development was discounted from some land adjacent to Bloxholm Woods to reduce potential impacts on users of local PRoW, BMV land and areas of high archaeological potential (**Principles 2.4, 5.3 and 8.2**).
- Solar PV development was discounted from land directly to the south of RAF Digby and west of Glebe Farm to increase offsets and reduce potential impacts on residential properties, users of the B1191 (Heath Road), BMV land and help maintain a sense of rural separation between villages (**Principles 1.2, 1.3, 2.3 and 8.2**).
- Potential access locations to Springwell West were refined along the B1191 (Heath Road) to reduce potential impacts on residential properties (**Principle 1.2**).
- Structural planting was included to provide screening, integrate the Proposed Development with the landscape and provide new habitats for biodiversity benefit. This included proposed tree belts to the east and south of Springwell Substation and BESS, along the western boundary of Springwell West, to the north of the B1191 (Heath Road) opposite Peacock Lodge, and to the south of Bloxholm Woods. New hedgerow planting was also proposed on either side of the lane leading to Thompson's Bottom (**Principles 1.3, 2.2, 3.1 and 3.6**).
- The location of potential new permissive footpaths were refined following stakeholder feedback. A new footpath link along the western boundary of Springwell West was included and the crossing of the A15, north of Toll Bar Cottages, was discounted for safety reasons and in response to feedback (**Principles 1.5 and 5.4**).

Springwell Central

- The Order Limits were extended to the west of RAF Digby to allow for a potential new permissive footpath connection to Scopwick adjacent to the B1191 (Heath Road) (**Principle 5.4**).
- Solar PV development was discounted from fields surrounding Rowston Top to reduce potential impacts on residential properties, users of Heath Road, Ashby Walled Gardens and BMV land (**Principles 1.2, 1.3, 2.4 and 8.2)**.
- Solar PV development was discounted from additional areas of land to the south-east of the B1191 (Heath Road) where the land rises and is more visually prominent. This was to reduce potential impacts on residential properties, users of the B1191 (Heath Road), Scopwick Mill and BMV land (**Principles 1.2, 1.3, 2.4 and 8.2**).
- Solar PV development was discounted from additional areas of land to the west of the B1188 (Lincoln Road) near Sheffield House and offset by approximately 300m from the road. This was designed to reduce potential impacts on residential properties, users of the local road network and BMV land (**Principles 1,2, 1.3 and 8.2**).
- Potential access to Springwell Central from the B1191 (Heath Road) was refined to reduce potential impacts on residential properties and Scopwick Mill (**Principles 1.2 and 2.4**).
- Structural planting was included to provide screening, integrate the Proposed Development with the landscape and provide new habitats for enhanced biodiversity benefit. This included proposals for new hedgerow planting along the existing PRoW at Rowston Top and new tree belt planting to the north of Sheffield House (**Principle 2.2 and 3.3**).
- The location of potential new permissive footpaths between RAF Digby and Scopwick were refined following stakeholder feedback and a link to Rowston Top was included (**Principles 1.5 and 5.4**).

Springwell East

- Solar PV development was discounted from a strip of high-quality agricultural land running through Springwell East. This was designed to reduce potential impacts on BMV land, residential properties and users of the Stepping Out Walks and other local footpaths (**Principles 1.2, 1.4, 5.3 and 8.1**).
- Solar PV development was discounted from land directly west of the Spires and Steeples Trail and adjacent to the B1188 (Lincoln Road) to reduce potential impacts on users of the footpath, the B1188 (Lincoln Road), residential properties, the setting of the Blankney and Scopwick Conservation Areas and to help maintain a sense of rural separation between villages (**Principles 1.2, 2.3, 2.5, 5.2 and 5.3**).
- Solar PV development was discounted from land between The Brickyard and Brickyard Farm to reduce potential impacts on residential properties (**Principle 1.2**).
- Structural planting was included to provide screening, integrate the Proposed Development with the landscape and provide new habitat for biodiversity benefit. This included new hedgerow planting adjacent to existing PRoW to reduce the potential impacts on the Spires and Steeples Trail, Stepping Out Walks and other local footpaths (**Principle 5.2 and 5.3**).

5.5 Design Stage 3

5.5.1 Following the Statutory (Phase Two) Consultation, the design of the Proposed Development was developed in response to consultation feedback and updated technical information. This process involved undertaking a detailed appraisal of feedback and engagement with statutory consultees and the local community, while also taking account of further environmental assessments and technical design studies. Project Principles were used to guide decision making throughout this process and embed good design outcomes to the Proposed Development.

5.5.2 Additional information influencing the evolution of the design at Stage 3 included: updated ecology surveys, refinement of the biodiversity mitigation strategy based on the outputs of the **Environmental Impact Assessment [EN010149/APP/6.1]**, refinement of the PRoW strategy, technical studies relating to the grid connection and cable corridor routes, noise modelling and technical studies in relation to highway works.

Figure 5.6: Illustrative Masterplan of the Proposed Development

- Order Limits
- Existing powerlines and pylons
- Existing Public Right of Way
- Existing woodland
- Existing hedgerows and trees
- Proposed permissive footpath
- Proposed Public Right of Way
- Proposed area for green infrastructure
- Proposed screening/ planting
- Proposed Earth Bund and Attenuation
- Proposed community growing area
- Proposed internal track
- Proposed area for Solar PV development
- Proposed siting zone for Grid Connection Corridor
- Proposed area for Springwell Substation and Main Collector Compound
- Proposed area for BESS
- Proposed areas for Satellite Compound

5.5.3 As a result of the Stage 3 design process a revised Illustrative Masterplan has been developed for the DCO Application as shown in **Figure 5.6** and the **Illustrative Layout Plans and Sections [EN010149/APP/2.5]**. The Stage 3 Illustrative Masterplan shows one way the authorised development could be carried out within the constraints of the **draft DCO [EN010149/APP/3.1]**.

5.5.4 At Stage 3 the proposed Order Limits reduced from 1,772ha to 1,280ha as shown in **Figure 5.7** and the **Location, Order Limits and Grid Coordinate Plans [EN010149/APP/2.1]**. A summary of the key design changes at Stage 3, including the reduction of the Order Limits, is provided below with reference to the relevant Project Principles that have guided the design.

All Parcels

- The location of proposed internal access tracks was refined to improve the use of existing tracks, crossings and / or gaps in the hedgerows wherever practicable to reduce potential impacts on the landscape (**Principles 2.1 and 4.2**).

Springwell West

- Land to the north and south of the proposed site for the National Grid Navenby Substation was discounted and removed from the Order Limits as no longer required for cabling (**Principle 4.1**).
- The western section of the Grid Connection Corridor was discounted and removed from the Order Limits to increase the distance from Gorse Hill Covert and reduce potential impacts on high priority hedgerows and trees and Stepping Out Walks (**Principle 2.1**).
- The location of the Springwell Substation and BESS was refined to be located entirely within a single field directly south of Gorse Hill Lane and a 250m offset was provided to the A15. This was designed to reduce potential impacts on residential properties, Stepping Out Walks and users of the A15 (**Principle 1.2, 1.3 and 2.2**).
- The location for a Satellite Collector Compound was shown on the western boundary of Springwell West. This was designed to reduce potential impacts on residential properties and users of the A15 (**Principles 1.2 and 1.3**).

Figure 5.7: Order Limits of the Proposed Development

- Solar PV development was discounted from land directly east of New England Lane and removed from the Order Limits to reduce potential impacts on Temple Bruer, residential properties and Stepping Out Walks. This was also designed to avoid areas of higher agricultural yield based on discussions with landowners (**Principles 1.2, 1.4 and 2.2**).
- Solar PV development was discounted from land directly west of the A15 (opposite Toll Bar Cottages) to reduce the potential impacts on residential properties, BMV land, users of the A15 and PRoWs. This was also designed to avoid areas of higher agricultural yield based on discussions with landowners (**Principles 1.2, 1.3, 1.4, 5.3 and 8.2**).
- Solar PV development was discounted from additional areas of land to the east of Ashby Lodge to reduce potential impacts on residential properties. This resulted in the removal of additional land from the Order Limits (**Principle 1.2**).
- Solar PV development was discounted from an addition area of land adjacent to the junction of Temple Road and the A15 to reduce potential impacts on local road users (**Principle 1.3 and 2.2**).
- Solar PV development was discounted from land to the north of Navenby Lane to respond to consultation feedback (including MOD Defence Infrastructure Organisation), technical requirements of the cable corridor study and to reduce potential impacts on residential properties and BMV land. This resulted in the removal of additional land from the Order Limits (**Principles 1.2 and 8.2**).
- Solar PV development was discounted from additional land to the south of Long Plantation to reduce potential impacts on users of local PRoW, BMV land and areas of high archaeological potential (**Principles 2.4, 5.3 and 8.2**).
- Land to the south and north of Slate House Farm that was no longer required for mitigation was removed from the Order Limits.
- Land to the north of Brauncewell Medieval Village that was no longer required for mitigation was removed from the Order Limits.
- Land to the south of Bloxholm Woods was identified as the preferred location for mitigation and enhancement due to its location adjacent to Bloxholm Woods LWS, priority habitats, existing recreational routes, areas of high archaeological sensitivity, the presence of some non-BMV land and to align with areas of poorer agricultural yield (**Principles 3.1, 5.4 and 8.3**).
- Land to south of RAF Digby was identified as the preferred location for mitigation due to its central location, existing ecology, presence of non BMV land and alignment to Biodiversity Opportunity Areas (**Principles 3.2 and 8.3**).
- The proposed locations for new structure planting were refined to improve screening and integration of the Proposed Development, biodiversity benefit and connectivity. Additional tree belt planting was included to the south of Slate House Cottages, south of Ashby Lodge, and between Bloxholm Woods and Warren Pit Plantation. Proposed tree belt planting was also refined along the western, southern and eastern edges of the Springwell Substation and BESS. New hedgerow planting was also proposed either side of the A15 (**Principles 1.2, 1.3, 2.2 and 3.1**).
- An Earth Bund was proposed to the east of Springwell Substation and BESS to support screening and integration of the Proposed Development and reduce potential impacts on residential properties and users of the A15 (**Principles 1.2 and 1.3**).
- The proposals for new footpaths were refined following stakeholder feedback from Lincolnshire County Council. This included the proposal for two new statutory PRoW at the following locations: connecting Bloxholm Woods and Temple Road; and connecting the existing PRoW (AshL/4/1) west of the A15 (near Navenby Lane) to New England Lane. Additional permissive footpaths were also proposed to provide circular walks at Bloxholm Woods and a new link to between Bloxholm Woods and Brauncewell Village. This resulted in a minor extension to the Order Limits north of Brauncewell Village (**Principles 1.5 and 5.4**).

Springwell Central

- The location for a Satellite Collector Compound was identified towards the centre of the Springwell Central. This was designed to reduce potential impacts on residential properties, users of the B1191 (Heath Road) and Scopwick Mill (**Principles 1.2, 1.3 and 2.4**).
- Land to the north of Ashby de la Launde, in the vicinity of Rowston Top, that was no longer required for mitigation was removed from the Order Limits.
- Land to the west of the B1188 (Lincoln Road) and north of Sheffield House that was no longer required for mitigation was removed from the Order Limits.
- The Order Limits were amended to the north of the B1191 (Heath Road) to remove land no longer required for cabling.
- Solar PV development was discounted from additional areas of land to the south-east of the B1191 (Heath Road) to increase offsets to Scopwick and reduce potential impacts on the Scopwick Mill, users of Heath Road and to help maintain a sense of rural separation between villages (**Principles 1.2, 2.3, 2.4**).
- The proposed access to Springwell Central from the B1191 (Heath Road) was refined to reduce potential impacts on residential properties, Scopwick Mill and agricultural land (**Principles 1.2 and 2.4**).
- The proposals for new footpaths were refined following stakeholder feedback from Lincolnshire County Council. This included the proposal for a new statutory PRoW connecting RAF Digby and Scopwick. The Order Limits were amended to allow for a connection to the existing pavement at Scopwick, (**Principles 1.5 and 5.4**).

Springwell East

- The location for a Satellite Collector Compound was identified to the east of Ash Holt. This was designed to reduce potential impacts on users of PRoW and areas of archaeological sensitivity (**Principles 2.4 and 5.3**).
- Land to the east of the B1188 (Lincoln Road) and south of Blankney was removed from the Order Limits as no longer required for mitigation and to exclude woodland blocks (**Principle 2.1**).
- Solar PV development was discounted from additional areas of land to the north of Scopwick to further reduce potential impacts on the village, residential properties, the Spires and Steeples Trail and Stepping Out Walks (**Principles 1.2, 5.2 and 5.3**).
- Solar PV development was discounted from additional areas of land to the north of Springwell East to reduce impacts on residential properties, BMV land and users of the local roads and PROW. This included removal of land from the Order Limits that was no longer required for mitigation. (**Principles 1.2, 1.3, 5.3 and 8.2**)
- Land to the south of Trundle Lane was removed from the Order Limits that was no longer required for mitigation.
- Land to the north of Kirkby Green that was no longer required for mitigation was removed from the Order Limits.
- Land to the south of The Brickyard was identified as the preferred location for mitigation due to its location next to Blankney Brick Pit LWS and alignment to Biodiversity Opportunity Areas (**Principles 3.1 and 3.2**).
- Solar PV development was discounted from land to the north of Scopwick Low Field Farm to reduce potential impacts on residential amenity, Stepping Out Walks and to reduce visual effects from Acre Lane (**Principles 1.2, 2.2 and 5.3**).
- The proposed access to Springwell East from the B1188 (Lincoln Road) was moved further north to reduce potential impacts on residential properties and users of the Spires and Steeples Trail (**Principles 1.2 and 5.2**).
- A community growing area was incorporated into the Proposed Development to the north of Scopwick and adjacent to the Spires and Steeples Trail in response to policies in NPS EN-1 about promoting provision of green infrastructure including open spaces and recreational facilities and is intended to deliver wider benefits to the local community and users of the public rights of way (**Principle 1.5**).
- Proposals to upgrade the Spires and Steeples Trail, between Scopwick and Blankney, were incorporated into the Proposed Development to support community aspirations identified within the Scopwick and Kirkby Green Neighbourhood Plan and in response to policy requirements in NPS EN-3 about facilitating enhancements to footpaths (**Principles 1.5 and 5.4**).
- The proposed locations for new hedgerow planting along the Spires and Steeples Trail, Stepping Out Walks and other local footpaths were refined to improve screening and integration of the Proposed Development (**Principles 5.2 and 5.3**).

Section 6

Proposed Development

6. Proposed Development

6.1 Introduction

6.1.1 This section summarises the operational design of the Proposed Development and demonstrates how it has responded to each of the Project Principles presented in **Section 4 (Design Approach)**.

6.1.2 Further information on the construction and decommissioning of the Proposed Development is provided in the **Outline Construction Environmental Management Plan [EN010149/APP/7.7]** and the **Outline Decommissioning Environmental Management Plan [EN010149/APP/7.13]** and is not covered in this document.

6.1.3 As described in **Section 4 (Design Approach)** and demonstrated in **Section 5 (Design Evolution)**, Project Principles have been used throughout the design process to guide decision making and embed good design outcomes to the Proposed Development. These outcomes will be secured in the detailed design of the Proposed Development, in accordance with the conclusions of the **Environmental Statement [EN010149/APP/6.1]**, via Control Documents contained within the **draft DCO [EN010149/APP/3.1]**. Should the DCO be granted, detailed design would need to be approved by the local planning authority in accordance with these Control Documents.

6.1.4 Field reference numbers are shown in **ES Volume 2, Figure 4.1 Field Numbering System** which is included in **Appendix 1** for ease of reference.

Design places that support and enhance local communities

Principle 1.1

Engage openly, transparently and meaningfully with stakeholders taking their feedback into account and making use of local knowledge to improve the Proposed Development.

The Applicant has engaged widely on the Proposed Development to ensure that landowners, the local community and stakeholders have been able to engage with the design of the project. This has included formal consultation, focused workshops with residents, site visits, and technical meetings with statutory consultees comprising: North Kesteven District Council; Lincolnshire County Council; Relevant Parish Councils; Historic England; Natural England; Environment Agency; National Highways; Lincolnshire Wildlife Trust; MoD and RAF Digby; and Lincolnshire Fire and Rescue (refer to **Figure 6.1**).

Formal consultation included non-statutory, statutory and targeted phases of consultation to provide consultees with the opportunity to understand and share feedback on the emerging proposals. At each phase of consultation, the Applicant ensured that a range of engagement techniques were used, that materials were available in different formats and at appropriate levels and that the consultation was widely publicised. The Applicant has had regard to all responses received to consultation in finalising its proposals, with feedback from all phases of consultation resulting in changes to the design of the Proposed Development. These changes, along with details of the ways in which the Applicant has complied with legislation, guidance and advice notes on pre-application consultation are explained in the **Consultation Report [EN010149/APP/5.1]**.

In addition to the formal consultation process, the Applicant sought to work with landowners and the local community to make use of local knowledge to improve the Proposed Development. For example, this included discussions with landowners to understand relative productivity and accessibility of the Site which informed the spatial layout of the Proposed Development. Discussions with the local community included how the Proposed Development could improve the local PRoW network, where new routes would be most beneficial, and how the Proposed Development could support community aspirations set out in the Scopwick & Kirkby Green Neighbourhood Plan **[Ref 13]**.

Figure 6.1: Stakeholder engagement: public consultation (left) and site visit (right)

Principle 1.2

Provide appropriate offsets to local settlements and dwellings on a case-by-case basis, respecting their individual amenity.

The Applicant has developed the design of the Proposed Development to incorporate appropriate offsets to local settlements and dwellings which would be secured by the spatial extents shown on the **Works Plans [EN010149/APP/2.3]**.

This has formed part of the iterative design and EIA process and is assessed in **ES Volume 1, Chapter 10: Landscape and Visual [EN010149/APP/6.1]** and **ES Volume 3, Appendix 10.5: Residential Visual Amenity Assessment (RVAA) [EN010149/APP/6.3]**.

Figure 6.2 shows the proposed location for Solar PV development, Springwell Substation and Main Collector Compound and BESS in relation to local villages and illustrates the offsets that have been incorporated to the design.

As a result of the offsets that have been incorporated into the Proposed Development, the landscape and visual assessment confirms that the development would not impact the character of local villages (Scopwick, Blankney, Kirkby Green, RAF Digby and Ashby de la Launde) and would not be visible from any locations within them except for potentially glimpsed views from RAF Digby.

At RAF Digby, glimpses of the Proposed Development may be possible through the security fencing which surrounds the residential barracks. However, these would be negligible and there would be no view of the Proposed Development from the sports fields adjacent to the B1191 (Heath Road).

Whilst a small number of residential properties would have some view of the Proposed Development, the design approach and mitigation measures proposed ensure the visual effects would not be overbearing at any dwelling.

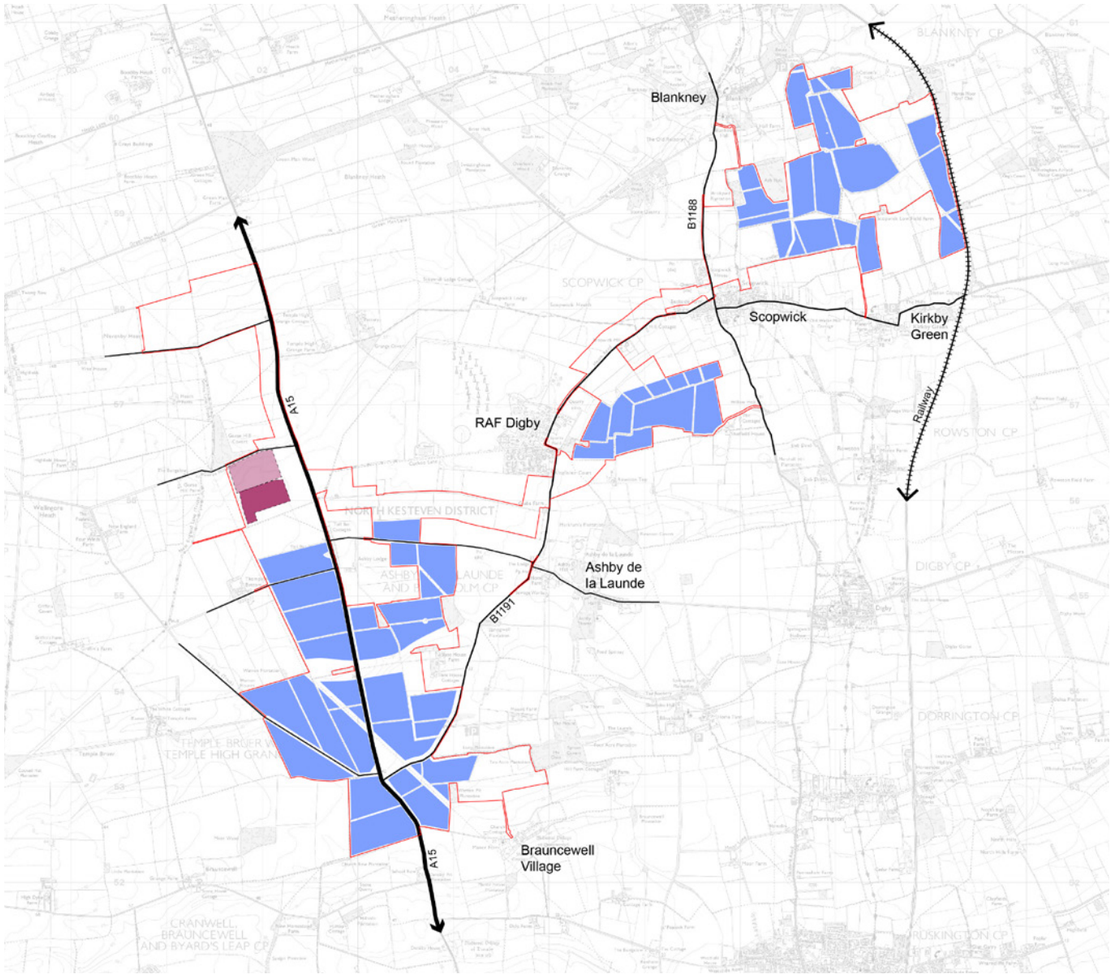


Figure 6.2: Proposed location for Solar PV development (blue), Springwell Substation and Main Collector Compound (light pink) and BESS (dark pink)

Principle 1.3

Consider sequential views and the experience of people using Heath Road and other local roads.

The Applicant has developed the design of the Proposed Development to reduce visual impacts on users of the local road network. This has formed part of the iterative design and EIA process and includes provision of offsets and screening which would be secured by the spatial extents shown on the **Works Plans [EN010149/APP/2.3]** and the Green Infrastructure Parameters presented in **Appendix 1** of the **oLEMP [EN01049/APP/7.9]**. A summary of the how the Proposed Development has been designed to consider users of the A15, B1191 (Heath Road) and B1181 (Lincoln Road) is provided below.

Along the A15, Solar PV development would be offset by a minimum of 25m from the road (refer to **Figure 6.3**). This would ensure that the proposed built development was not overbearing on the A15 and enable the retention of long-distance views from the road. Gaps in the Solar PV development are included to break up the view and experience of the Proposed Development when travelling along the road. This includes omitting Solar PV development in Field Bcd082, between Fields Bcd106 and Bcd114 and between Fields Bcd107 and Bcd115. Within Field Tb2, the Springwell Substation and BESS compound would be offset by 250m from the A15 and an Earth Bund would partially screen the lower lying elements of the compound from the road. The proposed crest height of the bund would be between 3-5m above existing ground levels. The eastward facing slope of the bund would have a typical gradient of 1:20 to blend with the existing character of the landform when viewed from the road. It would have a natural vegetated appearance in keeping with the existing agrarian landscape. An illustrative section of the bund is shown in the **Illustrative Layout Plans & Sections [EN010149/APP/2.5]**.

New structure planting, in the form of tree belts and hedgerows, would soften views of the Proposed Development from the A15 and screen it in some locations. This would include new hedgerows (or improvements to existing hedgerows where they are present) alongside the A15 for the full length of the road where it passes through Springwell West. Tree planting would also be located on top of the Earth Bund to provide further screening of the Springwell Substation and BESS compound. Along the western boundary of the Site, a new belt of tree planting would provide a vegetated backdrop to the Proposed Development when viewed from the road. This would help to integrate the Solar PV development with the existing landscape and ensure that it would not be visible above the skyline. **Figure 6.4** shows a visualisation of the proposed planting along the A15 at 1 and 10 years post construction.

Along the B1191 (Heath Road), an extensive block of structure planting would be located along the northern and southern sides of the road adjacent to Fields Bcd123, Bcd128, Bcd129 and Bcd139 and new hedgerows would be located adjacent to Field Bcd138 (refer to **Figure 6.5**). Once this vegetation is established, it would substantially screen any view of the Solar PV development in the adjoining fields. Beyond Slate House Farm, when travelling in an easterly direction along the B1191 (Heath Road) to Scopwick, Solar PV development would be set well back from either side of the road and has been discounted on rising ground to the immediate south of Scopwick Mill / The Windmill (as shown by **Figure 6.6**).

Along the B1181 (Lincoln Road), Solar PV development would be set well back from the road (approximately 300m) in both Springwell Central and Springwell East and would be screened by existing mature hedgerows for the vast majority of the road.

An assessment of potential effects on local road users is set out within **ES Volume 1, Chapter 10: Landscape and Visual [EN010149/APP/6.1]** and concludes that there would be some significant visual effects on users of the A15 during construction, operation and decommissioning and on users of the B1191 (Heath Road) during construction only. There would also be some significant visual effects on users of the minor roads leading from the A15 to Temple Bruer and Thompson Bottom Farm. Effects on other roads would not be significant.

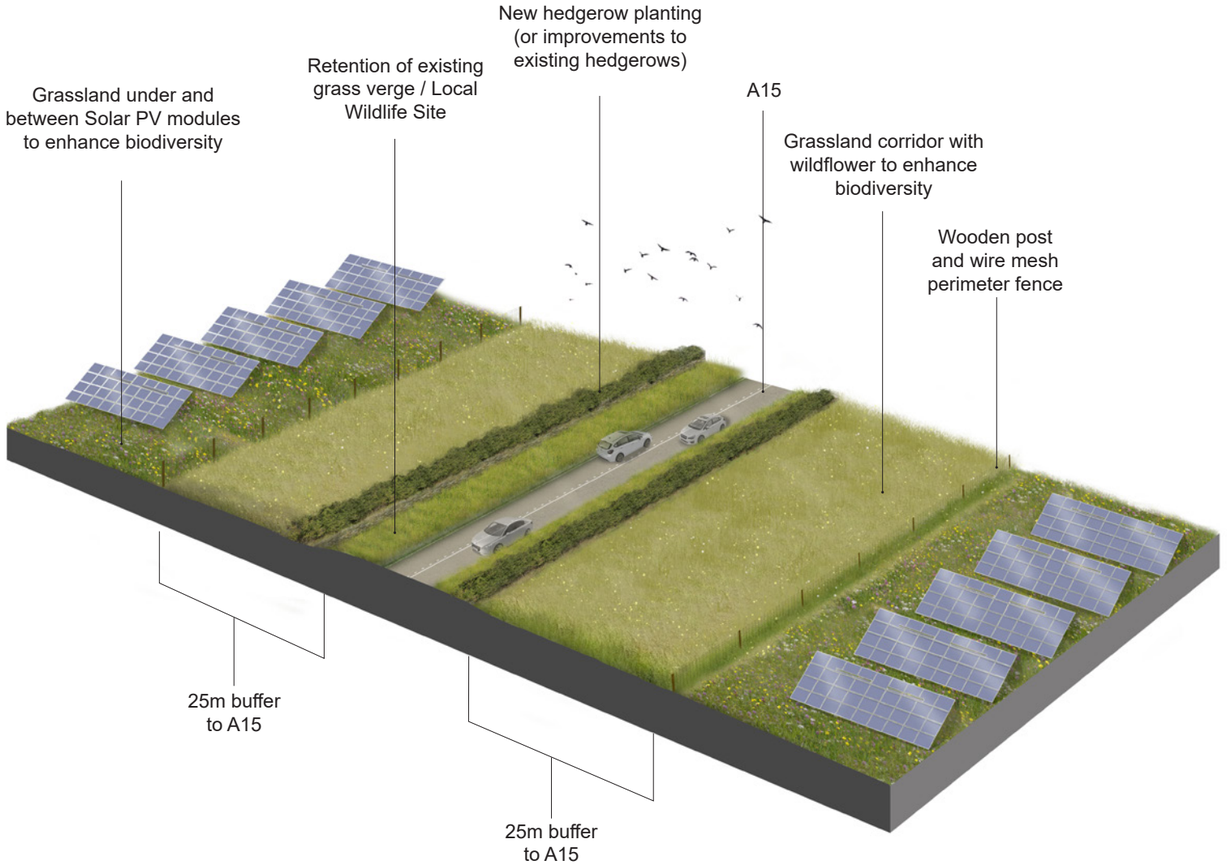


Figure 6.3: Indicative treatment of the A15

Existing view

Illustrative visualisation 1 year post-construction

Illustrative visualisation 10 years post-construction

Figure 6.4: Viewpoint 28: north of junction of A15 and Church Lane (Springwell West, looking north-west along the A15)

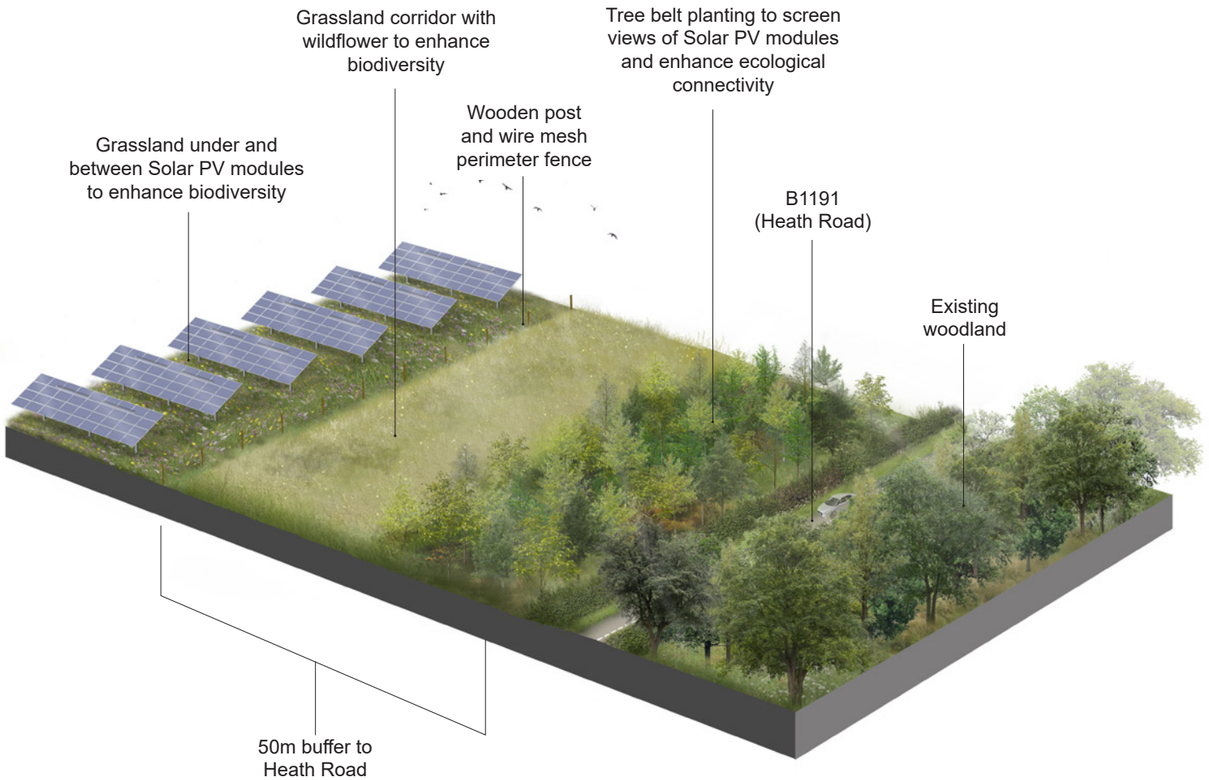


Figure 6.5: Indicative treatment of the B1191 (Heath Road) west of Slate House Farm

Existing view

Illustrative visualisation 1 year post-construction

Illustrative visualisation 10 years post-construction

Figure 6.6: Viewpoint 15: B1191 Western Edge of Scopwick (Springwell Central, looking south from the B1191 towards rising ground)

Principle 1.4

Work with Blankney Estates and other landowners to secure the long-term management of both the agricultural landscape and benefits provided by the Proposed Development.

The Applicant has developed the design of the Proposed Development in collaboration with local landowners to secure the long-term management of the agricultural landscape and benefits provided by the Proposed Development.

This has included discussions with landowners during the evolution of the design to understand relative productivity and accessibility of the Site which has informed the spatial layout of the Proposed Development. For example, the exclusion of built development from Fields Tb1, Bcd082, Bcd118, By27, and Lf03 was informed by higher levels of agricultural productivity reported by the landowner in these fields. Similarly, the rationale for proposing mitigation on Fields Bk02, Bk06 and Bk15 was informed by the lack of productivity reported by the landowner in these fields.

The proposed location of new footpaths and structure planting has also been informed by discussions with landowners. In both cases, the Applicant has sought to locate footpaths and planting at the edges of existing agricultural fields to reduce potential impacts on farming activities as shown by the Green Infrastructure Parameters presented in **Appendix 1** of the **oLEMP [EN01049/APP/7.9]**.

During the operation of the Proposed Development, the landscape within the Order Limits will be managed in accordance with the **oLEMP [EN010149/APP/7.9]**.

Principle 1.5

Identify opportunities for wider community benefits in consultation with local stakeholders.

The Applicant is committed to providing benefits to the local community that respond to the policies in NPS EN-1 and EN-3 in relation to green infrastructure, open space or recreational spaces, permissive paths and public rights of way, and go beyond the construction and operation of a solar farm for energy generation. These benefits have been identified through consultation and include proposed enhancements and improvements to the local footpath and cycle network (refer to Principle 5.4) and a new community growing area to the north of Scopwick. These would include the provision of 3.49km of new PRoW, 8.58km of permissive paths and improvements to the Spires and Steeples Trail between Scopwick and Blankney. The community growing area would be located adjacent to existing community facilities along Vicarage Lane (including Scopwick Cemetery, park and play area) and is adjacent to the Spires and Steeples Trail and Stepping Out Scopwick Loop. The community growing area would be secured via the **oLEMP [EN010149/APP/7.9]** and allows for permissive access 364 days a year to an area of up to 2ha for community use during the operation of the Proposed Development. The detailed design of the space would be developed post-DCO consent in conjunction with the Community Liaison Group.

2

Lead with the landscape

Principle 2.1

Retain existing vegetation wherever reasonably possible to retain the fabric of the Site and aid assimilation of development into its context.

The Applicant is committed to the retention of existing vegetation within the Order Limits wherever reasonably possible to retain the fabric of the site and aid assimilation of development into its context.

Existing vegetation will be protected by the provision of minimum offsets derived from a combination of guidance, good practice, precedence set by other NSIP solar schemes and professional judgement from technical specialists of the project team. They include a minimum 15m offset from existing woodland, a minimum 10m offset from existing hedgerows and a minimum 6m offset from ditches to perimeter fencing surrounding the Solar PV development. Some exceptions for hedgerows and ditches are provided where access tracks and/or cable route crossings are required however, these would be kept to a minimum and restored where practicable. The offsets will be secured by the **Design Commitments [EN010149/APP/7.4]** and the spatial extents shown on the **Works Plans [EN010149/APP/2.3]**.

During the operation of the Proposed Development, existing vegetation within the Order Limits will be managed and maintained in accordance with the **oLEMP [EN010149/APP/7.9]**. This includes repairing and/or improving existing hedgerows adjoining a siting zone for Solar PV development, Satellite Collector Compound, BESS or Springwell Substation to infill gaps. These hedgerows would be allowed to grow out more fully and managed for visual screening and biodiversity benefits.

In addition to the retention of existing vegetation, the Proposed Development includes extensive proposals for new planting as shown by the Green Infrastructure Parameters presented in **Appendix 1** of the **oLEMP [EN01049/APP/7.9]** and illustrated on **Figure 6.7**. This would include approximately 15,563m of new hedgerow planting and 16ha of new tree belts which would far exceed by many multiples the amount removed during construction.

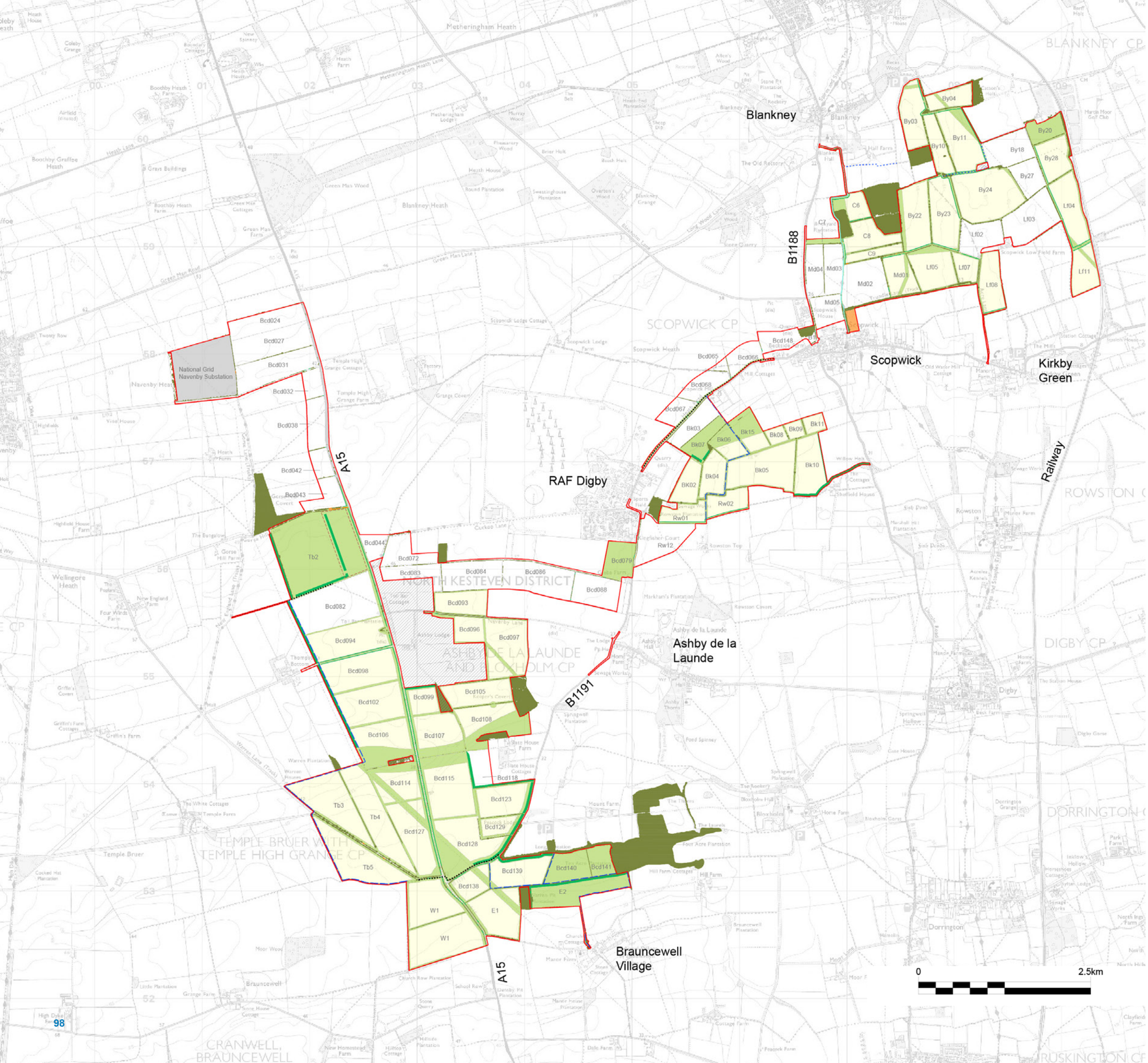


Figure 6.7: Green Infrastructure Parameters

Principle 2.2

Design the Proposed Development to respond to the distinctive and unique local character of the Site, informed by relevant local studies such as the North Kesteven Landscape Character Assessment.

The Applicant has developed the design of the Proposed Development to respond to the distinctive and unique local character of the Site. This has formed part of the iterative design and EIA process and is assessed in **ES Volume 1, Chapter 10: Landscape and Visual [EN010149/APP/6.1]**. A summary of how the design of the Proposed Development responds to the local character of the Site is provided as follows.

A greater proportion of the proposed Solar PV development would be located in Springwell West where the scale of the landscape is larger and less intimate than Springwell Central and Springwell East, and therefore more suited to large scale infrastructure. Springwell West also has an existing context of infrastructure within the landscape including the A15 and National Grid overhead transmission line. The location of Springwell Substation and BESS compound would be located near to existing woodland (Gorse Covert) to provide a backdrop and vertical context to the taller elements of the Proposed Development. This would help to integrate the proposed built development with the existing landscape.

In Springwell West and Springwell Central, the Proposed Development would respond to undulations in topography where they form notable features in the landscape. This would include a break in Solar PV development between Fields Bcd106 and Bcd114 and between Fields Bcd107 and Bcd115 where there is a visually prominent ridge of land that crosses the A15. Solar PV development has also been discounted from Fields Bk03 and Bk07, and parts of Fields Bk06 and Bk15 where there are visually prominent slopes between RAF Digby and Scopwick.

In Springwell East, the mass of Solar PV development would be frequently broken up by breaks in Solar PV development, areas of mitigation and wide grass strips. This would help maintain the rural context of the landscape, combining agrarian characteristics with those of a solar farm. As a result, the Solar PV development would not be oppressive or overbearing within the landscape.

New planting, in the form of tree belts and hedgerows, would help to screen the proposed built development and integrate it to the surrounding landscape, whilst also providing habitat for biodiversity receptors. Planting would be designed to complement the existing vegetation mix, structure and pattern of the landscape. For example, in Springwell West woodland scrub planting is proposed to compliment the existing woodland habitat at Long Plantation (refer to **Figure 6.8**). In Springwell East, sections of new hedgerow planting would be proposed to replicate the character of existing historic lanes (such as Trundle Lane) with hedgerows on both sides of a track / PRoW.

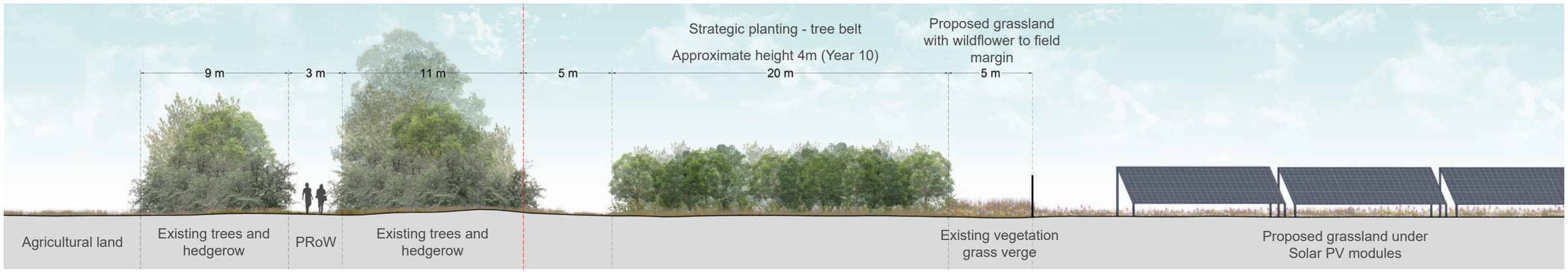


Figure 6.8: Indicative section through PRoW (Ash/11/1) at Long Plantation

Principle 2.3

Maintain the rural separation between the villages of Ashby de la Launde, RAF Digby, Scopwick, Kirkby Green and Blankney.

The Applicant has developed the design of the Proposed Development to maintain the rural separation between local villages and to provide a sensitive response to sequential views and the experience of people using the local road and PRoW network between settlements.

This has included amendments to the Order Limits and potential areas for Solar PV development to provide appropriate offsets to local settlements, dwellings, roads and PRoW (refer to **Figure 6.2**). Extensive areas of new planting are also proposed to mitigate the visual impacts of the Proposed Development from within and between local settlements.

Project Principles 1.2, 1.3, 5.2 and 5.3 provide further information on the provision of offsets and screening in relation to local settlements which would be secured by the spatial extents shown on the **Works Plans [EN010149/APP/2.3]** and the Green Infrastructure Parameters presented in **Appendix 1** of the **oLEMP [EN01049/APP/7.9]**.

The **ES Volume 1, Chapter 10: Landscape and Visual [EN010149/APP/6.1]** concludes that the Proposed Development would not impact the character of local villages and would not be visible from any locations within them except for potentially glimpsed views from RAF Digby. Along the B1191 (Heath Road) and B1181 (Lincoln Road) Solar PV development would generally be set well back, or screened by existing vegetation and new planting. Whereas along local footpaths, offsets and new hedgerows would help to screen and integrate the Proposed Development with the rural landscape.

Principle 2.4

Conserve the significance of heritage assets including Scopwick Mill and Ashby Walled Gardens.

The Applicant has developed the design of the Proposed Development to conserve the heritage assets within the Site and surrounding area. This has formed part of the iterative design and EIA process and is assessed in **ES Volume 1, Chapter 9: Cultural Heritage [EN010149/APP/6.1]**. A summary of how the design of the Proposed Development responds to local heritage assets is provided as follows and would be secured by the spatial extents shown on the **Works Plans [EN010149/APP/2.3]** and the Green Infrastructure Parameters presented in **Appendix 1** of the **oLEMP [EN01049/APP/7.9]**.

Solar PV development is omitted from land to the north of Ashby Walled Gardens and would not be visible from the heritage asset.

Solar PV development is omitted from land to the north of Scopwick Mill. To the south of Scopwick Mill, Solar PV development is omitted from rising land which is visible from the heritage asset. This includes Fields Bk07 and parts of Fields Bk06 and Bk15. These fields would be converted to grassland habitat to maintain the agricultural setting of the mill.

To the north of Brauncewell medieval village scheduled monument, Solar PV development is omitted from Field E2. This field would be converted to grassland habitat which would maintain the visual relationship between the monument and the surrounding agricultural fields. It would also preserve the remains of ridge and furrow, enhancing (through long-term preservation) its contribution to the significance of the monument. New tree belt planting along the northern boundary of Field E2 would screen Solar PV development in other fields to the north and further reduce visual change on the monument. A new permissive footpath, linking Bloxholm Woods to Brauncewell Village would be aligned to the edge of existing field boundaries and would be unsurfaced in keeping with the rural character of the landscape.

Site access points from the A15 have been selected to avoid works in proximity to the listed milepost to the south of Ashby Lodge Farm.

Principle 2.5

Protect the setting of the Scopwick and Blankney Conservation Area.

The Applicant has developed the design of the Proposed Development to protect the setting of the Scopwick and Blankney Conservation Areas. This has formed part of the iterative design and EIA process and is assessed in **ES Volume 1, Chapter 10: Landscape and Visual [EN010149/APP/6.1]** and in **ES Volume 1, Chapter 9: Cultural Heritage [Ref EN010149/APP/6.1]**.

This has included amendments to the Order Limits and potential areas for Solar PV development during the evolution of the design to provide appropriate offsets to Scopwick and Blankney (for further detail refer to Principle 1.2). As a result of the changes that have been incorporated into the design of the Proposed Development, the **ES Volume 1, Chapter 9: Cultural Heritage Assessment [EN010149/APP/6.1]** concludes that there would not be any likely significant effects on the Scopwick or Blankney Conservation Areas during operation.

Increase biodiversity appropriate to the landscape character and connect nature

Principle 3.1

Extend and enhance existing local wildlife sites and grassland priority habitats, including the creation of calcareous grassland adjacent to the A15.

The Applicant has developed the design of the Proposed Development to extend and enhance existing LWS and grassland priority habitats within and adjoining the Order Limits. This is detailed in the **oLEMP [EN010149/APP/7.9]** and is assessed in the **ES Volume 1, Chapter 7: Biodiversity [EN01049/APP/6.1]**.

Four LWS within or adjacent to the Order Limits would be affected by the Proposed Development where sections of grassland road verges would be removed for highways access. To provide compensation and improvement for loss of these habitats, new calcareous grassland areas would be created adjacent to the LWS. These would be set back from the road within the buffer between the field edge and the perimeter fencing surrounding the Solar PV development and designed to extend and improve connectivity between LWS as set out in the **oLEMP [EN010149/APP/7.9]**.

All other LWS have been excluded from the Order Limits and would be offset by a minimum of 20m from proposed built development. This is secured by the **Design Commitments [EN010149/APP/7.4]** and the spatial extents set out by the **Works Plans [EN010149/APP/2.3]**. Habitat creation would be provided adjacent to these LWS to improve and enhance them. This would include new grassland creation, tree belts and hedgerow planting adjoining Bloxholm Woods LWS in Fields Bcd139, Bcd140, Bcd141 and E2; and new grassland creation adjoining Blankney Brick Pit LWS in Field By20.

All existing woodland within the Order Limits would be retained with a minimum 15m offset from the proposed built development to any existing woodland in accordance with published guidance for tree root protection areas **[Ref 16 and 17]**. New planting would provide habitat to improve biodiversity and connectivity between existing woodland blocks. In the vicinity of Bloxholm Woods LWS this would include: new tree planting to the south of Long Plantation (refer to **Figure 6.8**), new planting connecting Bloxholm Woods to Warren Pit Plantation, and new planting along the B1191 (Heath Road) towards Slate House Farm (refer to **Figure 6.5**). Elsewhere, new tree belt planting would also extend south from Gorse Hill Covert along the western boundary of the Site. The location of new planting would be secured by the Green Infrastructure Parameters presented in **Appendix 1** of the **oLEMP [EN01049/APP/7.9]**.

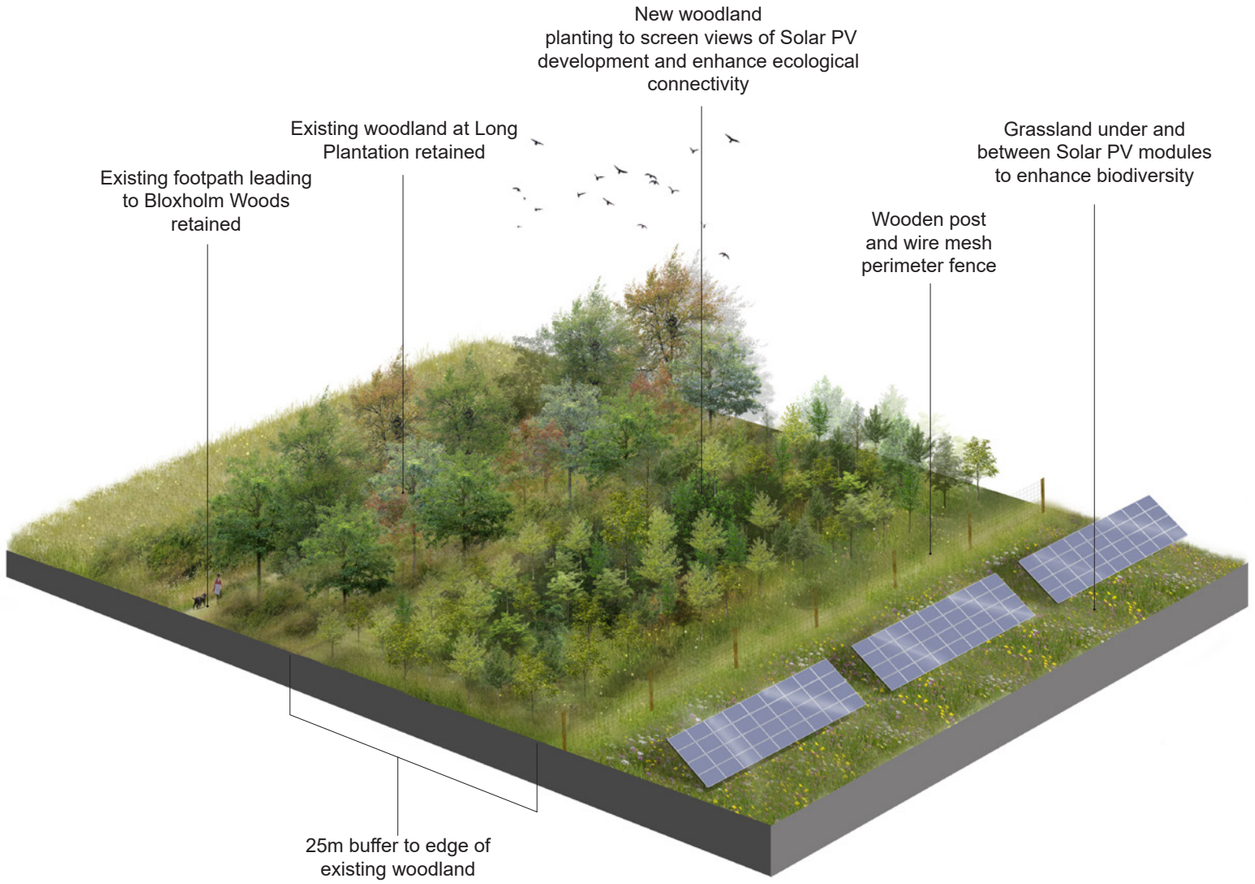


Figure 6.9: Indicative treatment of Long Plantation

Principle 3.2

Create a mosaic of habitats, such as new grassland and arable margins, to support farmland birds such as skylark and grey partridge and species such as brown hare.

The Applicant has developed the design of the Proposed Development to create a mosaic of habitats to support farmland birds and other key species. This will include the creation of approximately 100ha of open grassland spread across the Order Limits at strategic locations to maximise biodiversity benefit. Where practicable these areas are grouped together and have been aligned to be within, or in close proximity to Biodiversity Opportunity Areas. This is designed to provide open nesting habitat for ground nesting birds to compensate for habitat lost due to placement of Solar PV modules, improve habitat and carrying capacity for ground nesting birds, and increase insect diversity to benefit other nesting birds and foraging bats. The creation of new grassland areas would be spread across the Proposed Development at strategic locations as shown in **Figure 6.10**. The types of grassland habitat would vary to reflect the local landscape character and would include calcareous grassland in Springwell West and Springwell Central and neutral grassland in Springwell East.

Elsewhere throughout the Site, a minimum 10m offset would be provided from all existing hedgerows (with the exception of where access tracks and/or cable routes are required to cross an existing feature). This is based by published guidance **[Ref 16]** and would be secured by the **Design Commitments [EN010149/APP/7.4]** and the spatial extents set out by the **Works Plans [Ref EN010149/APP/2.3]**. The offsets would provide 10m wildlife corridors throughout the Proposed Development and would include the creation of new grassland margins, tree belts and hedgerows. They would provide a variety of biodiversity benefits including: new habitat for invertebrates, reptiles, amphibians, small mammals and birds; vegetated cover for foraging and dispersal, to maintain bat flight lines across the landscape, and provide a winter seed source for birds.

Impacts of the Proposed Development on birds is assessed in **ES Volume 1, Chapter 7: Biodiversity [EN010149/APP/6.1]** which concludes that there is anticipated to be an overall significant beneficial effect due to enhancement of farmland bird nesting habitat and foraging habitat as detailed in and secured by the **oLEMP [EN010149/APP/7.9]**.

Principle 3.3

Use locally native species wherever possible to create new habitats, increase the number of pollinator species and create food sources for birds such as skylark and yellow hammer during winter months.

The Applicant is committed to using locally native species to create new habitats, increase the number of pollinator species and create food sources for wildlife. This is set out within the **oLEMP [EN010149/APP/7.9]** together with details of the general approach to planting to be approved at detailed design.

Species mixes would replicate as far as practicable the makeup and pattern of planting typologies found within the local environment and with consideration of future climate change. They would consist of native and indigenous species with preference given to plant species of local provenance wherever possible. Mixes would include species which maximise biodiversity and provide habitat for wildlife guided by local requirements and objectives, and the landowners knowledge and experience of creating similar habitats in the local area. A proportion of field margins will be sown with a suitable seed mix to provide winter food source for farmland birds and will incorporate areas of spring and autumn cultivation to enable continued growth of a number of scarce plants that require open conditions.

For seeding areas within or adjacent to existing LWS, species would be included to support lowland calcareous grassland and be informed by guidance published by the Greater Lincolnshire Partnership on locally appropriate species for the County.

Tree belts will be a combination of native broadleaf and coniferous species and include bushier smaller species such as hazel, hawthorn and blackthorn to provide structure and screening at lower levels.

Hedgerows will comprise a native mix of scrubby species such as hawthorn, blackthorn and hazel, interspersed with taller tree species such as field maple and oak which will mature to become large hedgerow trees. The location of new structure planting is shown **Figure 6.11** and would be secured by the Green Infrastructure Parameters presented in **Appendix 1** of the **oLEMP [EN01049/APP/7.9]**.

Principle 3.4

Use land under and between Solar PV modules to deliver biodiversity benefit for pollinators and farmland birds.

The Applicant has developed the design of the Proposed Development to use land under and between Solar PV modules to deliver biodiversity benefit for pollinators and farmland birds. This is set out within the **oLEMP [EN01049/APP/7.9]** and will include the creation of legume (clovers, vetches etc.) rich modified grassland and species-rich neutral grassland under and between panels to increase floristic diversity and consequently increase invertebrate diversity and abundance (refer to **Figure 6.9**). An increase in invertebrate diversity and abundance will provide a foraging source for birds and bats.

Figure 6.10: Location of proposed grassland habitats: open fields and margins (dark green), under panels (light green)

Principle 3.5

Establish new planting and bunding at the earliest practicable opportunity.

The Applicant recognises the importance of new planting and bunding to mitigate the Proposed Development. This includes screening views from sensitive receptors, screening glint and glare from sensitive receptors, integrating the Proposed Development with the existing landscape context, and providing new habitat to improve biodiversity and connectivity. Establishing new planting and bunding at the earliest practicable opportunity would have benefit in reducing the short-term impacts of the scheme, particularly new planting which typically takes up to 10 years to establish.

The Applicant is committed to implementing proposed vegetation and advanced planting (prior to installation of solar panels) as part of the Proposed Development. This will include planting adjacent to the A15 to mitigate glint and glare effects of Solar PV development in Winter 2024-25.

The Applicant remains open to potential further early planting in areas identified by the Green Infrastructure Parameters presented in **Appendix 1** of the **oLEMP [EN01049/APP/7.9]**, in agreement with the Landowner under existing land management rights. Locations where any potential planting may occur, would 1) provide earlier mitigation of effects stated in the **Environmental Statement [EN010149/APP/6.1]** through earlier establishment and growth, 2) not hinder existing / future farming operations, 3) provide an environmental / biological benefit to the local area regardless of the Proposed Development. Such planting could include tree planting, planting new hedgerows, or infilling gaps in existing hedgerows.

A phasing strategy would be produced for new planting and bunding at the detail design stage of the project in accordance with the **oLEMP [EN01049/APP/7.9]**. This would be aligned to the construction phase strategy and identify priority areas for new planting and bunding to be implemented.

Principle 3.6

Deliver a substantial Biodiversity Net Gain beyond the minimum of 10%.

The combination of measures detailed in the **oLEMP [EN010149/APP/7.9]** results in the Proposed Development delivering a Biodiversity Net Gain of 31.66% for Habitats, 20.68% for Hedgerows and no change in Watercourses at this stage of the design. This has been assessed through the **ES Volume 3, Appendix 7.14: Biodiversity Net Gain Assessment [EN010149/APP/6.3]** and is based on the Department for Environment, Food and Rural Affairs (DEFRA) Biodiversity Metric **[Ref 18]**. Updates to the BNG calculation will be undertaken as part of the detailed design and LEMP(s) to ensure a minimum of 10% BNG is delivered.

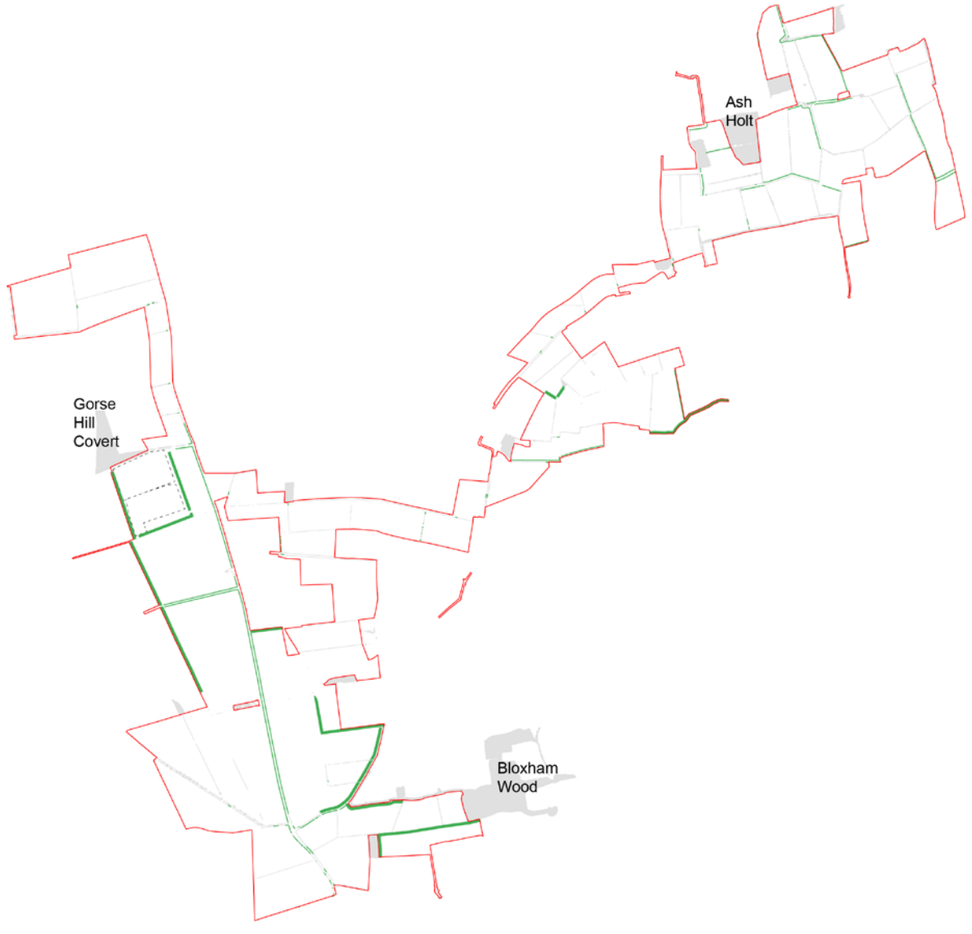


Figure 6.11: Location of existing (grey) and proposed structural planting: tree belts and hedgerows (green)

4

Make efficient use of the land, touch it lightly

Principle 4.1

Optimise generation and export capacity of the Proposed Development within the constraints of the Site to make the most efficient use of the land and available grid connection.

The Applicant has developed the design of the Proposed Development to optimise the generation and export capacity of the project within the constraints of the Site. This is needed 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 **Statement of Need [EN010149/APP/7.1]** which supports the DCO Application provides further detail on the need for the Proposed Development. Optimisation of the design has included the siting of the Proposed Development to make use of existing and available grid infrastructure, incorporation of BESS technology to provide grid balancing services, and allowance for future technological innovation and improvements within the provisions of the **draft DCO [EN010149/APP/3.1]**. The Proposed Development equates to an output of 1MW per 2.4 acres which represents an efficient use of the land for solar PV and associated infrastructure within the range identified at paragraph 2.10.17 of NPS EN-3. The **Environmental Statement [EN010149/APP/6.1]** provides a detailed assessment of the constraints of the Site and provides detail of the embedded mitigation to reduce the impacts of the Proposed Development.

Principle 4.2

Internal access tracks and cable routes will use existing tracks, crossings and / or gaps in the hedgerows wherever practicable.

The Applicant has committed to use existing tracks, crossings and / or gaps in the hedgerows for all internal access tracks and cable routes wherever practicable. This is set out in the **Design Commitments [EN010149/APP/7.4]** for the detailed design of the Proposed Development and is secured by a requirement in the **draft DCO [EN010149/APP/3.1]**.

In some instances, utilising existing tracks, crossing and / or gaps in the hedgerows might not be practicable, or might have greater impacts on the local environment compared to alternative designs. For example, in Springwell Central, utilising the existing access south of the B1191 (Heath Road) adjacent to Scopwick Mill is likely to have a greater detrimental impact on the local environment compared to creating a new access and break in the hedgerow further to the west (part way along on Field Bk03). Elsewhere it may not be possible to accommodate the cable route within an existing gap in the hedgerow and this might necessitate additional vegetation removal.

The Vegetation Removal Parameters presented in **Appendix 2** of the **oLEMP [EN01049/APP/7.9]** show the maximum area of vegetation anticipated to be removed by the Proposed Development and has been informed by indicative dimensions for the cable trenching, indicative location of internal access tracks and indicative locations for cable crossings as shown in **ES Volume 2, Figures [EN010149/APP/6.2**]. Final extents of vegetation removal would be secured post consent by requirement of the **draft DCO [EN010149/APP/3.1]** to submit further detailed LEMP(s).

Principle 4.3

Grid connection route should comprise below ground cables – cabling routes will run alongside access tracks as much as possible to avoid wider excavations.

The Applicant has committed to below ground cabling for the grid connection route and for cable routes to run alongside access tracks as much as possible to avoid wider excavations. This is set out in the **Design Commitments [EN010149/APP/7.4]** and is secured by a requirement in the **draft DCO [EN010149/APP/3.1]**. Cabling below ground will reduce the visual impact of the scheme and helps to integrate the Proposed Development with the local environment.

Figure 6.12: Precedent image of wooden post and wire mesh perimeter fence

Principle 4.4

Fences will be designed to integrate with the local environment, allow for the movement of wildlife and meet the functional requirements of the project.

Applicant has committed to design fences to integrate with the local environment, allow for the movement of wildlife and meet the functional requirements of the Proposed Development. This is set out in the **Design Commitments [EN010149/APP/7.4]** for the detailed design of the Proposed Development and is secured by a requirement in the **draft DCO [EN010149/APP/3.1]**.

For perimeter fencing surrounding Solar PV development, fences would be offset from existing vegetation to create a network of wildlife corridors across the Order Limits (as described in Project Principle 2.1). The fencing would be designed to permit the passage of wildlife, either through a clearance at ground level or via mammal gates, and would not be constructed through existing hedgerows or ditches wherever practicable. Perimeter fencing around the Solar PV development would comprise wooden post and wire mesh fencing (refer to **Figure 6.12**) to minimise visual impact on the local environment and would be screened by new hedgerow planting at visually sensitive locations.

Perimeter fencing around other elements of the Proposed Development, such as the Springwell Substation and BESS, would comprise metal palisade fencing or metal mesh with pulse monitoring to meet the safety and security requirements of the project.

Principle 4.5

Minimise the use of concrete and foundations where practicable.

The Applicant has committed to minimise the use of concrete and foundations where practicable within the detailed design of the Proposed Development to reduce the impact on the land and support the return to agricultural at decommissioning.

For areas of Solar PV development, the mounting structure of the Solar PV modules would be predominantly fixed to the ground using driven or helical piles which could easily be removed at decommissioning.

Concrete footings would only be used where ground conditions restrict the use of piles, for example, where there are areas of sensitive archaeology. This will be secured by the **Outline Construction Environmental Management Plan [EN010149/APP/7.7]**.

For other elements of the Proposed Development that require hardstanding, such as the BESS and compound areas, the layout would be designed to make the most efficient use of land and the extent of foundations would be limited to the minimum functional requirement.

5

Provide new ways to enjoy the countryside that go beyond the lifetime of the scheme

Principle 5.1

Retain all PRoW in their existing alignment in the long term.

The Applicant has developed the design of the Proposed Development to retain all existing PRoW within the Order limits in their existing alignment during operation. These are shown on **ES Volume 2, Figure 2.2 Existing Public Rights of Way [EN010149/APP/6.2]**.

In addition to the retention of all PRoW, mitigation measures are proposed to minimise the level of visual change for PRoW users and ensure that PRoWs can continue to be used the same as pre-development of the Site. This includes a minimum 15m offset to Solar PV development from all PRoW and a minimum 50m offset to Independent Outdoor Equipment (transformer, switchgear and central inverters) and ITS. These offsets are secured by the **Design Commitments [EN010149/APP/7.4]** and the spatial extents shown on the **Works Plans [EN010149/APP/2.3]**. Further information on how the design of the Proposed Development would respond to existing PRoW is provided in Principles 5.2 and 5.3. **Figure 6.13** shows the indicative treatment of a sample PRoW with different types of buffers and planting applied to either side.

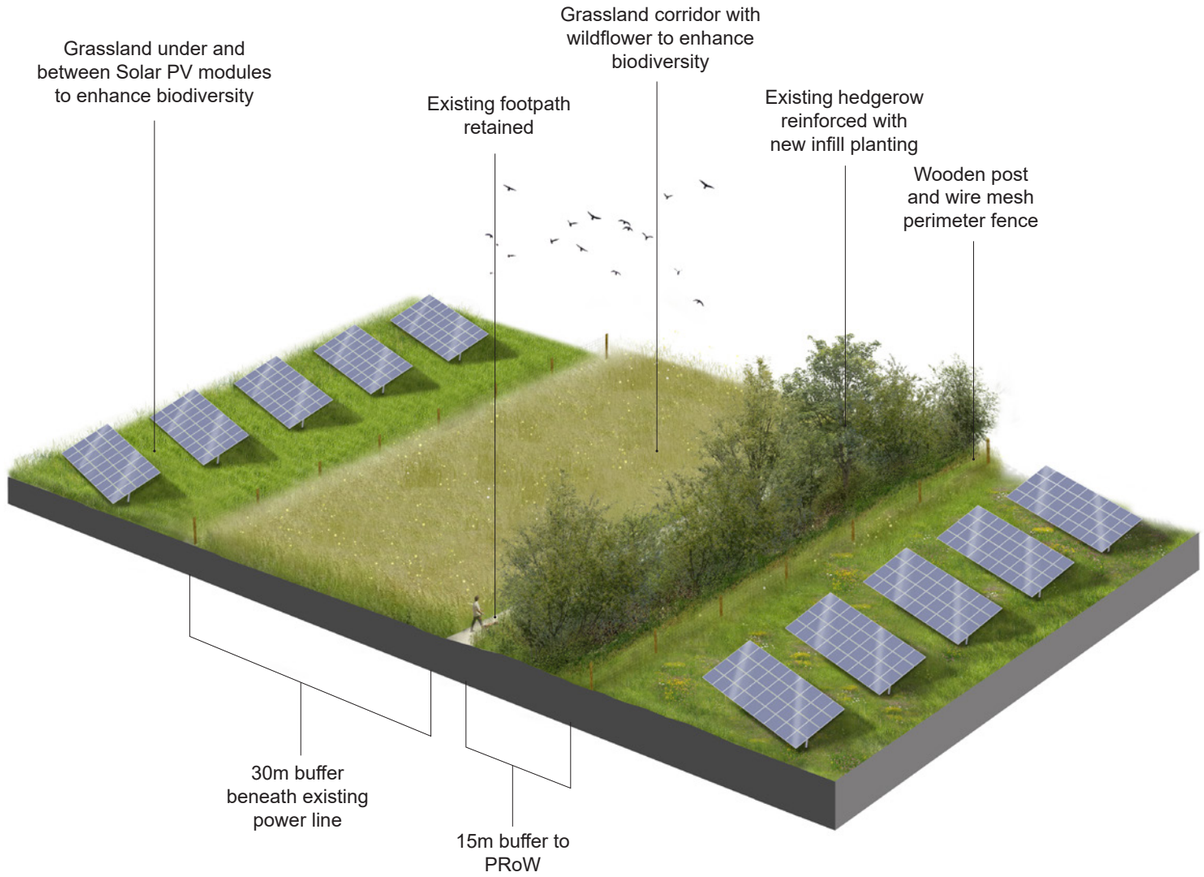


Figure 6.13: Indicative treatment of a sample PRoW with different types of buffers and planting applied to either side

Principle 5.2

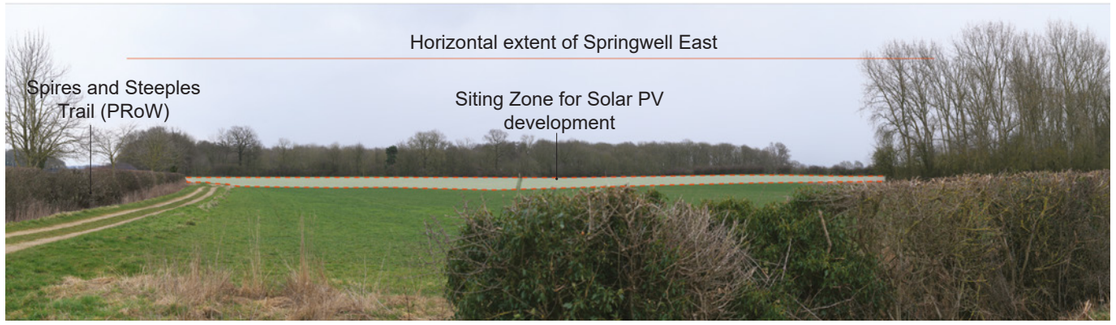
Protect the amenity of the Spires and Steeples Trail, avoiding any Solar PV development between the route and the B1188.

The Applicant has developed the design of the Proposed Development to protect the amenity of the Spires and Steeples Trail between Blankney and Scopwick. This has included discounting Solar PV development from all adjoining fields within the Order Limits west of the footpath (Fields C7, Md03, Md04 and Md05) and north of Scopwick (Field Md02). As a result, Solar PV development would only be located adjacent to the Spires and Steeples Trail for a short stretch of the route (approx. 250m in Fields C6, C8 and C9). This would minimise the potential visual effects on users of the footpath and ensure no views of the churches at Blankney or Scopwick would be interrupted by the Proposed Development. This would be secured by the spatial extents shown by the **Works Plans [Ref EN010149/APP/2.3]**.

Where Solar PV development is proposed adjacent to the Spires and Steeples Trail, mitigation measures are proposed to reduce the potential impacts on footpath users. In addition to the minimum 15m offset to Solar PV development from all PRoW, a larger offset would be provided at the north west corner of Field C6 where the footpath follows the corner of the field boundary.

Mitigation planting, in the form of new hedgerows, is proposed along the western boundaries of Fields C8 and C9 and along the northern boundary of Field C6. At these locations the path would be located within a wide (minimum 15m) walking corridor bounded on either side by existing or proposed hedgerows (refer to **Figure 6.14**). Once these hedgerows have established to a height of 3.5m there would be no views of the Proposed Development through the vegetation, except potentially heavily filtered glimpses in winter months but this would be barely discernible. The location of mitigation planting would be secured by the Green Infrastructure Parameters presented in **Appendix 1** of the **oLEMP [EN01049/APP/7.9].**

In addition to the mitigation measures identified above, the Spires and Steeples Trail would be upgraded to bridleway status and the surface of the path improved in accordance with the **Design Commitments [EN010149/APP/7.4]**. Further details on the how the Spires and Steeples Trail would be enhanced for users is provided Principle 5.4.



Existing view

Illustrative visualisation 1 year post-construction

Illustrative visualisation 10 years post-construction

Figure 6.14: Viewpoint 12: Spires and Steeples Trail (looking east along the footpath towards Ash Holt)

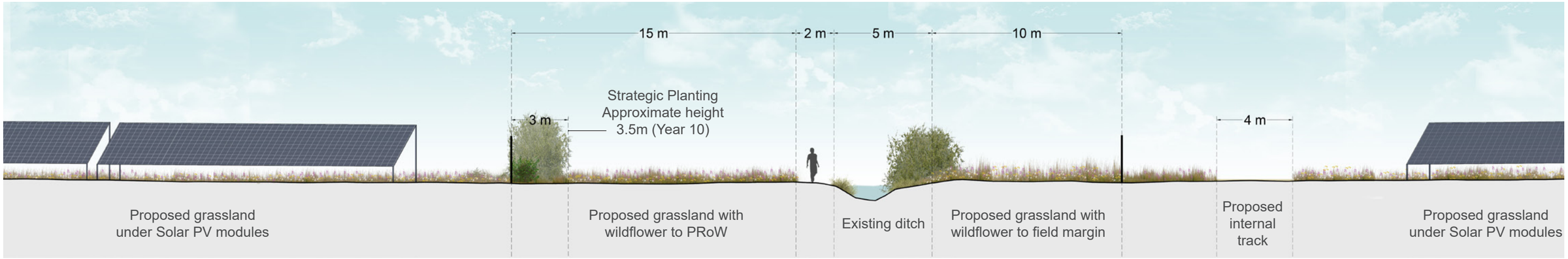


Figure 6.15: Indicative section through PRoW (Scop/1134/1)

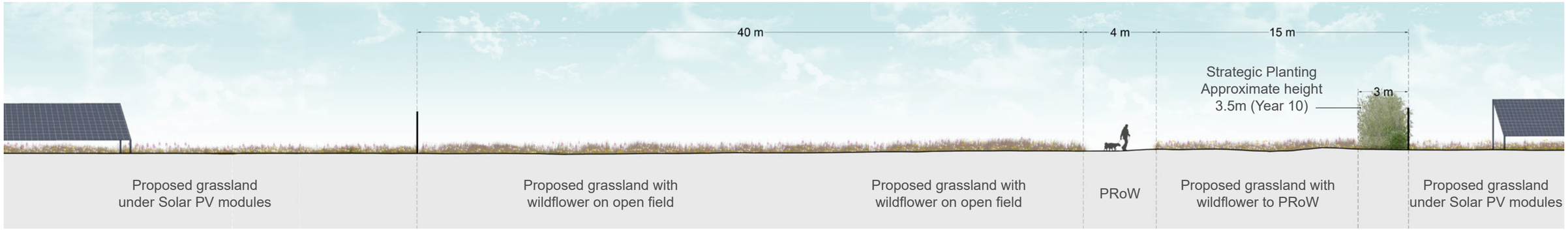


Figure 6.16: Indicative section through PRoW (Scop/1135/3)

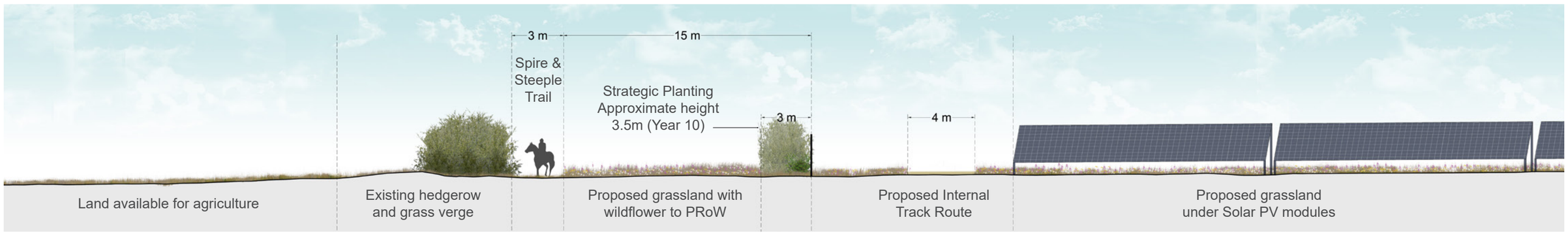


Figure 6.17: Indicative section through Spire and Steeple Trail

Principle 5.3

Consider sequential views and the experience of people using the Stepping Out Walks and other local footpaths.

The Applicant has developed the design of the Proposed Development to consider views and the experience of people using the Stepping Out Walks and other local footpaths. This has formed part of the iterative design and EIA process and is assessed in **ES Volume 1, Chapter 10: Landscape and Visual [EN010149/APP/6.1]**. The proposed design response includes discounting Solar PV development from specific fields within the Order Limits to break up the amount of development along footpaths and to create green infrastructure corridors aligned to them. This is summarised as follows.

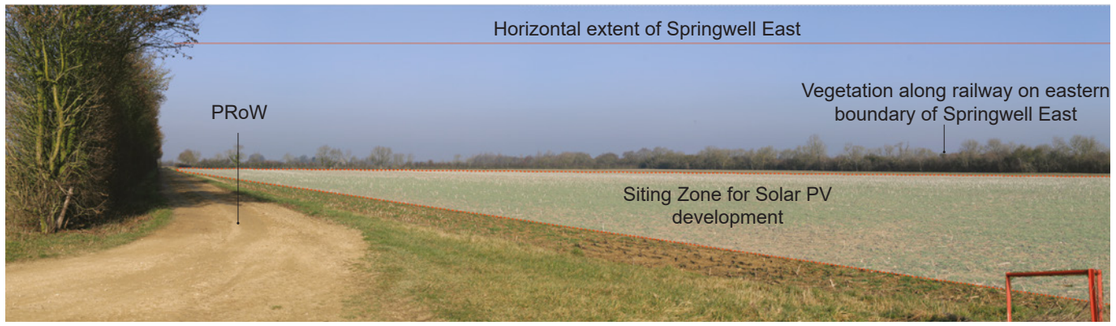
In Springwell East, Solar PV development is discounted from Fields By18, By20, By27, Lf03, Lf02, Md02, Md03, and Md05 as shown by the **Works Plans [EN010149/APP/2.3]**. All of these fields are adjacent to existing footpaths including the Stepping Out Scopwick Loop and the Stepping Out Blankney Circuit. As a result, there are relatively few sections of PRoW where the Solar PV development would occupy land immediately adjacent to both sides of a footpath. Whilst a large amount of the farmland within the tract of the landscape between Blankney, Scopwick and Kirkby Green would be occupied by Solar PV development (including a Satellite Collector Compound), proportionately at least as many fields would remain in agricultural use and break up the mass of development. Views from the PRoWs would therefore be of a mosaic of Solar PV development and arable crop and would remain primarily rural.

Where Solar PV development is proposed adjacent to footpaths, perimeter fencing will be offset at least 15m from either side of existing and proposed statutory PRoW as secured by **the Design Commitments [EN010149/APP/7.4]**. Larger offsets would also be provided to PRoWs in Fields C6, Lf05, Lf04, and By11. These offsets would provide pockets of open space along the existing footpaths to create variation and interest for users (refer to **Figures 6.15 to 6.17**).

New planting, in the form of hedgerows and tree belts, will provide screening and integration of the Proposed Development where it is located close to PRoW. The location of new planting is secured by the Green Infrastructure Parameters presented in **Appendix 1** of the **oLEMP [EN01049/APP/7.9]** and includes approximately 15,563m of new hedgerow and 16ha of new tree belts. In areas where Solar PV development is located adjacent to both sides of a footpath this would typically create a wide walking corridor (at least 15m wide) bounded on either side by existing or proposed hedgerows (refer to **Figure 6.18**).

In Springwell Central and Springwell West there is a much lower concentration of PRoW compared to Springwell East, and no instances where Solar PV development is proposed on both sides of an existing footpath. Solar PV development has been omitted from land adjacent to New England Lane to offset the Stepping Out Navenby and the Viking Way.

As a result of the mitigation measures summarised above the level of visual change for PRoW users will be reduced and will ensure that PRoWs can continue to be used the same as pre-development of the Site.



Existing view

Illustrative visualisation 1 year post-construction

Illustrative visualisation 10 years post-construction

Figure 6.18: Viewpoint 3: Junction of Scop/738/1 and Scop/8/1 (looking north along footpath Scop/738/1)

Principle 5.4

Enhance the footpath and cycle network by providing new and improved routes to increase connectivity and link local settlements such as RAF Digby, Scopwick and Blankney.

The Applicant has developed the design on the Proposed Development to create an enhanced and better-connected footpath and cycle network. This includes approximately 3.49km of additional PRoW and approximately 8.58km of additional permissive paths as shown on **Figure 6.19**. These are secured by the **Streets, Rights of Way and Access Plans [EN010149/APP/2.4]** and are described as follows.

Creation of three new PRoW:

- A new PRoW linking RAF Digby to Scopwick (approx. length 1,670m).
- A new PRoW connecting the existing PRoW (AshL/4/1) west of the A15 (near Navenby Lane) to New England Lane (approx. length 830m).
- A new PRoW from Temple Road (north of Brauncewell) to the Bloxham Woods Car Park to provide a connection across the A15 (approx. length 990m).

Creation of four new permissive paths:

- A new permissive path along the western edge of the Proposed Development linking New England Lane to Temple Road, north of Brauncewell (approx. length 4,130m).
- A new permissive path connecting the B1191 (Heath Road) with the existing PRoW between RAF Digby and Rowston (Rows/5/1) (approx. length 1,610m).
- A new permissive path linking Bloxholm Wood to Brauncewell Village (approx. length 1,120m).
- New permissive paths to provide a series of circular walking loops from Bloxholm Woods (approx. length 1,720m).

In addition to the creation of the new routes identified above, the Proposed Development would include a permanent upgrade to the existing PRoW between Scopwick and Blankney to bridleway status (approx. length 2,090m). This would include an upgrade of the existing surface conditions of the trail to better allow user access and enjoyment to 'all-weather' standard allowing year-round accessibility for all users as secured by the **Design Commitments [EN010149/APP/7.4]**. All paths would be managed in accordance with the **Outline Public Rights of Way and Permissive Path Management Plan [EN010149/APP/7.12]** and include waymarking and signage in accordance with the **oLEMP [EN010149/APP/7.9]**.

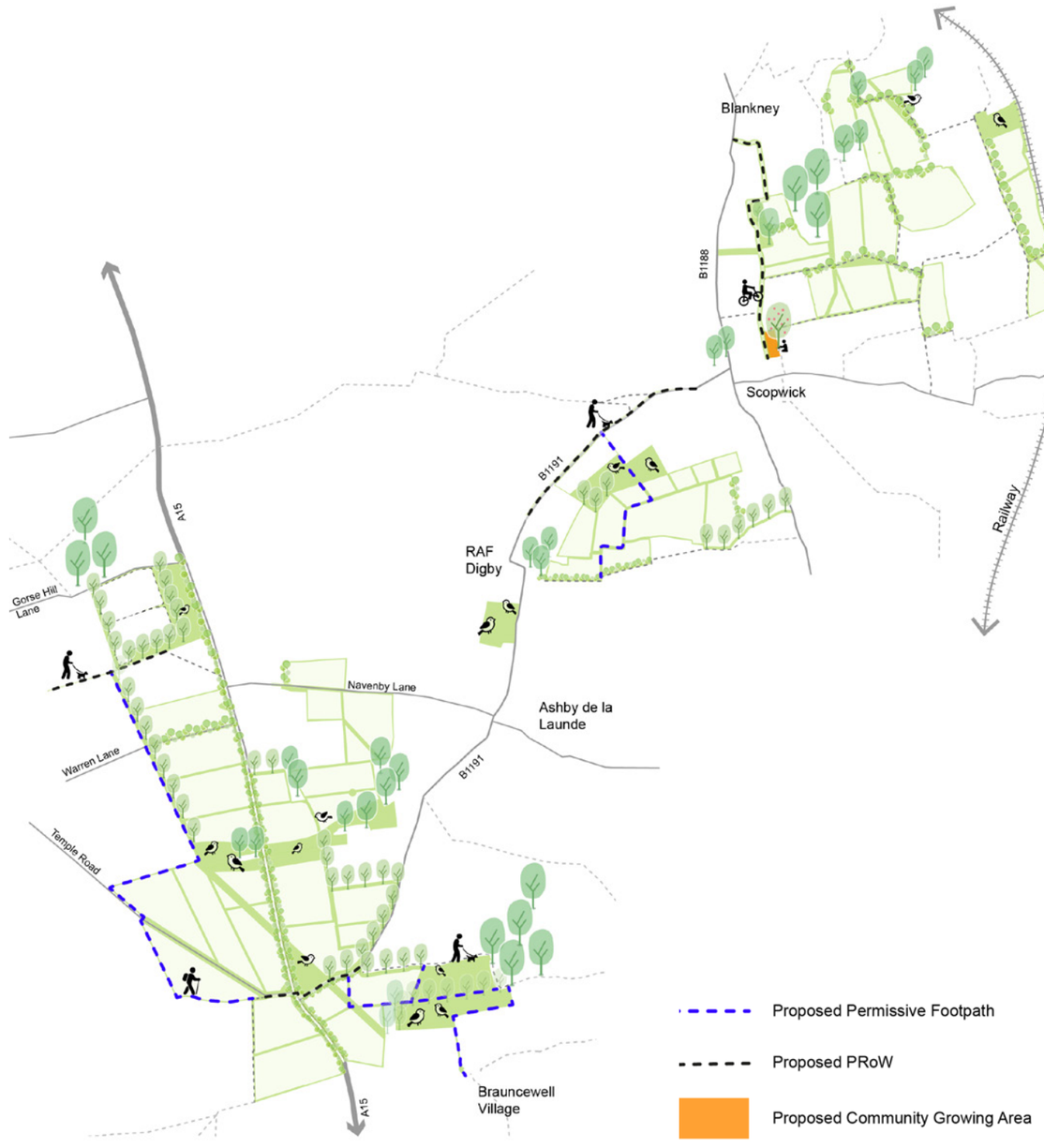


Figure 6.19: Proposed PRoW, permissive paths and community growing area

Improve economic resilience through education and by boosting the UK supply chain

Principle 6.1

Foster innovation and extend supply chain to leave a lasting legacy value for Lincolnshire and the UK.

The Applicant has an established record of adding legacy value through supply chains and has committed to promoting the delivery of economic benefits generated by the Proposed Development to residents and business. This includes opening up opportunities for enhanced business growth and productivity through winning contracts on the Proposed Development and catalysing increased capabilities and specialisms in green construction and manufacturing across Lincolnshire. This is set out within the **Outline Employment, Skills and Supply Chain Plan [EN01049/APP/7.20]**.

Tier 1 contractors would define supply chain needs right across the work phases. The Applicant and its contractors would then engage with relevant stakeholders to deliver a practical awareness raising campaign for businesses both within the area local to the Site and right across Lincolnshire regarding opportunities to engage with work on-site.

This would include offering opportunities for businesses providing relevant goods and services to register an interest in tendering for work; market warming events to provide businesses with information on required supplier capacity and capability requirements; and the creation of practical processes to connect Tier 1 contractors and potential local suppliers.

The Applicant would work with the Lincolnshire Institute of Technology and Lincoln University to promote technical knowledge transfer and encourage innovation regarding solar, and other renewable, energy development and storage.

If DCO consent is granted, the Outline Plan would be developed into a full Employment, Skills and Supply Chain Plan. This would be secured through a requirement of the **draft DCO [EN010149/APP/3.1]**.

Principle 6.2

Provide education and interpretation of the Proposed Development and the Site.

The Proposed Development would be designed to provide education and interpretation of the solar farm site as set out within the **oLEMP [EN01049/APP/7.9]**.

Opportunities for the local community to engage with and learn about the natural environment will be provided. This will include the provision of informal, low-key interpretation boards at appropriate, strategic points across the Order Limits that would allow the local community to learn and engage with nature. Information will also be provided on the solar farm, climate change, local history and ecology and the benefits of renewable energy. This would be agreed in consultation with the Community Liaison Group (CLG).

A new community growing area is proposed to the north of Scopwick in response to stakeholder feedback. The area is located in Field Md06, adjacent to existing community facilities along Vicarage Lane (including the Scopwick cemetery and recreational area), the Spires and Steeples Trail and Stepping Out Scopwick Loop. The community growing area will be made available to the public, 364 days a year, by permission of the landowner and allows for an area of up to 2ha. The detail design of the space will be developed post DCO consent in conjunction with the CLG.

The Applicant would create opportunities for residents to access employment, upskilling and re-skilling opportunities. The opportunities would be led by the workforce needs of the Proposed Development, but could include work experience placements, entry level jobs, joint apprenticeship schemes and higher-level job opportunities. This is set out within the **Outline Employment, Skills and Supply Chain Plan [EN01049/APP/7.20]**.

The Applicant would also harness the motivational potential of the Proposed Development to inspire the next generation of talent to confidently invest their careers and futures in Lincolnshire, by raising awareness of potential opportunities in solar and other renewable industries within the region.

7

Manage water, improve quality, reduce pollution

Principle 7.1

Slow the flow of water within the site to improve flood resilience where practicable.

The **Outline Surface Water Drainage Strategy** (which forms an appendix of the **Flood Risk Assessment [EN010149/APP/7.16]**) will attenuate rainfall runoff from the areas of proposed hardstanding associated with the Proposed Development as part of the sustainable drainage strategy. The surface water will either be discharged at a restricted rate to local watercourses or discharged to the ground via infiltration if found to be a viable option. This will ensure flood risk is not exacerbated as a result of the Proposed Development, whilst also having the potential to provide a flood risk betterment.

It is proposed within the **Outline Surface Water Drainage Strategy** (which forms an appendix of the **Flood Risk Assessment [EN010149/APP/7.16]**) that perimeter swales downslope of the Solar PV arrays will provide additional surface water attenuation and promote infiltration into the ground for surface water runoff from fields containing Solar PV development. This can assist with slowing the flow of water within the site.

Principle 7.2

Apart from Solar PV modules, no built structures (central inverters, substation and collector compounds) will be located within Flood Zones 2 or 3. Solar PV modules will be above the maximum flood height level.

Apart from Solar PV development, the Applicant has developed the design of the Proposed Development to ensure that Springwell Substation, BESS, ITS, Independent Outdoor Equipment (transformer, switchgear and central inverters) and Collector Compounds will be located in Flood Zone 1. This will be secured via **the Design Commitments [EN010149/APP/7.4]**.

Once attached to the mounting structure, the minimum height of the lowest part of the Solar PV modules will be 0.8m above the existing ground level (AGL). This will be above the calculated flood height level for the maximum credible scenario as assessed within the **Flood Risk Assessment [EN010149/APP/7.16]**. Therefore, Solar PV modules within Flood Zone 2 or 3 will be resilient to flooding.

Support agricultural productivity

Principle 8.1

Fields comprising solely of Grade 1 or 2 land within the Site will remain available for arable production.

In accordance with EN-1, the Applicant has sought to minimise impacts on BMV land and preferably use land in areas of poorer quality except where this would be inconsistent with other sustainability considerations. This has influenced both the initial site selection process and the subsequent design evolution of the Proposed Development.

At a macro level, the **Planning Statement, Appendix 1: Site Selection Report [EN010149/APP/7.2]** provides details of how the Order Limits were selected with regard to the quality of the land, noting that the areas selected had a higher proportion of Grade 3 than similar sized parcels elsewhere locally.

As part of the subsequent design evolution of the Proposed Development, the Applicant has sought to omit areas of BMV land from the Order Limits where it is practicable to do so. This is outlined in **Section 5 (Design Evolution)** and has resulted in the Site being covered by a lower percentage of BMV land compared to the percentage of BMV land across Lincolnshire as a whole (42.3% of the Site is covered by BMV land compared to 71.2% coverage within Lincolnshire).

Where BMV land has been included within the Order Limits, the Applicant has sought to minimise impacts on its use for agriculture. The starting point for this has been to discount whole fields comprising of solely Grade 1 or 2 BMV land from proposed built development. This relates to Fields By18 and By27 in Springwell East (refer to **Figure 6.20**). These fields would remain available for arable production as part of the Proposed Development and are included within the Order Limits primarily to allow for underground cable routes and/or use of existing access tracks as shown by the **Works Plans [EN010149/APP/2.3]**.

Further details of how the Applicant has sought to minimise impacts on BMV land and preferably use land in areas of poorer quality is provided in Principle 8.2 and 8.3. This has been assessed through the **ES Volume 1, Chapter 11: Land, Soil and Groundwater [EN010149/APP/6.1]**.

Principle 8.2

Prioritise the use of BMV land for arable production where practicable.

BMV land is present across the Site where it is not practicable to exclude it from the Order Limits. To further reduce impacts on BMV land within the Order Limits, the Applicant has sought to prioritise these areas for arable production where practicable. A summary of how the design of the Proposed Development responds to BMV land is provided below and shown on **Figure 6.20**.

All Grade 1 land within the Order Limits has been discounted from Solar PV development and will remain available for arable production.

Where practicable, Grade 2 land within the Order Limits has been discounted from Solar PV development. The remaining tracts of Grade 2 land proposed for Solar PV development equates to 2.4% (14.3ha) of the total area proposed for Solar PV development. This includes segments of Grade 2 land within Fields By10, By11, By22, By24, Bk02, Bk08, Bk10, Bk11 and

E1. For each of these fields the extent of Grade 2 land is less than the Solar PV development area and generally comprises a small proportion of the field. Fields with larger extents of Grade 2 land, comprising Fields Lf03, Bcd082 and Md06, would remain available for arable production.

Tracts of Grade 3a land are present throughout the Order Limits and are scattered across all three land parcels. In general, the concentration of Grade 3a land in Springwell West is less than Springwell Central and Springwell East and this has been one of the determining factors in proposing a higher proportion of Solar PV development in Springwell West. It is not practicable to exclude all Grade 3a land from Solar PV development due to the way it is distributed across the Order Limits, often forming fragments of individual field parcels. In order to minimise the use of BMV land, the use of Grade 3a land for Solar PV development has been carefully considered by the Applicant on balance with other environmental factors and only proposed where it is considered to be appropriate. As a result, Grade 3a land accounts for 33.2% (196.4ha) of the total area proposed for Solar PV development.

It has not been possible to remove all BMV land from the Order Limits or from the installation of Solar PV modules. To do so would reduce renewable energy generation capability in a location where there is available grid capacity, and at a time when the need for such development is urgent. This is a critical point and is consistent with Paragraph 2.10.31 of EN-3 which explains that solar farm developments are not prohibited on BMV land and that "it is recognised that at this scale, it is likely that applicants' developments may use some agricultural land". This point is further demonstrated by the limited availability of poorer grade land in the areas surrounding the Site. Further details on the policy compliance for using BMV land is set out in the **Planning Statement [EN010149/APP/7.2]**.

Principle 8.3

Prioritise the use on non-BMV land for habitat creation where practicable.

The Applicant has developed the design of the Proposed Development to prioritise the use of non-BMV land for the creation of new habitats where practicable. This has been one of the considerations that has informed the proposed location for the habitat creation areas shown on the Green Infrastructure Parameters presented in **Appendix 1** of the **oLEMP [EN01049/APP/7.9].**

Proposed grassland creation is aligned to non-BMV land in Fields By20, Bcd079, E2, Bcd114, Bcd115 and Tb2 (refer to **Figure 6.21**). In some instances, the proposed location for grassland creation is not aligned to BMV land and has been informed by other environmental factors. For example, Field Bcd140 and Bcd141 contain sensitive below ground archaeology and, through consultation with the landowner, are not considered suitable for arable use despite the presence of BMV land. As a result, these fields are proposed for grassland creation where they will complement the Bloxholm Woods LWS. Similarly, Fields Bk06, Bk07 and Bk15 are also proposed grassland creation despite the presence of majority BMV land. In this instance the decision to proposed habitat creation in these fields has been informed through consultation with the landowner, taking into account the productivity and accessibility of these fields.

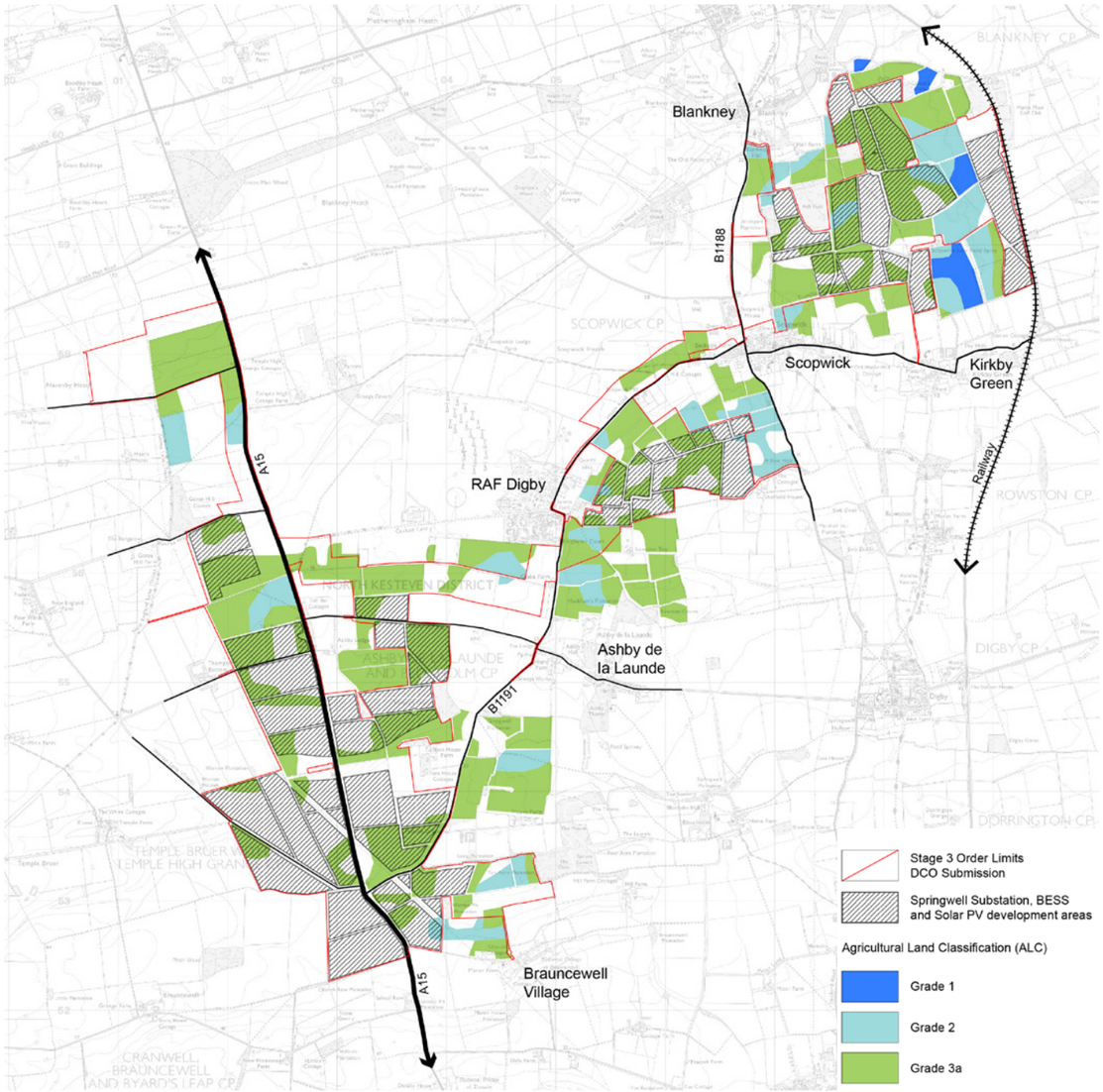


Figure 6.20: Areas of Solar PV development in relation to BMV land

9

Build resilience in a changing climate

Principle 9.1

Design for resilience and adaptation to future climate change.

One of the major risks posed to new developments regarding climate change is flood risk. The Applicant has opted to site potentially vulnerable infrastructure (i.e., Substation and BESS Units) in the northwestern region of the Site, where flood risk is considered to be ‘very low’. This infrastructure will be situated on raised platforms above ground level, to further minimise the residual flood risk. Further information on the extent of design measures implemented to minimise flood risk can be found in the **Flood Risk Assessment [EN010118/APP/7.16]**, as well as principle 7.1 and 7.2.

Proposed planting will also be cognisant of future climate change and species that are drought tolerant and/or require relatively less watering will be favoured.

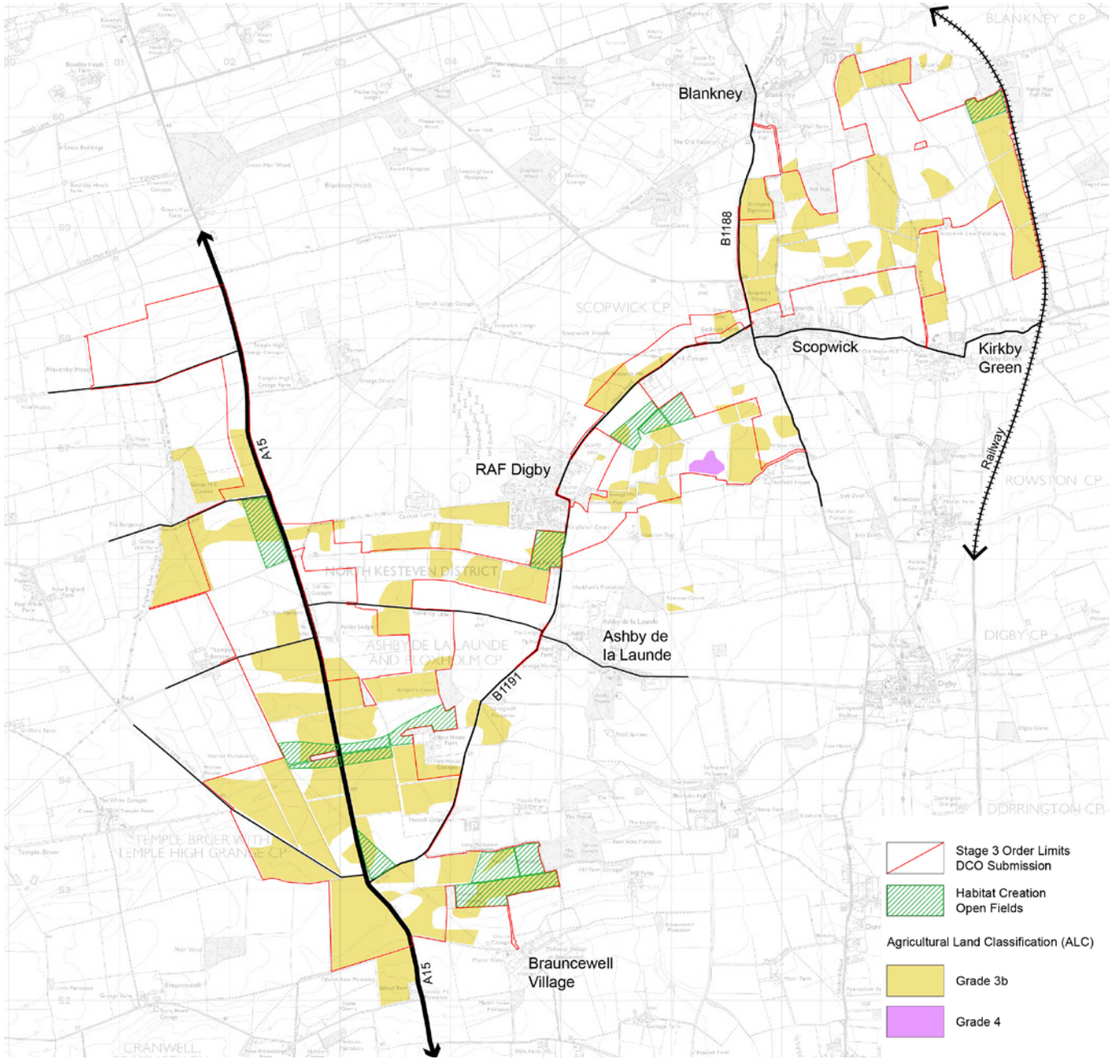


Figure 6.21: Areas of habitat creation (open fields) in relation to non-BMV land

Ensure responsible construction, ongoing maintenance and decommissioning

Principle 10.1

Behave as a considerate neighbour through both construction, operation and decommissioning.

Measures which ensure this principle is appropriately implemented and secured in the **Outline Construction Environmental Management Plan (oCEMP) [EN010149/APP/7.7]**, **Outline Decommissioning Environmental Management Plan (oDEMP) [EN010149/APP/7.13]**, **Outline Operational Environmental Management Plan (oOEMP) [EN010149/APP/7.10]**, and **Outline Construction Traffic Management Plan [EN010149/APP/7.8]** which support the DCO Application.

Principle 10.2

Provide clear lines of communication between the developer and the local community.

Pre-application consultation and engagement with the local community have been key features of the design of the Proposed Development as summarised in the **Consultation Report [EN010149/APP/5.1]**. This has included two phases of formal consultation and a targeted consultation on footpath and highways improvements, alongside a continuous programme of stakeholder and community engagement.

Should the Application be granted consent, a Consultation Liaison Group (CLG) would be established prior to construction on the main site commencing, and last through the construction phase of the Proposed Development. This would provide a forum for discussion throughout the construction period, supplemented by a dedicated Community Liaison Officer to act as a point of contact should there be any queries outside of the forum. This is secured by the **Outline Construction Environmental Management Plan [EN010149/APP/7.7]**.

While the CLG would not be in place during operation, updates would be given to the local community and stakeholders at key milestones to maintain an on-going relationship over the entire lifetime of the project. There would also be contact details onsite and online for members of the community and stakeholders to contact the asset operations team.

Figure 6.22: Precedent images showing construction of a solar farm

Principle 10.3

Prioritise sustainable resource management and techniques and minimise carbon emissions throughout the lifecycle of the Proposed Development.

Measures which ensure this principle is appropriately implemented can be found throughout multiple additional documents submitted in support of the DCO Application, including the **Outline Construction Environmental Management Plan (oCEMP) [EN010149/APP/7.7]**, **Outline Decommissioning Environmental Management Plan (oDEMP) [EN010149/APP/7.13]**, **Outline Operational Environmental Management Plan (oOEMP) [EN010149/APP/7.10]**, and **Outline Employment, Skills and Supply Chain Plan [EN010149/APP/20]**. Likewise, some of the other principles stated in this document indirectly contribute to this principle, such as principle 4.5.

The minimisation of carbon emissions throughout the project lifecycle will also be achieved through adherence to best practice guidelines in-place throughout the lifespan of the project for all applicable aspects of construction (including maintenance and replacement), operation, and decommissioning. This includes:

- Implementing measures to decrease fuel use by maximising energy efficiencies, for example to ensure all vehicles switch off engines when stationary and ensure construction vehicles are well maintained and conform to current emissions standards.
- Promoting the use of sustainable fuels in construction vehicles, and where possible making use of electric vehicles to reduce fuel consumption.
- Liaising with construction staff to minimise GHG emissions associated with their commute to the Site, including provision of staff minibuses, and promoting lower carbon modes of travel such as car sharing options and use of public transport.
- Using locally sourced and/or produced materials. The use of recycled aggregates, where appropriate, for foundations, sub-bases, hard-standings and pavement materials.
- Actions to meet the waste hierarchy in accordance with the principles of the Government's Resources and waste strategy for England 2018 **[Ref 19]**. Promoting the recycling of materials by segregating construction waste to be re-used and recycled where practical.
- Supporting suppliers to produce a Carbon Management Plan to meet carbon reduction objectives.

Section 7
Conclusions

7. Conclusions

7.1.1 The design of the Proposed Development has been developed in accordance with a clear design framework, based on the criteria for good design set out in EN-1**.** This has included the adoption of project level design principles (Project Principles) to guide decision making and embed good design outcomes to the Proposed Development.

7.1.2 Project Principles have evolved throughout the design process, being informed and refined by stakeholder engagement, consultation feedback, technical studies and assessments. They have been used to steer and influence the design of the Proposed Development to avoid and reduce adverse impacts wherever possible, make the most of opportunities for enhancement and balance the need for flexibility and certainty within the DCO Application.

7.1.3 In addition to the generation of secure, low cost, decarbonised, clean, renewable energy, the Proposed Development would deliver a number of environmental, social and economic benefits. These include significant areas of new habitats that respect and enhance features within the landscape, including over 100ha of grassland (including calcareous grassland), 15,563m of new hedgerows and 16ha of tree belt planting delivering a Biodiversity Net Gain and improvements in ecological connectivity.

7.1.4 The Proposed Development would also provide benefits to the local community via an enhanced green infrastructure network including a better-connected footpath and cycle network and access to open space and recreational spaces. These would include the provision of 3.49km of new PRoW, 8.58km of permissive paths, improvements to the Spires and Steeples Trail and a new community growing area.

7.1.5 If DCO consent is given, the design of the Proposed Development will be secured and implemented post-consent, in accordance with the **Environmental Statement [EN010149/APP/6.1]**, via Control Documents contained within the **draft DCO [EN010149/APP/3.1]**. Adherence to the Control Documents will secure good design outcomes, uphold the conclusions of the Environmental Statement, and provide for flexibility.

Section 8

References

8. References

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Ref. 4 *Design Principles for National Infrastructure* (2020) National Infrastructure Commission. Available online: N[redacted]

Ref. 5 *Project Level Design Principles* (2024) National Infrastructure Commission. Available online: [redacted]

Ref. 6. *Central Lincolnshire Local Plan 2018-2040* (Adopted 2023), Central Lincolnshire Joint Strategic Planning Committee. Available Online: Local Plan for adoption Approved by Committee.pdf (n-kesteven.gov.uk).

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Ref. 16 *Guidance: Ancient woodland, ancient trees and veteran trees: advice for making planning decisions* (2022) National England and Forestry Commission. Available online: Ancient woodland, ancient trees and veteran trees: advice for making planning decisions - GOV.UK (www.gov.uk).

Ref. 17 *BS 5837:2012 Trees in Relation to Design, Demolition and construction - Recommendations* (2012) British Standards Institution.

Ref. 18 *Statutory biodiversity metric* (last updated 2024) Department for Environment, Food & Rural Affairs. Available online: Statutory biodiversity metric tools and guides - GOV.UK (www.gov.uk).

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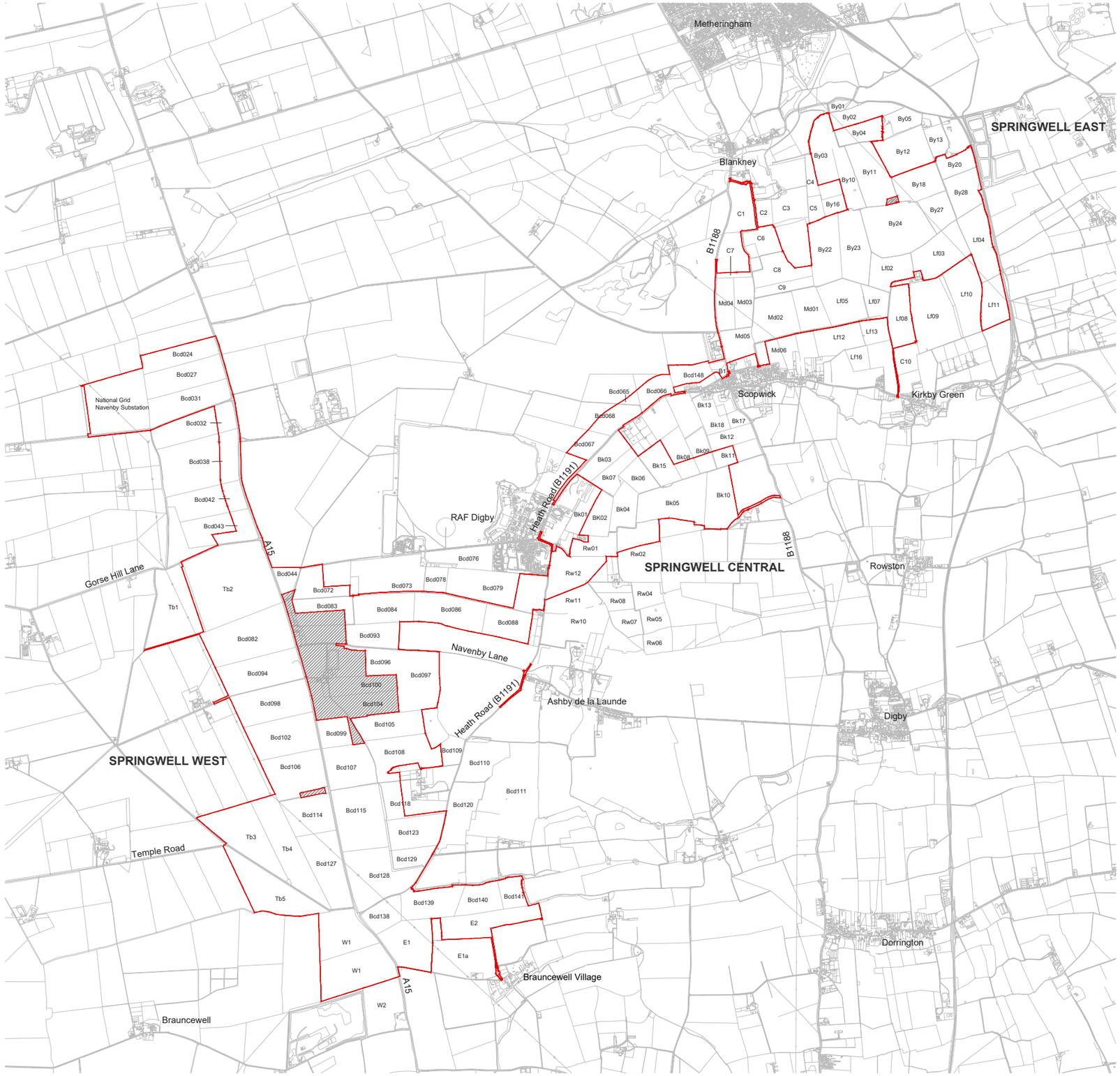
Appendix 1
Field Numbering System

Application Document Ref: EN010149/APP/7.3
Planning Inspectorate Scheme Ref: EN010149



KEY:

Order Limits

Areas outside the Order Limits

NOTES:

1. Ordnance Survey (OS) MasterMap data adopted as the drawing base map.
2. The location of features shown are indicative only. Exact locations to be confirmed on site.
3. Additional features may be present on site that have not been identified on the OS data.
4. The Order Limits are drawn to Land Registry boundaries. In some locations the Land Registry boundaries differ from the OS MasterMap data which results in the Order limits not aligning with the line work shown on the plan.

01	NOV 2024	DCO SUBMISSION	LDA	LDA	EDF
App	Date	Description	Drn	Chk	App

Springwell Solar Farm

DOCUMENT:
ENVIRONMENTAL STATEMENT
VOLUME 2: FIGURES
REGULATION 5(2)(a)

TITLE:
FIGURE 4.1
FIELD NUMBERING SYSTEM

PIN REFERENCE NUMBER:
EN010149/APP/6.2

SCALE : 1:40,000 @ A3

0 2.5km

REV: 01

Springwell Solar Farm

springwellsolarfarm.co.uk

Application Document Ref: EN010149/APP/7.3
Planning Inspectorate Scheme Ref: EN010149