

Supplementary Preliminary Environmental Information Report: Section 5 New Weston Marsh Substations A and B

Volume 3 Part B Section Specific Assessment

Chapter 2 Landscape

Appendix 2A Landscape Character Baseline

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Grimsby to Walpole

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Contents

Introduction	2
Landscape Character Area Baseline	3
National Character Areas (NCA)	
NCA 46: The Fens	4
East Midlands Regional Landscape Character Types (RLCT)	
RLCT 2A: Settled Fens and Marshes	8
References	11

Introduction

This appendix provides background baseline information for the RLCT, LCT and LCAs within the Study Area for Section 5 New Weston Marsh Substations A and B and should be read in conjunction with:

- **Supplementary PEI Report Volume 2 Part B Section 5 Chapter 2 Figure 2.1 – Landscape Designations and Features**
- **Supplementary PEI Report Volume 2 Part B Section 5 Chapter 2 Figure 2.2 – Landform and Drainage**
- **Supplementary PEI Report Volume 2 Part B Section 5 Chapter 2 Figure 2.3 – National Landscape Character Areas**
- **Supplementary PEI Report Volume 2 Part B Section 5 Chapter 2 Figure 2.4 – Regional and Local Landscape Character Areas**

Background information provided for each area of landscape includes a map of the area, baseline description and key characteristics. It also includes judgements on the value of the landscape and its susceptibility to change arising from the Project.

For completeness and to provide further context to the assessment, the relevant National Landscape Character Areas (NCA) as defined by Natural England (Ref 1) are also included in this Appendix. This is to ensure that the potential for significant effects at a wider than district level is understood, given the length of the route and geographical coverage of the Project. An assessment of the effects of the Project on the NCAs will be provided in the project-wide assessment of landscape effects presented in the ES, once the assessments of the more detailed regional and local landscape types have been completed.

Baseline Description

The descriptions are based on the landscape character assessments prepared by East Midlands Councils (Ref 2). The baseline descriptions in this appendix were informed by an extensive review of these RLCT, LCT and LCA, as well as Ordnance Survey (OS) maps, Google Earth Pro, Google Streetview, and field survey.

Landscape value tables are included for each RLCT, LCT and LCA. These highlight the preliminary judgements made with regard to the appraisal of the relative value of the landscape (within the Study Area). As described in the landscape methodology at **Supplementary PEI Report Volume 3 Part A Appendix 4B Environmental Impact Assessment Methodologies and Scope**, judgements are made against a series of factors and are visually represented on a sliding scale bar representing lower to higher value.

Judgements on Susceptibility

As with the appraisal of landscape value, preliminary judgements of susceptibility are made against individual factors in accordance with Section 2 of the methodology set out in **Supplementary PEI Report Volume 3 Part A Appendix 4B Environmental Impact Assessment Methodologies and Scope**. These judgements are visually represented on a sliding scale bar representing lower to higher value. The detailed assessments of landscape susceptibility primarily relate to the 400 kV overhead line component of the Project. Where relevant, landscape susceptibility to a new substation is also reported.



National Landscape Character Areas

NCA 46: The Fens

Context

The Fens are a flat, open and low-lying landscape which drains into the Wash, England’s largest tidal estuary. Much of the land lies below sea level, with vast horizons and expansive skies creating a strong sense of remoteness. Rectilinear drainage systems support intensive agriculture on nationally important peat soils, while woodland is limited to roadside trees, village clusters, and orchards in the Wisbech area.

Four main rivers, the Witham, Welland, Nene, and Great Ouse, follow artificial canalised courses with high banks separating them from the adjacent fields. ‘Roddons’ (elevated silt banks) highlight former tidal creek systems, contrasting with the surrounding degraded peat soils.

The landscape varies across the NCA. The ‘settled inland fens’ near the Wash feature sinuous lanes, small settlements, medieval churches, and remnant grasslands. The ‘peaty fens,’ drained between the 17th and 19th centuries, consist of rectilinear fields and straight roads with minimal semi-natural habitats remaining. The southeast Lincolnshire fens are similarly rectilinear and productive, with little trace of their rich ecological past.

The settlement patterns aligns with historical development, with the larger towns including Boston, Spalding, and Wisbech in the inland fens. Modern developments include ribbon housing located along major roads such as the A17 and A47. In contrast, the peaty fens are sparsely settled, with isolated farmsteads and derelict buildings.

The Fens are crossed by major transport links, including the East Coast mainline railway and roads such as the A16, A17, and A47, which form elevated corridors and contribute to rising light pollution. Other infrastructure includes power stations and pylon lines, with the latter exerting a strong influence in the flat landscape.

Key Characteristics

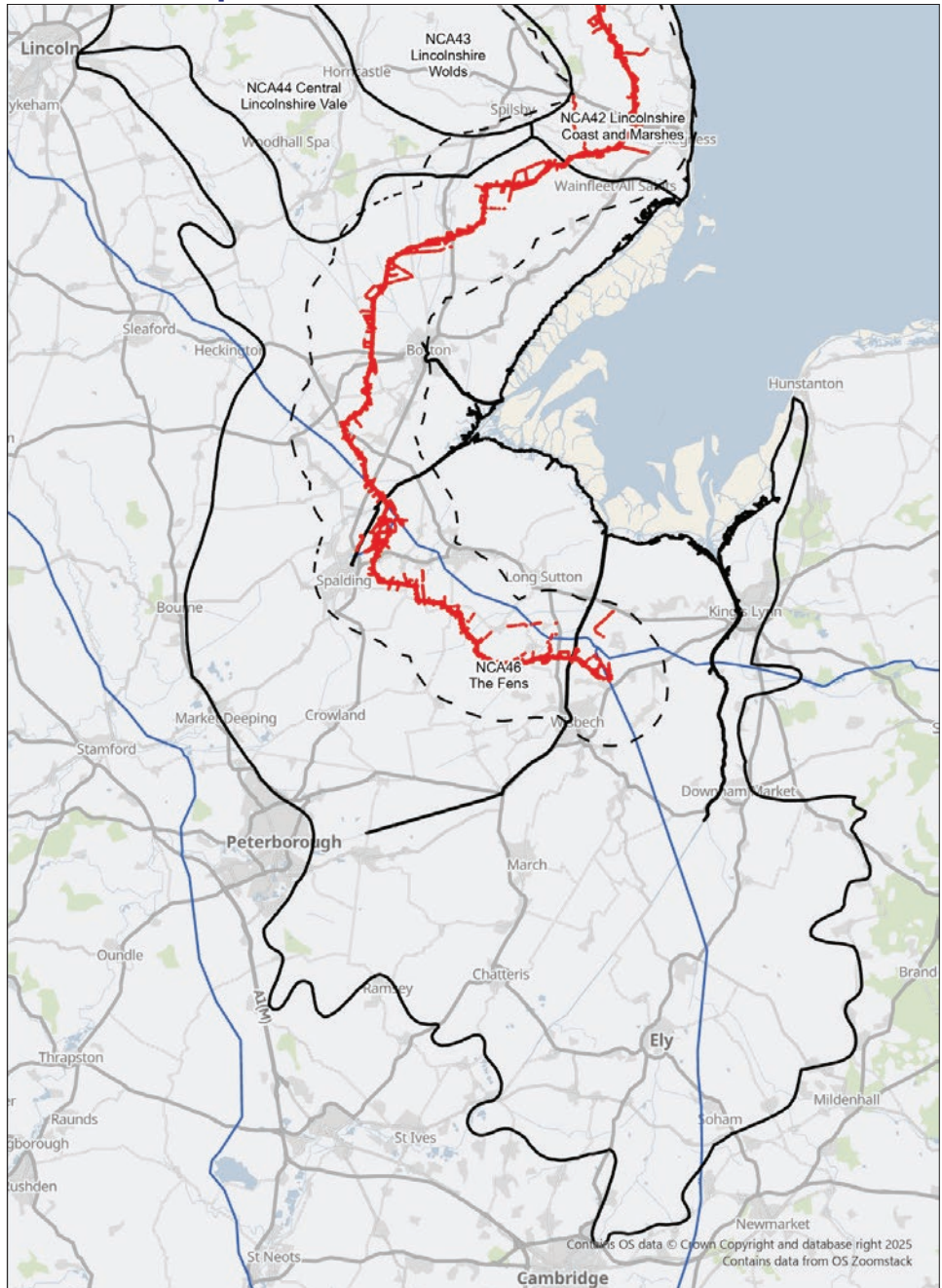
The key characteristics of the NCA (Ref 3) defined by Natural England are:

- ‘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.
- 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. The soils are important for agriculture, which is hugely significant for the rural economy in the Fens.

There are over 4,000 farms in the Fens; enough wheat is grown here annually to produce a quarter of a million loaves of bread and one million tons of potatoes are grown here. 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.

- *The Wash is the largest estuarine system in Britain, supporting internationally important intertidal and coastal habitats influenced by constant processes of accretion and deposition, forming salt marsh and mudflats and providing habitats for wildfowl, wading birds and other wildlife, including grey seals and approximately 90 per cent of the UK’s common seals. It also provides important natural sea defences and plays a key role in climate change regulation. Flood storage areas on the Nene, Cam, Lark and Ouse washes also provide significant biodiversity interest. True fen mainly occurs at remnant conservation sites, such as Baston or Wicken Fen.*
- *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. Associated horticultural glasshouses are a significant feature. Beef cattle graze narrow enclosures along the banks of rivers and dykes and on parts of the salt marsh and sea banks.*
- *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.*
- *The area is very rich in geodiversity and archaeology, with sediments containing evidence for past environmental and climate changes and with high potential for well-preserved waterlogged site remains at the fen edge, within some of the*

Location Map



Key

- 5 km Study Area
- Draft Order Limits

- infilled palaeo-rivers and beneath the peat.*
- *Large, built structures exhibit a strong vertical visual influence, such as the 83 m-high octagonal tower of ‘Boston Stump’ (St Botolph’s Church), Ely Cathedral on the highest part of the Isle of Ely dominating its surrounding fen, wind farms and other modern large-scale industrial and agricultural buildings, while drainage and flood storage structures and embanked rail and road routes interrupt the horizontal fen plain.*

NCA 46: The Fens

Key Characteristics Continued

- *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’.*

Landscape Change

The NCA Profile (Ref 3) explains that the Fens which have been significantly altered through time by drainage and intensive farming, are under significant pressure from ongoing soil erosion and flooding. Despite the heavy agriculture use and loss of salt marsh habitat, the Fens remain host to internationally important intertidal habitats, which may be improved by recent restoration schemes. Additional changes include pressures from sea level rise and increased storms, which may increase flooding as well as erosion, and may also impact constructed coastal defences.

The overall trend for landscape change is stated as *‘mainly improving’*.

Key management objectives to the Project include:

- *‘Conserving historic landmark buildings and earthwork sites together with their setting, especially on the settled fens and clay islands.*
- *Promoting understanding of the benefits and potential adverse impacts of wind farms and associated electricity transmission pylons, which are an increasing feature of the fenland landscape’.*

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East Midlands Region Landscape Character

East Midlands RLCT 2A: Settled Fens and Marshes

Context

- NCA 42: Lincolnshire Wolds
- Group 2: Fenland and Fenland Margins

This large RLCT extends from Humberston south to Tydd St Mary and forms part of the wide Lincolnshire coastal plain which runs broadly parallel but at some distance from the Lincolnshire Wolds to the west.

Key Characteristics

- Low-lying, flat, open landscape, much of which lies below sea level, relying on pumped drainage and the control of sluices to maintain its agricultural viability.
- A complex series of rivers and small streams drains eastwards towards the sea.
- Fertile soils support productive arable farming, with limited biodiversity.
- Varied enclosures, from organic Saxon to geometric field systems near the coast.
- Sparsely settled, but more developed near the coast, where seaside resorts with large static caravan areas contrast with productive farmland and remote countryside.
- Field boundaries mainly marked by dykes, sea walls, roads, and canalised rivers, with few hedgerows or woodlands.
- Long views towards the Lincolnshire Wolds and the coast.
- Detractors include wind turbines, coastal development, overhead lines and large agri-industrial farm units.

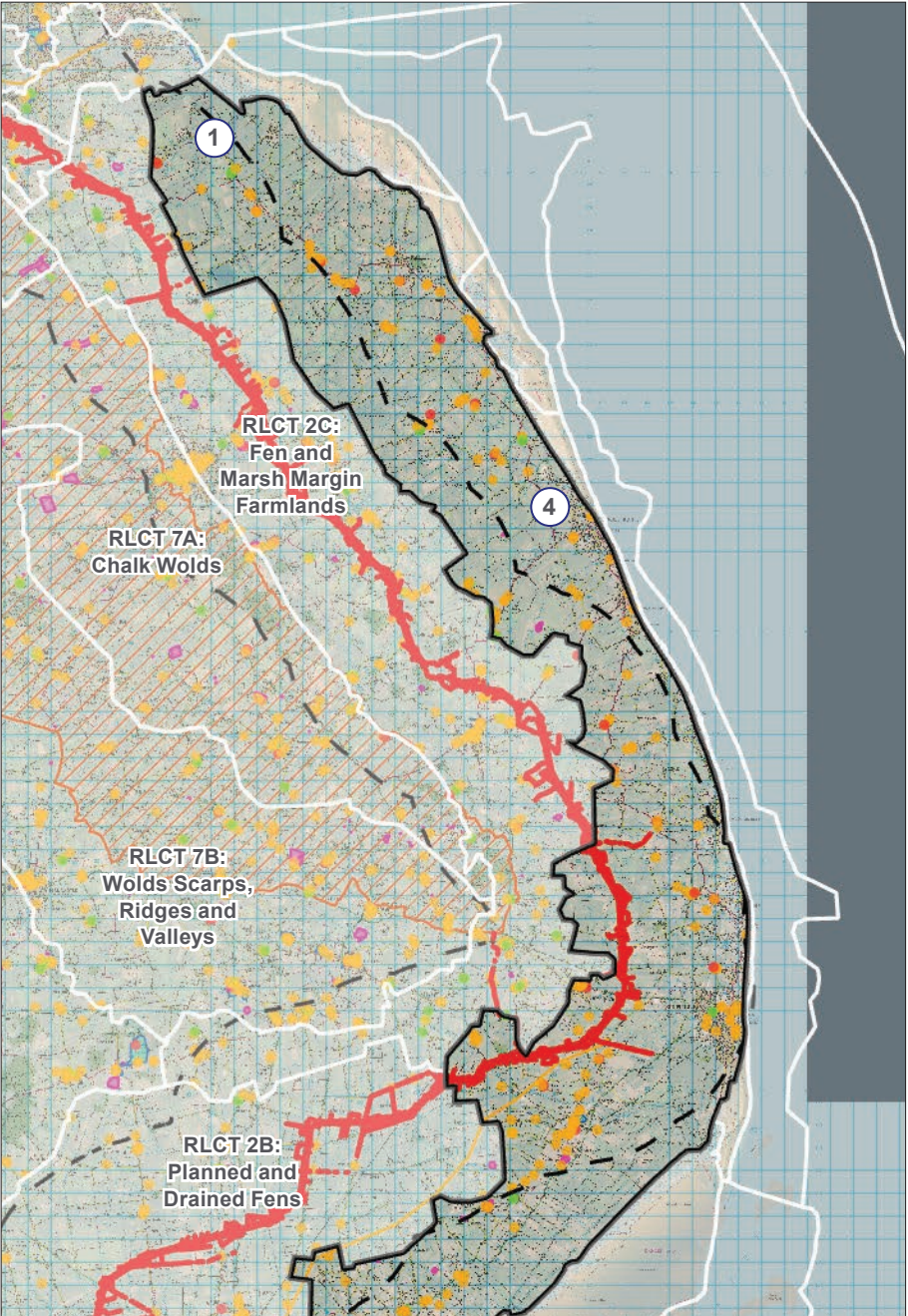
Baseline Description

Much of this RLCT lies below sea level and is dominated by intensive crop growing, with some grazed pasture near villages and sea banks. Fields are defined by a complex network of rivers, streams, and artificial drainage channels. Hedgerows are largely absent, emphasising the visual prominence of trees along roadsides, in farm belts and on village fringes.

While the landscape of this RLCT appears unified due to its simple landform, highly managed drainage system and intensive arable use, there is significant local variation in how the landscape is perceived. South of Boston, the ancient ‘Townlands’ offer a more intimate, small-scale landscape with winding lanes, small settlements, historic churches, and remnants of grasslands, reflecting over a thousand years of continuous settlement. This contrasts sharply with the large, geometric fields and industrial-scale farm complexes found elsewhere.

The coastal fringe north of Boston, is well settled, with resort towns including Skegness and Mablethorpe marked by large clusters of static

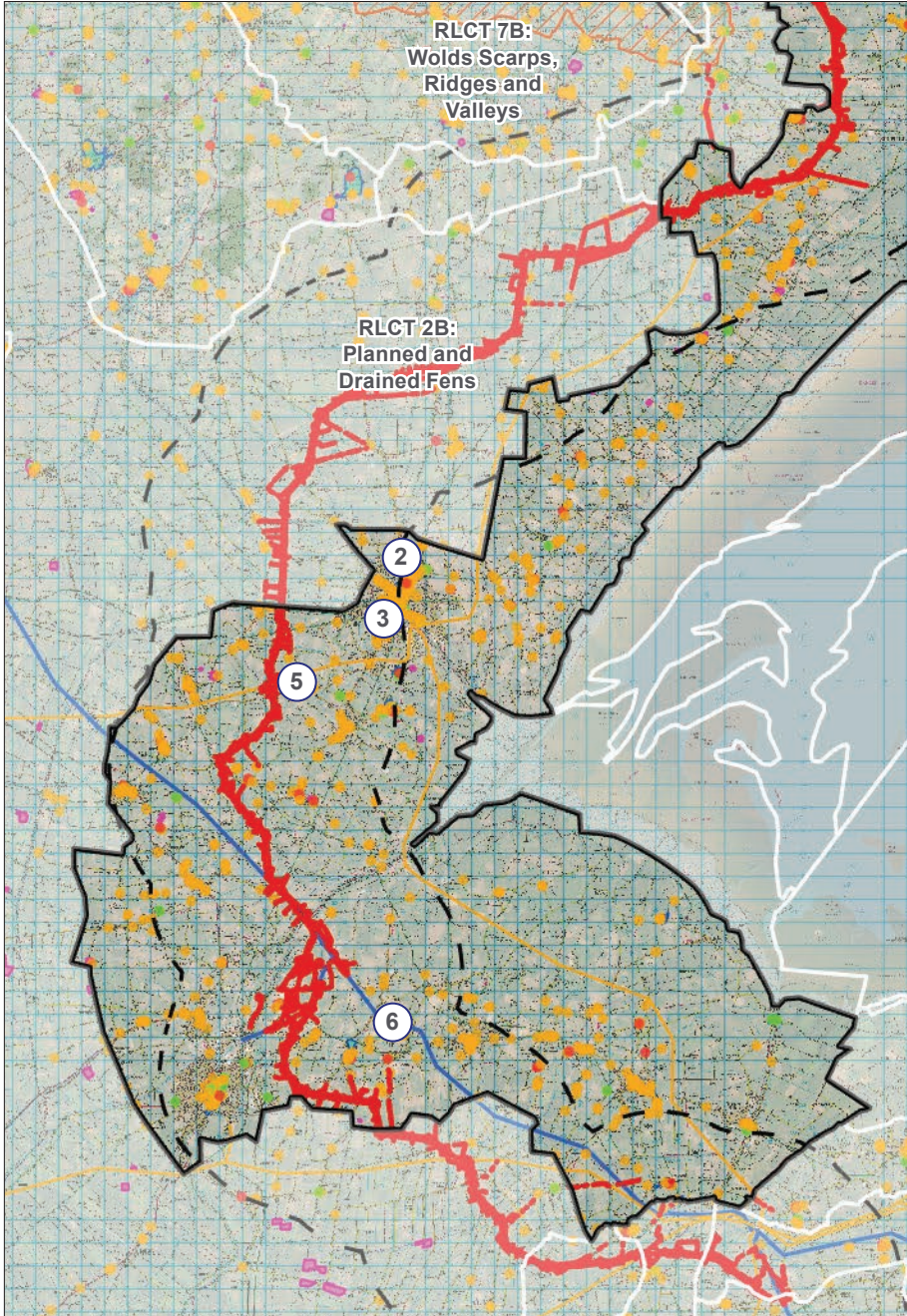
Location Map



Background Mapping information has been reproduced from the OS map by permission of OS on behalf of The controller of His Majesty's Stationery Office. ©Crown Copyright Ordnance Survey. National Grid Electricity - 100024241

Key

- | | |
|--|---------------------|
| Conservation Area | 5 km Study Area |
| Scheduled Monument | Existing 400 kV OHL |
| Listed Building: | Existing 132 kV OHL |
| Grade I | Draft Order Limits |
| Grade II | |
| Grade II* | |
| Lincolnshire Wolds National Landscape (AONB) | |



Notes

- ① Tetney Blow Wells SSSI
- ② Greenwich Meridian Trail
- ③ St Botolph's Church (Boston)
- ④ A1031 and A1104
- ⑤ Existing 132 kV overhead line
- ⑥ Existing 400 kV overhead line

caravans which in places extend into the Study Area. In contrast, much of the inland area remains sparsely populated, creating a sense of remoteness, where vast skies and featureless horizons enhance the sense of isolation.

Much of the landscape is very open, offering expansive views towards low-lying horizons and expansive skies, shaped by changing weather patterns. Tree belts, although few, often frame and foreshorten these views, while church spires and small woodlands punctuate the skyline. Overhead lines are a prominent skyline element particularly south of Boston, but do not diminish the landscape's prevailing sense of remoteness.



To the north of the RLCT, views west extend across the flat landscape towards the Lincolnshire Wolds National Landscape (AONB) which is visible on the skyline

Key Landscape Value Attributes

The organic pattern of enclosure boundaries and roads in the ‘Townlands’ offers a tangible connection to the origins of this well-settled agricultural landscape. Ancient villages and remote hamlets mark the early stages of drainage, enclosure, and settlement,

which later developed into the more structured, geometric patterns characteristic of 19th and 20th-century enclosures along the coast. The area is rich in archaeological remains, including prehistoric sites, ridge and furrow patterns, and abandoned settlements, all of which enhance the RLCT's character.

Intensive agriculture and coastal development has resulted in only limited retention of semi-natural habitats, but some of the RLCT (outside the Study Area) is covered by internationally important coastal and marine habitat associated with the Humber Estuary and the Wash. Within the Study Area, ecological value is associated with the local wildlife sites such as Covenham Reservoir, Tetney Flood, Great Eau, and Manby Wetlands.

Tetney Blow Wells SSSI and the many Scheduled Monuments and Conservation Areas dispersed throughout the LCT add historic interest.

Public rights of way are limited, although they include the Greenwich Meridian Trail to the north. Most recreational opportunities are found



To the south of the RLCT, overhead lines become a more common feature, fields are defined by a network of ditches

outside the Study Area and are focused on the coastal resorts. Based on the above and the judgements made against the indicators listed in the Table A below, particularly the ‘Townlands’, the value of the RLCT within the Study Area is considered to be medium.

Key Landscape Susceptibility Attributes

This flat, low-lying landscape offers long and often uninterrupted vistas towards the Lincolnshire Wolds National Landscape (AONB) and local landmarks, including churches and historic windmills. These views are particularly vulnerable to visual intrusion as are views of ‘Boston Stump’, the iconic octagonal medieval tower of St Botolph's Church in Boston, which is widely visible on the local skyline.

The rural farmland away from the urban settlements and major transport corridors, has a sense of tranquillity and isolation, indicating a higher level of susceptibility.

The landscape's perceptual qualities are affected by urban elements, including the busy A1031 and A1104 corridors, as well as the presence of wind farms. Overhead power lines and pylons are also prominent, particularly south of Boston. These existing detractors have already diminished the area’s scenic quality and rural character, thus reducing its susceptibility to further change from a new overhead line.

Based on the above and the judgements made against the factors listed in Table B, the susceptibility of the RLCT within the Study Area to a new 400 kV overhead line is considered to be medium.

Based on the above and the judgements made against the factors listed in Table C, the susceptibility of the RLCT within the Study Area to a new 400 kV substation is considered to be medium.

Table A: Landscape Value

Factors used to judge value	Judgements on value	
	Lower	Higher
Landscape character and quality		
Scenic quality		
Conservation interests		
Recreation value		
Perceptual aspects and tranquillity		
Associations		
Overall Value	The value of this landscape is judged to be medium.	

Table B: Landscape Susceptibility to a 400 kV OHL

Factors used to judge susceptibility	Judgements on susceptibility	
	Lower	Higher
Landform (Holford Rules 4 and 5)		
Landcover (Holford Rules 5 and 6)		
Scale		
Skylines (Holford Rule 4)		
Human influence		
Overall Susceptibility	The susceptibility of this landscape to a new 400 kV overhead line is considered to be medium.	

Table C: Landscape Susceptibility to a Substation

Factors used to judge susceptibility	Judgements on susceptibility	
	Lower	Higher
Landform (Horlock Rule 4)		
Landcover pattern		
Field pattern, scale and enclosure		
Human influence		
Overall Susceptibility	The susceptibility of this landscape to a new 400 kV substation is judged to be medium.	

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References

Ref 1 Natural England (2024). National Character Area Profiles [Online]. Available at: <https://nationalcharacterareas.co.uk/> [Accessed: 15th November 2024].

Ref 2 Landscape Design Associates (2010). East Midlands Region Landscape Character Assessment [Online]. Available at: <https://publications.naturalengland.org.uk/publication/5635681403535360> [Accessed: 15th October 2024].

Ref 3 Natural England National Character Area 46 The Fens. [Online]. Available at: <https://nationalcharacterareas.co.uk/the-fens/> [Accessed 28th November 2024]

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