



# BEACON FEN

## ENERGY PARK

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Appendix 6.3 – Landscape Character Baseline and Sensitivity Assessment

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## Quality information

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# 1. Appendix 6.3 Landscape Character Baseline and Sensitivity

## 1.1 Introduction

1.1.1 This appendix sets out the landscape characteristic and sensitivity as identified at a National, Regional, Local and Site level. Landscape character areas within the Landscape and Visual assessment (LVIA) study area are illustrated in **Figure 6.5 Landscape Character (Document Ref: 6.4 ES Vol.3, 6.3.16)**.

## 1.2 Landscape Character of the Site

1.2.1 The key characteristics of the site, including the Solar Array Area, the Cable Route Corridor and Bespoke Access Corridor, are described below.

### Key Characteristics:

- Medium to large-scale landscape field pattern, comprised of irregular mosaic of predominantly arable fields;
- Largely flat, uniform landscape with few detracting landscape features, with small woodland blocks present within the site area such as Fox Covert;
- Views of large scale infrastructure including wind farms are more prevalent from the Cable Route Corridor to the south of the Site;
- Limited boundary hedgerows and trees with occasional trees and roadside vegetation screening;
- Extensive agricultural drainage network that often forms boundaries between field parcels with numerous ponds and water bodies evident within the site;
- Absence of detracting features or structures within field parcels;
- PRowS are routed through the Cable Route Corridor and Bespoke Access Route with a single PRow present (on map but not on the ground) in the Solar Array Area;
- The A17 road traverses the Cable Route Corridor; and
- Relatively open and expansive views are available beyond the Site boundary of the wider landscape.

### Landscape Value

1.2.2 The value of the site is assessed in Table 1.1 below.

**Table 1.1 - Landscape Value of the Site**

FACTOR	THE SITE	VALUE
Natural heritage	The site features few if limited landscape elements, with only intermittent field hedgerows as boundaries, occasional trees and drainage bunds. Woodland blocks are infrequent, and the landscape pattern and	Medium

FACTOR	THE SITE	VALUE
	form is typically large scale and uniformly of arable use. Agricultural drains feature some elements of ecological and biodiversity value.	
<b>Cultural heritage</b>	There are no specific cultural or heritage features at site level, with most assets typically around the perimeter comprised of Listed Buildings such farmsteads in surrounding hamlets and villages.	Low
<b>Landscape condition</b>	The predominantly agricultural landscape is in good overall condition and state of health, with strong structure and landscape pattern.	Medium
<b>Associations</b>	There are no cultural associations present within the site	None
<b>Distinctiveness</b>	The character of the site is largely influenced by the agricultural landscape features contained within, such as the drainage ditches and large scale and pattern which is typical of the landscape within the wider rural area.	Medium
<b>Recreational</b>	There are limited recreational opportunities within the Site although several PRoW are routed through the Cable Route Corridor and Bespoke Access Route and Solar Array Area; including a single PRoW within the site.	Low
<b>Perceptual (scenic)</b>	The site is relatively open, uninterrupted and offers extensive panoramic views despite its intensively farmed character, with few detracting features.	Medium
<b>Perceptual (Wildness and tranquillity)</b>	The site offers some perceptions of tranquillity despite its intensively farmed land use.	Medium
<b>Functional</b>	The landscape of the site forms part of a multifunctional Green Infrastructure Network with a partially connected series of tree blocks, hedgerows and drainage channels that offer ecological value.	Medium

1.2.3 Overall, the value of the landscape of the site is assessed as medium due to its overall perceptual characteristics of tranquillity and with some scenic qualities that reflect the character of the wider rural landscape.

1.2.4 The sensitivity of the Site has been assessed in **Chapter 6: Landscape and Visual (Document Ref: 6.2 ES Vol. 1, 6.2.6)**.

## 1.3 Local Landscape Characteristic

1.3.1 The following section sets out the Local Landscape Character baseline across the study area and should be read in combination with **Figure 6.5: Landscape Character (Document Ref: 6.4 ES Vol.3, 6.4.16)**.

## North Kesteven District Council

1.3.2 The following Landscape Sub Areas have been identified within North Kesteven Council based on the North Kesteven District Council Landscape Character Assessment, September 2007<sup>1</sup>.

### Fenland Landscape Sub-Area

1.3.3 The Site is largely located within the Fenland Sub-Area, key characteristics include the following:

- *“Landscape Sub-Area runs the entire length of the District;*
- *The narrowest part is in the north, widening southwards beyond Sleaford to meet the Upland Plateau Fringe;*
- *The western edge is defined by the Limestone Heath and Slea Valley, 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; and*
- *Opportunities for landscape enhancement mainly rest with increased hedgerow and tree planting and maintaining the character of the villages.”*

### Landscape Value

1.3.4 The value of the Fenland Landscape Sub-Area is assessed in Table 1.2 below.

**Table 1.2 - Landscape Value of Fenland Landscape Sub-Area**

FACTOR	THE SITE	VALUE
Natural heritage	This Landscape Sub Area currently comprises predominantly of arable farmland, which is divided into medium to large-scale fields and contains numerous agricultural drainage ditches with occasional field boundary hedgerows. The openness and rural character reflect the characteristic field pattern of the wider Sub-Area. There are a limited number of woodland copses, tree blocks or hedgerows; therefore, the ecological value of the habitats is limited.	Medium

<sup>1</sup> North Kesteven District Council Landscape Character Assessment September 2007

FACTOR	THE SITE	VALUE
<b>Cultural heritage</b>	The cultural heritage within this Sub-Area is contained within the settlements of North and South Kyme. There are no other major settlements within this Sub-Area. Remnants of a medieval castle within South Kyme known as Kyme Tower, a Grade I listed structure is a notable heritage asset within the sub-area.	Medium
<b>Landscape condition</b>	Landscape elements are generally intact and managed with some fragmented hedgerows.	Medium
<b>Associations</b>	No specific cultural or literary associations have been identified	Low
<b>Distinctiveness</b>	The landscape character of this Sub-Area is coherent with landscape elements that create a characteristic pattern of the site, with largely open, flat, expansive areas devoid of any larger landscape elements or tree cover.	Medium
<b>Recreational</b>	There is limited recreational value within this landscape Sub-Area, as most PRowS tend to align with the local road network with few footpaths and bridleways.	Low
<b>Perceptual (scenic)</b>	Views are generally uninterrupted and open, with some evidence of built form in the distant views and surrounding settlements.	Medium
<b>Perceptual (Wildness and tranquillity)</b>	The rural landscape is of medium tranquillity due to the presence of the local road network with occasional powerlines. The landscape is also intensively farmed, whereby landscape assets such as woodlands are scarce.	Medium
<b>Functional</b>	The landscape of this Sub-Area almost exclusively consists of arable farming and offers limited functional landscape links beyond the presence of drainage dykes. Dykes themselves are often colonised with sedge and reeds presenting a valuable habitat resource.	Medium

1.3.5 Overall, the value of the Fenland Landscape Sub-Area is assessed as medium. This is due to the perceived openness and largely distinctive intact agricultural landscape present within this character area and the associated perceptual and scenic qualities.

1.3.6 The sensitivity alongside landscape effects on Fenland Landscape Sub-Area has been assessed in **Chapter 6: Landscape and Visual (Document Ref: 6.2 ES Vol. 1, 6.2.6)**.

### Central Clays and Gravels Landscape Sub-Area

1.3.7 This Central Clays and Gravels Landscape Sub-Area is located immediately adjacent to the west of the Solar Array Area and the Bespoke Access Road is largely located within this Sub-Area. Key Characteristics include:

- *“Landscape Sub-Area runs the entire length of the District;*
- *The narrowest part is in the north, widening southwards beyond Sleaford to meet the Upland Plateau Fringe;*
- *The western edge is defined by the Limestone Heath and Slea Valley, 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; and*
- *Opportunities for landscape enhancement mainly rest with increased hedgerow and tree planting and maintaining the character of the villages.”*

## Landscape Value

1.3.8 The value of the Central Clays and Gravels Landscape Sub-Area is assessed in Table 1.3 below.

**Table 1.3 - Landscape Value of Central Clays and Gravels Landscape Sub-Area**

FACTOR	THE SITE	VALUE
<b>Natural heritage</b>	This Landscape Sub Area currently comprises a mix of arable farmland frequently interspersed with settlements including Sleaford. There are some more substantial plantations to the south but overall, the contribution of natural heritage is limited.	Medium
<b>Cultural heritage</b>	The cultural heritage assets within this Sub-Area are moderate to limited.	Low
<b>Landscape condition</b>	Landscape elements are generally in reasonable condition but the frequent presence of built development, energy infrastructure and transport corridor has resulted in some fragmentation.	Medium
<b>Associations</b>	No specific cultural or literary associations have been identified.	Low
<b>Distinctiveness</b>	The landscape character of this Sub-Area is less strongly characterised than the fenland to the east and more influenced by the presence of built development.	Low
<b>Recreational</b>	There are some regionally promoted routes such as the Spire and Steeples Trail and a modest PRow network.	Medium

FACTOR	THE SITE	VALUE
<b>Perceptual</b> (scenic)	Views of agricultural landscape are frequently interrupted by the presence of built development and transport corridors. Although some parts have scenic quality and landmarks such as church spires add to this quality.	Medium
<b>Perceptual</b> (Wildness and tranquillity)	Relatively limited perceptions of tranquillity because of the presence of settlements and transport corridors. The rural landscape is also intensively farmed and modified.	Low
<b>Functional</b>	The landscape provides a considerable agricultural resource and provides a slightly elevated setting for the flatter fenlands to the east.	Medium

1.3.9 Overall, the value of the Central Clays and Gravels Landscape Sub-Area is assessed as medium.

1.3.10 The sensitivity alongside landscape effects on Central Clays and Gravels Landscape Sub-Area has been assessed in **Chapter 6: Landscape and Visual (Document Ref: 6.2 ES Vol. 1, 6.2.6)**.

## Boston Borough Council

1.3.11 The eastern part of the study area falls within the administrative boundaries of Boston Borough Council. The Landscape Character Assessment<sup>2</sup> identifies Landscape Character Types (LCT), which represent distinct types of landscape that are relatively homogenous in character. From this, the LCTs have been subdivided into nine Landscape Character Areas (LCA). The Holland Reclaimed Fen LCA falls predominantly within the north-eastern part of the study area, with the Bicker to Wyberton Settled Fen LCA situated mainly to the south east. The key characteristics of the Landscape Character Areas have been identified and outlined below.

### Holland Reclaimed Fen LCA

1.3.12 Key Characteristics include:

- *“Flat and low-lying reclaimed fenland;*
- *Open and expansive views with big skies and dark night skies, with some views semi-enclosed at ground level by large embankments;*
- *More distant views to Boston Stump and to the Lincolnshire Wolds in East Lindsey District to the north;*
- *A man-made intensive arable landscape laid out in a regular, geometric pattern with narrow roads and trackways alongside drains, dykes and ditches;*
- *The large North Forty Foot Drain and South Forty Foot Drain are key dominating features of the area;*
- *Field boundaries are typically open with wet ditches, dykes and drains and the occasional hedgerow;*
- *Occasional large-scale horticultural glasshouses and packing or processing plants occur near the southern boundary of the area;*

<sup>2</sup> [Landscape Character Assessment of Boston Borough, July 2009](#)

- *Sparsely populated with occasional small hamlets, scattered farmsteads, and occasional rows of former workers’ cottages;*
- *Occasional derelict farm cottages and field buildings;*
- *Sparse tree cover confined to shelterbelts, with occasional hedgerows and small blocks of mixed woodland with shrubby edges;*
- *Bicker Fen windfarm and large-scale pylons on the south-western tip are modern landmark features; and*
- *A semi-remote, tranquil and intact working agricultural landscape.”*

### Landscape Value

1.3.13 The value of Holland Reclaimed Fen LCA is assessed in Table 1.4 below.

**Table 1.4 - Landscape Value of Holland Reclaimed Fen LCA**

FACTOR	THE SITE	VALUE
<b>Natural heritage</b>	An intensely farmed, open landscape with a hierarchy of drains, dykes and ditches with sparse tree cover and occasional small mixed woodland blocks. Most other trees are found in shelterbelts in and around local hamlets and farmsteads. The landscape contains limited range of landscape elements valued for natural heritage.	Medium
<b>Cultural heritage</b>	Heritage features are limited to the extensive drainage system which itself is crossed by bridges of varying styles and ages including iron bridge at Langrick. There are few listed buildings and the presence of some derelict field and farm buildings.	Low
<b>Landscape condition</b>	The landscape condition, although predominantly man-made through food production and farming, can be described as intact, and of overall good quality with the infrequent landscape features present.	Medium
<b>Associations</b>	There are no specific literary or cultural associations identified within this LCA	None
<b>Distinctiveness</b>	The landscape character of the LCA is coherent with the wider landscape pattern and elements of fens.	Medium
<b>Recreational</b>	There are few PRowS within the LCA with limited recreational value, with a range of PRowS aligned along drains or roads.	Low
<b>Perceptual (scenic)</b>	There are expansive and peaceful panoramas available across seas of cereal crops with big skies. Views are sometimes foreshortened by large drain embankments.	Medium
<b>Perceptual (Wildness and tranquillity)</b>	The LCA generally offers a feeling of remoteness with few areas of urban influence evident, mostly concentrated in the southeast corner of the LCA. The main detracting features present include the Bicker Windfarm to the southwest boundary and the associated Bicker Fen National Grid Substation. Numerous high-voltage electricity pylons are also present throughout the LCA.	Medium

FACTOR	THE SITE	VALUE
<b>Functional</b>	With limited landscape elements such as hedgerows and tree shelterbelts, the functional landscape is restricted to hydrological systems in place, although this network is dense and rich in biodiversity.	Medium

1.3.14 Overall, the value of the Holland and Reclaimed Fen LCA is assessed as medium. This is due to the strong, distinctive agricultural landscape, with largely open, flat and panoramic views that present tranquil and scenic qualities. The LCA has limited recreational value with a modest PRow network. However, there are some detracting features including views of large scale infrastructure to the north.

1.3.15 The sensitivity alongside landscape effects on the Holland Reclaimed Fen LCA been assessed in **Chapter 6: Landscape and Visual (Document Ref: 6.2 ES Vol. 1, 6.2.6)**.

### Bicker to Wyberton Settled Fen

1.3.16 Bicker to Wyberton Settled Fen LCA is located in the south-eastern portion of the study area and stretches to the west of Boston. Key characteristics are set out below.

Key Characteristics include:

- *“Largely flat landform slightly elevated above the adjacent drained fenland;*
- *Open views with big skies;*
- *Views to landmark water towers, and church towers and spires set amongst mature trees in historic villages. Other visible landmarks include the windfarm at Bicker and Boston Stump;*
- *An intact working rural landscape;*
- *Settlement pattern of widely spread villages, often medieval in origin, with farmsteads and dwellings scattered in between;*
- *Scattered agricultural buildings, horticultural glasshouses, packing sheds, poultry sheds, food processing plants and distribution centres which are of a mix of styles and ages;*
- *A relatively large-scale organic network of winding roads is infilled by a geometric field pattern of predominantly arable fields;*
- *Generally, tree cover is sparse with occasional hedgerows and hedgerow trees and infrequent blocks of mixed woodland;*
- *A scattering of visible heritage features with archaeological earthworks including medieval moated sites and saltern mounds, Listed Buildings and some designated Conservation Areas within historic villages;*
- *Towards the outskirts of Boston there are more modern influences including converging rows of large-scale pylons and new recreational sites; and*
- *A distinctive, cohesive and legibly evolving agricultural landscape, which is peaceful in parts but not particularly remote.”*

### Landscape Value

1.3.17 The value of Bicker to Wyberton Settled Fen LCA is assessed in Table 1.5 below.

**Table 1.5 - Landscape Value of Bicker to Wyberton Settled Fen LCA**

FACTOR	THE SITE	VALUE
<b>Natural heritage</b>	Tree cover is sparse with occasional isolated deciduous trees on field boundaries with a limited number of hedgerows. Field pattern is generally medium to large-scale, with a predominantly arable landscape throughout the LCA. Coniferous shelterbelts are repeated elements within the landscape.	Medium
<b>Cultural heritage</b>	The area is rich in heritage features which include scattered Listed Buildings, Wyberton Park and the remains of the nearby Swineshead Abbey. There are also several Conservation Areas within the LCA.	High
<b>Landscape condition</b>	The landscape elements are in a good physical state and health, with strong structure and pattern and absent from detracting features.	Medium
<b>Associations</b>	There are no specific literary or cultural associations identified within this LCA	Low
<b>Distinctiveness</b>	The landscape character of the LCA within the study area is representative of the wider landscape of Lincolnshire, with gently undulating landform and dominating medium to large-scale fields resulting in overall medium distinctiveness.	Medium
<b>Recreational</b>	The PRoW network is relatively limited within this LCA.	Low
<b>Perceptual (scenic)</b>	Views across the LCA are generally open and panoramic, with limited boundary vegetation and only occasional built form.	Medium
<b>Perceptual (Wildness and tranquillity)</b>	The rural landscape is of medium tranquillity due to the presence of the local road network, occasional power lines and telegraph poles. The landscape is also intensively farmed with few areas of woodland.	Medium
<b>Functional</b>	The landscape of this LCA forms an important functional part of the network in terms of hydrological systems and underlying geological and morphological structure with rich clay and river deposits.	Medium

1.3.18 Overall, the value of Bicker to Wyberton Settled Fen LCA is assessed as medium. This is due to the relatively intact and rural working landscape, which also provides open and distinctive views of the surrounding area with some detracting or incongruous features.

## South Holland District Council

1.3.19 In the absence of a Landscape Character Assessment published by the South Holland District Council, the boundaries of the Historic Character of the County of Lincolnshire<sup>3</sup> covering the Lincolnshire area have been used to identify LCA within the administrative area of South Holland District Council. Based on the

<sup>3</sup> The Historic Character of The County of Lincolnshire. Lincolnshire County Council (September 2011)

review of the available information informed by field surveys, two LCA were identified, comprising the Wash LCA and the South Holland Fens LCA. The Key characteristics of the South Holland Fens LCA are outlined below:

### South Holland Fens LCA

1.3.20 South Holland Fens LCA is located to the south of the Proposed Development in relatively close proximity to the southern extent of the Cable Route Corridor. Key Characteristics include the following:

- *“This LCA presents a large portion of the southern half of the country, with the area well defined to the north and west, where in these areas a clear defined edge is present on higher ground;*
- *Predominantly flat topography, dissected by local roads, rivers, drainage channels and drainage ditches, often on raised banks;*
- *Least settled character area due to the lack of nucleated settlements;*
- *The few trees to be found tend to be near farmsteads and there is no evidence of hedgerows as field boundaries;*
- *Views are unrestricted across the landscape, with limited detracting features enhancing the impact of big skies;*
- *The flat landscape is occasionally relieved by small woodland blocks and raised roads and tracks around isolated farmsteads; and*
- *The south of the LCA is boundary is partially formed by the River Welland meandering across the landscape until it joins the River Nene.”*

### Landscape Value

1.3.21 The value of the South Holland Fens LCA is assessed in Table 1.6 below.

**Table 1.6 - Landscape Value of South Holland Fens LCA**

FACTOR	THE SITE	VALUE
<b>Natural heritage</b>	This LCA comprises predominantly of mixed medium to large-scale rectilinear arable fields with boundaries formed by agricultural drains. Occasional small blocks of woodland are present. Overall, the value of natural heritage elements is medium.	Medium
<b>Cultural heritage</b>	Agricultural drainage patterns and systems as well some evidence of historic farmsteads and hamlets present features of historic and cultural heritage within this LCA.	Medium
<b>Landscape condition</b>	The predominantly agricultural landscape is in good overall condition and state of health, with strong structure and landscape pattern.	Medium
<b>Associations</b>	There are no specific literary or cultural associations identified within this LCA	Medium
<b>Distinctiveness</b>	The LCA is largely influenced by its hydrology and drainage systems, rivers, and tributaries, such as the Forty-Foot Drain. Combined with the strong rural and open character these factors contribute to a medium level of distinctiveness.	Medium
<b>Recreational</b>	There is a reasonable Prow network that providing linkages with the wider countryside from settlements.	Medium

FACTOR	THE SITE	VALUE
<b>Perceptual</b> (scenic)	The scenic quality of the LCA is characterised by the open and expansive rural landscape that offers some views with limited detracting features.	Medium
<b>Perceptual</b> (Wildness and tranquillity)	The tranquillity of the LCA within the study area is relatively high due the lack of larger nucleated settlements or main roads and has features typical within a rural landscape that include pockets of land wildness.	High
<b>Functional</b>	The landscape of this LCA forms an important part of a multifunctional Green Infrastructure Network with strong physical and functional links with the presence of tree blocks and drainage channels that offer ecological value.	Medium

1.3.22 Overall, the value of the South Holland Fens LCA is assessed as medium due to the presence of a strong, historic drainage network that offers both cultural and ecological value. Additionally, the predominantly rural character with its flat and open views also contributes to its value.

### Landscape Character Areas with potential to experience indirect effects

1.3.23 The Proposed Development has the potential to introduce indirect landscape effects to the following Local Character Areas:

- The Wash Farmlands LCA (South Holland District Council);
- The Fens LCA (South Kesteven District Council); and
- Fens Margins LCA (North Kesteven District Council).

1.3.24 However, as these Local Landscape Areas are peripheral to the study area with limited intervisibility and considerable separation distance from the Proposed Development, there will be negligible or no change to aesthetic qualities of the landscape, such as tranquillity, perceptions of naturalness or noise. The long-distance views from these LCAs will largely be screened by intervening layers of vegetation.

## 1.4 National Character Areas

1.4.1 Natural England produces mapping and written descriptions of the landscape character of England within National Character Areas (NCA). The aim is to assist those who make decisions regarding local plans to consider how best to enhance and respect local distinctiveness. There are two NCAs identified that fall within the site: NCA Profile 46: The Fens and NCA Profile 47: Southern Lincolnshire Edge.

1.4.2 A sensitivity assessment and assessment of landscape effects in relation to the respective NCAs that are applicable to the site are outlined below.

### NCA Profile 46: The Fens

1.4.3 Key characteristics include:

- *“Expansive, flat, open, low-lying wetland landscape influenced by the Wash estuary, and offering extensive vistas to level horizons and huge skies throughout, provides a sense of rural remoteness and tranquillity;*
- *Overall, woodland cover is sparse, notably a few small woodland blocks, occasional avenues alongside roads, isolated field trees and shelterbelts of poplar, willow and occasionally leylandii hedges around farmsteads, and numerous orchards around Wisbech. Various alders, notably grey alder, are also used in shelterbelts and roadside avenues;*
- *The predominant land use is arable – wheat, root crops, bulbs, vegetables and market gardening made possible by actively draining reclaimed land areas;*
- *The soils are important for agriculture, which is hugely significant for the rural economy in the Fens. In addition to traditional vegetables, exotics such as pak choi are now cultivated. Some 40 per cent of England’s bulbs and flowers are also produced in the Fens;*
- *Open fields, bounded by a network of drains and the distinctive hierarchy of rivers (some embanked), have a strong influence on the geometric/rectilinear landscape pattern. The structures create local enclosure and a slightly raised landform, which is mirrored in the road network that largely follows the edges of the system of large fields. The drains and ditches are also an important ecological network important for invertebrates, fish including spined loach, and macrophytes;*
- *Drainage and flood storage structures and embanked rail and road routes interrupt the horizontal fen plain. Settlements and isolated farmsteads are mostly located on the modestly elevated ‘geological islands’ and the low, sinuous roddon banks (infilled ancient watercourses within fens). Elsewhere, villages tend to be dispersed ribbon settlements along the main arterial routes through the settled fens, and scattered farms remain as relics of earlier agricultural settlements. Domestic architecture mostly dates from after 1750 and comprises a mix of late Georgian-style brick houses and 20th century bungalows; and*
- *Jurassic clays are overlain by rich, fertile calcareous and silty soils over the coastal and central fens and by dark, friable fen peat further inland.”*

1.4.4 The NCA Profile 46: The Fens list a range of opportunities. The identified opportunities relevant to the Proposed Development that will inform the design of the Proposed Development.

- *“Maintaining the valuable, productive, open agricultural landscape of the Fens National Character Area (NCA) with its high-quality soils;*
- *Encouraging landowners and managers to use sustainable farming methods that protect the soil, such as maintaining vegetative cover and using grass buffer strips to reduce soil erosion from susceptible arable fields in the autumn and winter;*
- *Encouraging the establishment of areas of semi-natural habitat such as reedbed and washland which slow the passage of water through the hydrological system;*
- *Promoting and establishing strategic, appropriately sized areas for biodiversity across the Fens to mitigate the impacts of local, summer storm-related catchment flooding, and to develop robust populations;*
- *Seeking opportunities to create grazing marsh, reedbed and salt marsh throughout the Fens to compensate for losses of these habitats at the*

*coast as a result of climate change and associated isostatic adjustment-induced sea-level rise, or where work carried out has damaged habitat;*

- *Manage existing broadleaf woodland;*
- *Manage existing hedgerows sympathetically, cutting no more than every two years to allow them to fill out, and plant to fill in gaps;*
- *Restore and introduce hedgerows into key locations to reinforce field patterns;*
- *Manage existing plantation woodlands to ensure their long-term survival as landscape features, increasing the content of native broadleaves where possible;*
- *Manage grassy verges to encourage greater species richness and to maintain them as a feature of the long straight roads;*
- *Encourage the establishment of permanent grassland to protect the evidence of medieval settlements and other ground features.*
- *Manage existing broadleaf woodland; and*
- *Manage existing hedgerows sympathetically, cutting no more than every two years to allow them to fill out, and plant to fill in gaps.”*

## **Landscape Susceptibility to the Proposed Development**

- 1.4.5 The Fens are a distinctive large-scale, low-lying and flat landscape, and therefore less susceptible to the introduction of solar arrays. Enclosure within the NCA is limited, with open fields often bounded by network of drains, which have a strong influence on the geometric and rectilinear field pattern. Therefore, the open character of the field patterns suggests that they are more susceptible to the introduction of solar arrays. Land cover is influenced by its overall productive arable use, with limited evidence of woodland cover or widespread landscape features and so is less susceptible.
- 1.4.6 The Fens features elements of large-scale infrastructure and built-form such as Bicker Fen Wind Farm and high voltage power lines and pylons throughout. Such features lower the susceptibility of the NCA to the Proposed Development Scheme. The landscape area of the Fens is relatively remote and tranquil, particularly around the edge of the Wash, whereby the sense of tranquillity is more pronounced around large marsh areas and wetland habitats to the east. Much of the NCA is farmed for arable use, however, the sense of tranquillity and remoteness overall is broken up by the presence large scale infrastructure such as power lines and electricity pylons. Therefore, this results in an overall medium susceptibility.
- 1.4.7 The Fens feature several small settlements that contribute to its historical development with landmark features, such as church spires and other listed structures. The flat, open vistas and relatively uncluttered skylines are distinct from the areas within the wider NCA. However, the susceptibility to the introduction of solar arrays to the Fens will generally be low. Overall, the susceptibility of the Fens NCA to the Proposed Development will be medium.

## **Landscape Value**

- 1.4.8 The Fens have been transformed considerably in the past and resulting in a limited presence of natural or semi natural habitats. Church spires and other landmarks are frequently visible and act as landmarks although often perceived in relation to detracting elements, such as overhead power lines,

within the characteristically flat landscape. The landscape is in relatively good condition with visibly well-maintained landscape elements. Through its distinctive character associations of fenland are distinctly linked to the local traditions and folklore.

- 1.4.9 Recreational opportunities vary across the NCA but the PRow route network provides opportunities for people to access the countryside. The flat and open landscapes with wooded horizons are distinctive and are valued attributes and in places there are areas which have some perceptions of tranquillity. Overall, the Fens NCA are of medium value.

## Sensitivity to the Proposed Development

- 1.4.10 A combined medium value and medium susceptibility of The Fens NCA will result in an overall medium sensitivity.
- 1.4.11 The Assessment of the effects of the NCA Profile 46: The Fens is presented in Table 1.7 below.

**Table 1.7 - Assessment of Effects on the Fens National Character Area Profile: 46 the Fens**

<b>EFFECTS ON NCA 46 THE FENS</b>	
<p><b>Value:</b> Medium  <b>Susceptibility:</b> Medium  <b>Sensitivity:</b> Combined medium value with medium susceptibility will result in <b>medium</b> sensitivity.</p>	<p><b>Sensitivity:</b>                      Medium</p>
<p><b>Size/scale, geographical extent, duration, and reversibility of effect</b></p>	<p><b>Magnitude</b></p>
<p><b>Construction:</b> Construction activity would occur within Beacon Energy Park and Cable Route Corridor, resulting in localised short term changes to landscape pattern and land use, temporary stripping of topsoil and excavation followed by reinstatement works with Cable Route Corridor. A range of energy infrastructure elements will be introduced on the Solar Array Area. However, due to the small scale of the construction activity and its extent in relation to the wider extent of the NCA, the alteration to key characteristics would be restricted. Overall, a low magnitude of change is expected.</p>	<p>Low</p>
<p><b>Year 1:</b> The Proposed Development would result in a change in land use across Beacon Fen Energy Park. The land use within the Cable Route Corridor will be restored, although the landscape and the crops will not fully reflect the baseline scenario at year 0. The presence of solar energy infrastructure will introduce uncharacteristic elements, but the change will be of a very small scale and extent within the wider extent of the NCA. Overall, a very low magnitude of change is expected.</p>	<p>Very low</p>
<p><b>Year 15:</b> In Year 15, the mitigation planting will help to integrate the Proposed Development within the existing landscape. The proposed vegetation along the perimeter of the Proposed Development will help to integrate the Proposed Development. There will be no change to the Cable Route Corridor as the landscape will be restored by year 15.</p>	<p>Very low</p>

## EFFECTS ON NCA 46 THE FENS

<b>Decommissioning:</b> The decommissioning stage will be similar in many ways to construction, as the solar arrays alongside associated infrastructure will be removed. The proposed mitigation planting will be effective in screening of the Proposed Development elements. There will be no change within the Cable Route Corridor.	Very low
<b>Significance of effects</b>	<b>Effects</b>
<b>Construction:</b> The medium sensitivity combined with the low magnitude of change will result in minor adverse effects on the landscape character of the Fens NCA.	Minor adverse (not-significant)
<b>Year 1:</b> The medium sensitivity combined with the very low magnitude of change will result in a negligible adverse effect as the change will be largely limited to Beacon Fen Energy Park.	Negligible adverse (not-significant)
<b>Year 15:</b> The medium sensitivity combined with a very low magnitude of change will result in negligible adverse effects.	Negligible adverse (not-significant)
<b>Decommissioning:</b> The medium sensitivity combined with a very low magnitude of change will result in negligible adverse effects as decommissioning will introduce some uncharacteristic elements. There will be no change within Cable Route Corridor.	Negligible adverse (not-significant)

## NCA Profile 47: Southern Lincolnshire Edge

1.4.12 Key characteristics of this NCA are set out as follows:

- *The NCA comprises of an elevated arable escarpment with a distinct cliff running north-south along the western boundary, providing far reaching views over the Trent and Belvoir Vales NCA;*
- *Semi-natural habitats in small, isolated fragments, with pockets of woodland on clay soils, fen at the foot of the dip slope and flower rich limestone grassland, particularly along road verges;*
- *Sparse settlement on higher land, with springline villages along the foot of the cliff, parklands and country estates such as Rauceby and Belton on lower ground, and larger settlements – including Sleaford, Ruskington and Metheringham – to the east of the dip slope;*
- *Majority of settlements gathered around edges of scarp, where there are numerous villages built on spring lines at the foot of the dip slope. Settlements on the higher land on the plateau consists largely of individual farmsteads;*
- *Long, straight roads and tracks, often with wide verges, including Ermine Street, which follows the route of a key Roman north–south route;*
- *Heavy clay soils in the east and south-west of the area, which support more grazing land in smaller, less regular fields, along with small areas of woodland and parkland; and*
- *Productive loamy soils on the limestone plateau, giving rise to a large-scale open landscape of arable cultivation with large, regular fields and few boundaries of tightly cut hedgerows or rubble limestone walls.*

1.4.13 The NCA profile also identifies the following opportunities:

- *“Manage existing broadleaf woodland;*
- *Manage existing hedgerows sympathetically, cutting no more than every two years to allow them to fill out, and plant to fill in gaps;*
- *Restore and introduce hedgerows into key locations to reinforce field patterns;*
- *Manage existing plantation woodlands to ensure their long-term survival as landscape features, increasing the content of native broadleaves where possible;*
- *Manage grassy verges to encourage greater species richness and to maintain them as a feature of the long straight roads;*
- *Encourage the establishment of permanent grassland to protect the evidence of medieval settlements and other ground features;*
- *Manage existing broadleaf woodland; and*
- *Manage existing hedgerows sympathetically, cutting no more than every two years to allow them to fill out, and plant to fill in gaps.”*

## Landscape Susceptibility to the Proposed Development

- 1.4.14 The susceptibility of the NCA Southern Lincolnshire Edge landscape is generally low to the introduction of solar arrays, due to the relatively large-scale landscape pattern. Large fields with hedgerows providing visual separation from the road network have the potential to accommodate solar arrays with minimal disruption to field pattern. The landscape presents a greater degree of enclosure around the field patterns within the NCA compared to the Fens and is slightly less susceptible to the introduction of solar arrays.
- 1.4.15 Landform within this NCA offers some variation on topography through the presence of a dramatic limestone cliff to the west and the dip slope that drops gently away to the edge of the fens in the east. Therefore, this increases the susceptibility to the Proposed Development. The presence of some semi-natural habitats, woodlands, and watercourses, offer some variance in landcover. However, in general, land cover with the NCA consists mainly of arable crops and therefore lowers the susceptibility to the introduction of Proposed Development.
- 1.4.16 Settlement within this NCA is generally concentrated upon lower ground, with only scattered and infrequent farmsteads upon the scarp slopes. Therefore, the remoteness and tranquillity are of medium to low susceptibility, as although most of the NCA is open and expansive, there are numerous transport links and ‘A’ class roads such as the A15 between the larger settlements of Sleaford and Lincoln. Evidence of built form and large-scale development such as Grange Farm Solar Farm and the nearby solar farm south of White Cross Lane are notable features present within the NCA, along with high voltage electricity cables and pylons. These features also lower the susceptibility to the Proposed Development. The NCA includes several historic landmarks, including church spires, which are distinct within the views across the area. The skylines are important features of the fenland landscape and are of medium susceptibility to the introduction of solar arrays as they have generally low impact on skylines within flat landscape of fens.

## Landscape Value

- 1.4.17 The natural heritage of this NCA is of medium value as there is evidence of large-scale arable farming that is typical of the wider Lincolnshire landscape, there is also evidence in variances in topography and landcover with escarpments present in some parts. The landscape also includes a medium level of archaeological and historical cultural interest. The landscape is generally open, medium to large-scale with relatively few trees and woodlands that are in very good condition.
- 1.4.18 Public access is not expansive with a relatively limited PRow network and no Country Parks or National Nature Reserves. The area is of medium tranquillity with less disturbed areas being more remote parts of the sparsely settled areas. The landscape of this NCA demonstrates a good level of distinctiveness with some variation across the NCA. The open landscape of the dip slope contrasts with the more sheltered, enclosed, traditional landscapes of the clay lands, with the area around Sleaford being the most influenced by built development. Overall, the value of the Southern Lincolnshire Edge NCA is medium.

## Sensitivity to the Proposed Development

- 1.4.19 A combined medium value and medium susceptibility of the NCA: South Lincolnshire Edge results in an overall medium sensitivity.
- 1.4.20 Table 1.8 below includes the assessment of the effects on the regional scale on the NCA Profile 47: Southern Lincolnshire Edge.

**Table 1.8 - Assessment of effects on the NCA Profile 47: South Lincolnshire Edge**

<b>EFFECTS ON NCA 47 SOUTH LINCOLNSHIRE EDGE</b>	
<p><b>Value:</b> Medium  <b>Susceptibility:</b> Medium  <b>Sensitivity:</b> Combined medium value with medium susceptibility will result in medium sensitivity.</p>	<p><b>Sensitivity:</b>                      Medium</p>
<p><b>Size/scale, geographical extent, duration, and reversibility of effect</b></p>	<p><b>Magnitude</b></p>
<p><b>Construction:</b> Construction activity within Beacon Energy Park will affect a small proportion of the NCA. The construction within the Cable Route Corridor will be of small scale, occupying a very small extent of the NCA. Although the construction will be uncharacteristic within the landscape, the change in landscape will be short-term and reversible. Overall, a very low magnitude of change is expected.</p>	<p>Very low</p>
<p><b>Year 1:</b> In year one, many of the qualities of the existing landscape will be restored. The change of land use and landscape pattern within the NCA Profile 47: Southern Lincolnshire Edge associated with introducing the Solar Array Area will be very limited due to a very small scale of change and geographical extent. Overall, a very low magnitude of change is expected.</p>	<p>Very low</p>
<p><b>Year 15:</b> In Year 15, the mitigation planting will help to integrate the Proposed Development within the existing landscape. The scale of change will remain very small alongside the extent. The proposed mitigation planting will help to integrate the Proposed Development.</p>	<p>Very low</p>

## EFFECTS ON NCA 47 SOUTH LINCOLNSHIRE EDGE

<p>The landscape within the Cable Route Corridor will be restored by year 15. A very low magnitude of change will remain.</p>	
<p><b>Decommissioning:</b> There will be a very small scale of change and extent at the decommissioning stage, as the solar arrays alongside associated infrastructure will be removed. The proposed mitigation planting will be effective in screening the Proposed Development. There will be no change within Cable Route Corridor. A very low magnitude of change will remain.</p>	<p>Very low</p>
<p><b>Significance of effects</b></p>	<p><b>Magnitude</b></p>
<p><b>Construction:</b> The medium sensitivity combined with the very low magnitude of change will result in negligible adverse effects on the landscape character of the Fens NCA.</p>	<p>Negligible adverse (not significant)</p>
<p><b>Year 1:</b> The medium sensitivity combined with the very low magnitude of change will result in a negligible adverse effect due to a very small extent and scale of change.</p>	<p>Negligible adverse (not significant)</p>
<p><b>Year 15:</b> The medium sensitivity combined with a very low magnitude of the change will result in a negligible adverse effect on the landscape character due to the very small scale and extent of change.</p>	<p>Negligible adverse (not significant)</p>
<p><b>Decommissioning:</b> The medium sensitivity combined with a very low magnitude of change will result in negligible adverse effects as decommissioning will be very limited in extent and scale within the NCA. The cable route will remain buried underground. Overall, the effects will be negligible adverse.</p>	<p>Negligible adverse (not significant)</p>