



Immingham Green Energy Terminal

TR030008

Volume 6

6.4 Environmental Statement Appendices
Appendix 13.B: Landscape Character Baseline

Planning Act 2008

Regulation 5(2)(a)

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

September 2023

Infrastructure Planning

Planning Act 2008

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

Immingham Green Energy Terminal

Development Consent Order 2023

6.4 Environmental Statement

Appendix 13.B: Landscape and Visual Legislation

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1 Landscape Character Baseline

1.1 National Landscape Character

1.1.1 The Study Area contains two National Character Area (“NCA”) profiles:

- a. NE344: NCA Profile: 41 Humber Estuary (Ref 1-1); and
- b. NE521: NCA Profile: 42 Lincolnshire Coast and Marshes (Ref 1-2).

1.1.2 The relevant key characteristics of these NCAs are summarised in **Table 1**.

Table 1: National Character Area Summary Table

National Character Area	Key Characteristics
Natural England	
NCA 41: Humber Estuary	<ul style="list-style-type: none"> • <i>“Expansive, flat, low-lying estuarine landscape dominated by the open water of the Humber, with an ever-changing character due to the weather and tides.</i> • <i>Underlying bedrock of Cretaceous Chalk exposed as cliffs where the estuary cuts through between the Yorkshire and Lincolnshire Wolds.</i> • <i>A predominantly reclaimed, formerly inter-tidal landscape with high-quality soils giving rise to productive arable farming, within large rectilinear fields with boundaries formed by dykes, drains and embankments, and with very little tree cover.</i> • <i>Large, dispersed farmsteads and small villages on higher land are set within a quiet rural landscape.</i> • <i>Internationally important estuarine, intertidal and coastal habitats, influenced by the constant processes of accretion and deposition forming mudflats, salt marsh, saline lagoons, sand flats and sand dunes, which support large numbers of breeding and overwintering birds, grey seals and lampreys.</i> • <i>The unique peninsula of Spurn Point, with its mudflats and sand dunes constantly responding to dynamic coastal processes, provides birdwatching of international interest within a wild and remote landscape.</i> • <i>Big skies and open views over the estuary, mudflats and salt marshes, where flood embankments allow, with views of extensive industrial installations especially on the south bank.</i> • <i>Quiet rural areas and the estuary itself contrast distinctly with urban and industrial influences around Hull and around the major ports, especially on the south bank.”</i>
NCA 42: Lincolnshire Coast and Marshes	<ul style="list-style-type: none"> • <i>“Flat coastal plain to the east, with dramatic skylines across great distances, rising gradually in the west to more undulating land at the foot of the adjacent Lincolnshire Wolds.</i>

National Character Area	Key Characteristics
	<ul style="list-style-type: none"> • <i>Cretaceous Chalk underlies most of the area with later Quaternary sand, gravel and clay deposits laid down following glacial activity. Slowly permeable, seasonally waterlogged fine and fertile loamy soils.</i> • <i>Strong marine influences of accretion and erosion shape the coastline with extensive wide, shallow beaches, vast areas of mudflats, major dune systems, continuous lengths of artificial sea defences, and numerous sandy beaches and nature reserves.</i> • <i>Important coastal habitats are managed for nature conservation. There are coastal mudflats and a dune complex in Cleethorpes. Extensive dune systems and salt marshes support a wide range of overwintering and migratory seabirds. At Gibraltar Point an ancient calcareous dune system exists and coastal saline lagoons, reedbeds and mudflats are important for their biodiversity.</i> • <i>Land management has had a fundamental impact on the character of this area, with a clear distinction between the higher ground of the Middle Marsh, where settlement is nucleated, and dispersed settlement relating to drainage in the Outmarsh.</i> • <i>Inland is a predominantly open, medium-scale agricultural landscape with mixed arable farmland in the Middle Marsh to the west. The Outmarsh, and smaller farm units with traditional pastures and occasional vegetable crops on the Outmarsh - nearer to the coast, also has medium-scale arable agriculture with pockets of traditional pasture.</i> • <i>Traditional grazing marshes are a nationally threatened habitat with a distinctive landscape and cultural history. They need to be grazed, for example with cattle, and a range of cattle types are used including Lincoln Reds.</i> • <i>Woodland and hedge cover is sparse but increases westwards towards the foot of the Lincolnshire Wolds with significant ancient woodland on the Middle Marsh. The substantial amount of ancient semi-natural woodland includes a number of Sites of Special Scientific Interest (SSSI) and nature reserves (such as Rigsby, Muckton and Legbourne). More minimal tree and hedgerow cover is found on the lower-lying, open Outmarsh.</i> • <i>A complex series of rivers and small streams drains eastwards towards the sea. There are some natural watercourses such as the Great Eau and Waithe Beck, as well as a network of many manmade drainage ditches. The disused Louth Canal – a canalisation of the River Lud – extends as far as Tetney Lock.</i> • <i>Many deserted medieval villages surviving under grass are found in this NCA. Reclaimed marshland and salt marshes contain traces of ridge and furrow (which are permanent</i>

National Character Area	Key Characteristics
	<p><i>pasture) and areas retain important evidence of medieval and later industry (for example, salterns) with evidence of ancient salt works.</i></p> <ul style="list-style-type: none"> • <i>A dispersed settlement pattern is characteristic throughout much of the area with a concentration of larger settlement along the coast including resort towns. The port of Grimsby, once one of the largest fishing ports in the country, now acts as an important international freight link.</i> • <i>Rural areas have a mix of dispersed and nucleated settlement; the latter concentrated in the Middle Marsh. Rural settlements and market towns are strongly characterised by the use of brick and pantile, as a result of extensive 18th- and 19th-century rebuilding, with some very rare mud and stud buildings. Stone was used in particular for churches and high-status buildings.</i> • <i>Industrial areas are located in parts of the coastal strip, and there is some discordant development in certain areas, such as holiday resorts of bungalows and very extensive caravan parks. In places offshore and onshore wind turbines are present and distinctive on the skyline.</i> • <i>The developed seaside resorts attract tourists to the coast. The undeveloped wild coast with inspiring long views, high levels of tranquillity and numerous nature reserves means that this area is important for access, recreation and green tourism.”</i>

1.1.3 At a national scale the study area includes the Marine Character Area (“MCA”): East, where the area is defined in the National Seascape Character Assessment for England (MM01134) (Ref 1-3). The MCA is sub-divided, and the study area falls within MCA 6: Humber Waters (Ref 1-4). The relevant characteristics are summarised in **Table 2** below.

Table 2: National Seascape Character Assessment

Seascape Character Area	Key Characteristics
Marine Management Organisation National Seascape Character Assessment for England (MMO1134)	
MCA 6: Humber Waters	<ul style="list-style-type: none"> • <i>“The second largest coastal plain estuary in the UK bounded by intertidal mud and sand flats and saltmarsh.</i> • <i>Humber estuary drains approximately 20 per cent of the country.</i> • <i>Consistently muddy waters derived from North Sea tidal dynamics and suspended sediment from erosion taking place along the Holderness coast.</i> • <i>Internationally important for wildlife habitats and spawning grounds especially birds.</i>

Seascape Character Area	Key Characteristics
	<ul style="list-style-type: none"> • <i>Very large tidal range with constant and powerful tidal movements.</i> • <i>Constantly dredged and maintained navigation canal associated with land uses along the internal shores.</i> • <i>Waters host UK's largest port complex and waters are heavily trafficked with up to 40,000 ship movements per year.</i> • <i>Views are significantly animated by shipping traffic.</i> • <i>Extensive and complex mix of industrial, commercial, agricultural, residential and tourism estuary land uses which dominate views.</i> • <i>Renowned for transportation and fishing heritage.</i> • <i>Spanned inland by the Humber Bridge, the fifth largest single-span suspension bridge in the world.</i> • <i>Divided from the sea by the dynamic and evolving sand spit of Spurn Head which is a designated feature for its geomorphology and habitats.</i> • <i>Waters guarded at the mouth of the Humber by two early 20th century sand forts.</i> • <i>Important archaeological features present.”</i>

1.2 Regional Landscape Character

1.2.1 The study area is covered by one Regional Character Area (“RCA”) profile: RCA Area 3, The Northern Marshes (Ref 1-5).

1.2.2 The relevant characteristics of the RCA are summarised in **Table 3** below.

Table 3: Regional Character Assessment

Regional Character Area	Key Characteristics
The Historic Landscape Characterisation Project for Lincolnshire	
RCA Area 3: The Northern Marshes	<ul style="list-style-type: none"> • <i>“The landscape of the Northern Marshes Character Area is heavily influenced by the many industrial features along the coast”.</i> • <i>“Along the seaward bank of the Humber Estuary there is a large modern industrial presence clustered around the deep-water port of Immingham, which was completed in 1913. The most immediately visible of these industries is the Lindsey Oil Refinery at South Killingholme. The refinery complex includes many large and tall structures, such as tanks and flare stacks, which are a significant vertical element in this largely flat landscape.”</i> • <i>“Other industries have also grown up in the vicinity and the coast north of Grimsby is strongly industrial in character for a</i>

Regional Character Area	Key Characteristics
	<p><i>distance of almost seven miles. Despite the frequent interpretation of these features as detrimental to the landscape of the North-East Lincolnshire Coast, the industrial facilities of the area make a significant contribution to its unique character, often creating brooding and dramatic skylines across great distances.”</i></p> <ul style="list-style-type: none"> • <i>“Further north, along the coast, there are areas of well preserved open countryside. Between East Halton and New Holland the area is primarily rural in character with a preserved rectilinear field pattern indicative of nineteenth-century drainage and enclosure. Long straight roads with wide verges lead from these settlements toward the River Humber and the landscape is dotted with isolated farms and other buildings. There is good visibility in all directions as the fields are bounded by ditches rather than hedges. The ditches indicate the marshland origins of the landscape. Further inland, between the A1077 and the coastal railway, the drained marsh character gives way to a more typical Lincolnshire landscape of nucleated settlement. Although the field patterns are still indicative of planned enclosure, there are also areas of more ancient enclosure to be found close to the villages. Views are more restricted in this part of the character area, as the roads are less straight and fields are more likely to be bounded by hedges.”</i>

1.3 Local Landscape Character

1.3.1 The Site and study area is covered by the following three published Local Character Assessments:

- a. North East Lincolnshire Council Landscape Character Assessment (Ref 1-6).
- b. East Riding of Yorkshire Landscape Character Assessment (Ref 1-7).
- c. North Lincolnshire Council Landscape Character Assessment and Guidelines (Ref 1-8).

1.3.2 A description of the key landscape characteristics for each of the relevant local character areas and sub-areas are provided below in **Table 4**.

Table 4: Local Landscape Character

Local Landscape Character	Key Characteristics
North East Lincolnshire Council Landscape Character Assessment	
Area A: Humber Estuary	<p>The summary of the area is as follows:</p> <ul style="list-style-type: none"> • <i>“Though geomorphologically perhaps the most dominant natural feature, within North East Lincolnshire the visual presence of the estuary is only generally obvious from a few prominent vantage points or from immediately alongside the river. In a local context the estuary is mostly contained by</i>

Local Landscape Character		Key Characteristics
		<p><i>flood alleviation berms. However there is a widespread sense of being close to the estuary.”</i></p> <p>The visual characteristics are described as follows:</p> <ul style="list-style-type: none"> “<i>The Humber Estuary is an expansive, flat and low-lying landscape in which agriculture, industrial/urban and semi-natural habitat land uses combine to provide local variety in an otherwise simple, sometimes bleak landscape. The estuary itself can sometimes present a somewhat sombre appearance, particularly at low tide when extensive areas of mud flat are exposed. In contrast, at high tide the estuary has a brighter, more attractive coastal feel. The dynamics of tides, changing weather, bird life and visible activity on the estuary sometimes combine to create a vibrant scene. However, in many areas views of the water are blocked by flood alleviation berms and the estuary’s presence is perceived only through the more subtle influences such as the taste and smell of salt laden air.</i>”
Area Ai: Humber Estuary	Local Landscape Type (LLT) 1: Industrial Landscape	<p>The characteristics are described as follows:</p> <ul style="list-style-type: none"> “<i>Industrial Landscape - is visually intrusive, stretching from the north-western edge of Grimsby up to and around Immingham. It is dominated by on-shore oil and gas refineries and other large scale industrial units and extends inland to the A180.</i>”
Area Bi: Lincolnshire Coast and Marshes		<p>The summary of the area is as follows:</p> <ul style="list-style-type: none"> “<i>Slightly undulating agricultural landscape flowing off the Lincolnshire Wolds towards the coast. Local landscape diversity is provided by a varied distribution of woodlands, villages and towns.</i>” <p>The visual characteristics are described as follows:</p> <ul style="list-style-type: none"> “<i>The Lincolnshire Coast and Marshes forms a transition zone between the higher Wolds and the coast. It is an unexceptional agricultural landscape without a strong sense of place or setting. Areas close to the A180 are often affected by traffic noise which can have a detracting influence on the quality of the landscape character.</i>”
Area Bi: Lincolnshire Coast and Marshes	LLT 2: Open Farmland	<p>The characteristics are described as follows:</p> <p>“<i>Open Farmland - extends northwards from the outskirts of Grimsby. Its western edge runs parallel with the main railway line and its eastern edge follows the A180.</i>”</p>
Area Bi: Lincolnshire Coast and Marshes	LLT 3: Wooded Open Farmland	<p>The characteristics are described as follows:</p> <p>“<i>This area lies to the west and north west of Grimsby and Cleethorpes. Its northern extent lies on the Borough boundary near Habrough; its southern at the Borough boundary near Holton-le-Clay. The Borough boundary and the A18 mark its</i></p>

Local Landscape Character		Key Characteristics
		<i>western extent and the outskirts of Grimsby and Cleethorpes, the B1210 and main railway line its eastern edge.</i>
East Riding of Yorkshire Landscape Character Assessment		
Landscape Character Type (LCT) 21: Low Lying Drained Farmland		<p>The characteristics are described as follows:</p> <ul style="list-style-type: none"> • <i>“Sunk island is a designated Conservation Area</i> • <i>Fields vary in size but are generally large and very large and intensively farmed for arable crop production. The area has a well-managed almost manicured appearance for the most part due to the intensive nature of farming practices. Several farmsteads are sparsely scattered throughout the area. Paull is the only village in the LCT and is located on the bank of the Humber Estuary southeast of Hull.</i> • <i>There are four scheduled monuments in this LCT. Three are medieval moated sites and one is the Battery at Paull. Paull Battery is a very important historic military structure once part of a larger structure and located on the site of a deserted medieval village.</i> • <i>Other military structures in the area are found at Spurn Head which was an important military complex during the Napoleonic and First and Second World Wars. There are off shore forts within the estuary.</i> • <i>There are no primary or secondary transport corridors in this LCT. Roads are limited to smaller country lanes and private access tracks. There is a small network of public footpaths in the area that mostly link tracks and lanes.</i> • <i>The Humber Estuary and Spurn Point are internationally important wildlife habitats, especially for birds. There are also several small areas of relatively species-poor salt marsh along the north bank of the Humber Estuary. The best example of this habitat, being the most extensive and most species rich, is at Welwick. In other areas new saltmarshes are building up as the rate of the ebb flow decreases and silt is deposited. Some of these areas are dominated by red fescue and are grazed by cattle.</i> • <i>The Humber estuary is an internationally important site for birds and is a designated SSSI.”</i>
LCT 21: Low Lying Drained Farmland	Landscape Character Area (LCA) 21B: Sunk Island	<p>The detailed characteristics of Sunk Island are described as follows:</p> <ul style="list-style-type: none"> • <i>“Sunk Island is a Conservation Area and an example of direct land reclamation, linking the original island with the mainland. This was done by constructing levees to prevent flooding then enclosing and artificially draining the land. The area is at risk of flooding and is protected by the clay embankment along the north bank of the Humber Estuary.</i> • <i>The area is designated a Conservation Area in recognition of its historic importance and character that is the result of</i>

Local Landscape Character		Key Characteristics
		<p><i>gradual land reclamation since the late 17th Century. Access to the island was restricted until a series of roads were built in the mid-1800s.</i></p> <ul style="list-style-type: none"> • <i>Most of the land apart from a few individual properties remains the property of the Crown. The brick church was closed in the 1980s and is now a heritage centre.</i> • <i>Agricultural land adjacent to the Humber Estuary would have at one time consisted of wet pasture. Much of this has been drained, however it is still important for many birds including pink-footed goose, wigeon, lapwing and golden plover. Field pattern is comprised of large, rectilinear arable fields bordered by tracks and drainage ditches.</i> • <i>East of Welwick, there are several stretches of canal, brackish pools and marshes and damp grassland. All of these are small in extent but never-the-less important for plant species rarely found elsewhere nationally. This is a bleak landscape unique to the East Riding.</i> • <i>A managed realignment site has been created at Welwick, located immediately to the west of the pumping station at the end of Winestead Drain. This area was the last part of the Humber Estuary to be reclaimed in the 1960's. Previously arable farmland, the area is now a mix of inter-tidal saltmarsh and mudflat.</i> • <i>There are few people and settlements are mostly scattered brick built farmsteads that punctuate the flat and open landscape. Tree cover is sparse. A notable feature is the avenue of trees on the Sunk Island to Ottringham Road."</i>
North Lincolnshire Landscape Character Assessment and Guidelines		
The Humber Estuary LCA		<ul style="list-style-type: none"> • <i>"The Humber Estuary is a pre-dominantly flat, expansive, low-lying, estuarine landscape.</i> • <i>Local areas of undulating terrain and wooded farmland inland of the estuary.</i> • <i>Visual presence of the Humber from within the LCAR itself is often slight, owing to the low-lying nature of the terrain and the visual obstruction created by flood alleviation defences.</i> • <i>The sky and open views dominate, with ever-changing character due to tidal influences, and mudflats, salt marshes and reedbeds form where flood embankments allow.</i> • <i>Tidal dynamics create recurring change as the low tide reveals extensive areas of mudflat in contrast to the high tide which creates a brighter more attractive coastal feel.</i>

Local Landscape Character		Key Characteristics
		<ul style="list-style-type: none"> • <i>The dynamics of tides, changing weather, flocks of wetland birds and visible activity on the estuary can combine to create a vibrant scene.</i> • <i>The whole of the estuary is an internationally and nationally designated area of ecological conservation importance containing important wetland and coastal habitats.</i> • <i>Inland of the floodbanks, there are significant areas of wetland habitat at Alkborough Flats and in the blow wells and claypits stretching from Barton upon Humber to East Halton.</i> • <i>A predominantly reclaimed, formerly intertidal landscape of rectilinear, mainly arable fields on fertile well-drained soils, often unbounded, with dikes, drains and embankments characteristic.</i> • <i>The agricultural land is graded as ‘High’ and ‘Good to Moderate’ in Natural England’s Agricultural Land Classification system; the second and third highest grade.</i> • <i>Hedgerow and tree cover is limited, although occasional dense woodland blocks break up views and are visually prominent.</i> • <i>Urban and industrial complexes are significant. Away from settlement and industrial influences there is a sense of remoteness and isolation.</i> • <i>Strong Cultural Heritage across the LCAR, notably through the presence of the Grade I Listed Humber Bridge.</i> • <i>Good regional connectivity in the form of the PROW network with some routes along the estuary edge, including overlap with the Viking Way long distance footpath. The National Cycle Network Route 1 crosses the Humber Bridge.”</i>
The Humber Estuary LCA	LCT Industrial Landscape	<ul style="list-style-type: none"> • <i>“The topography of the land is low lying and flat but gently undulates over the 10m and 20m contour lines as it extends to the west.</i> • <i>The area has been heavily developed for industry from the 1960’s onwards with now only remnant pockets of flat open farmland, woodland and naturalised coastal habitats interspersed amongst the dominant industrial infrastructure.</i> • <i>The saline lagoons of North Killingholme Haven Pits, on the site of the former clay extraction pits associated with the brick and tile works, have the same national and international level ecological designations as the Humber Estuary, and are significant as roosting and feeding grounds for visiting waterbirds, especially waders.</i>

Local Landscape Character	Key Characteristics
	<ul style="list-style-type: none"> • <i>In the last 15 years the expansion of hard surfaced vehicle storage areas, east of Rosper Road, has resulted in the loss of 185 hectares of arable land. This includes an unnamed block of deciduous woodland, previously present for over 100 years, as well as the diversion / culverting of field drains and watercourses. Because of this expansion, the saline lagoons are now tightly contained on 3 sides by hard surfaces.</i> • <i>A similar scenario of expansion has developed at the northern end of the LCT towards the clay extraction pits of the former Wilkinson and Houghton Ltd bricks works on Skitter Road.</i> • <i>Deciduous woodland blocks at Chase Hill Wood and Burkinshaw's Covert are similarly contained by the industrial landscape. Both blocks have been present for over 100 years with the former retaining its original footprint, but the latter has been partially removed. Plantation woodlands have been planted adjacent to Burkinshaw's Covert. These woodlands are Local Wildlife Sites.</i> • <i>Landscape infrastructure elements are insignificant within the industrial landscape. Ornamental mitigation planting and amenity trees in grass verges are generally out of scale with the vertical infrastructure and industrial mass.</i> • <i>Field boundary hedgerows still retained in good condition on the remaining agricultural farmland around Marsh Lane.</i> • <i>Development has resulted in a disaggregated landscape lacking unity. Urban elements such as fences and signs proliferate and present visual clutter.</i> • <i>Major transport corridors for the distribution of freight, including the Ulceby to Immingham railway and the A160 which bisect the area to the south. Industrial traffic such as large bulk tankers and lorry freight are common on the road network.</i> • <i>Lighthouses and engineered coastal defences prominent along the coastline.</i> • <i>Cultural heritage contribution from the 3 lighthouses (Killingholme North Low, High and South Low) and the Brick and tile kiln and associated chimney at the former Wilkinson and Houghton Ltd brickworks. All are located on the shoreline and are Grade II listed structures.</i> • <i>The PROW network includes a route along the coastline and links inland to East Halton. There are no continuous routes through the industrial landscape, though the England Coast Path will make the necessary corrections."</i>

1.4 References

- Ref 1-1 Natural England (2014). National Character Area 41: Humber Estuary.
- Ref 1-2 Natural England (2014). National Character Area 42: Lincolnshire Coast and Marshes.
- Ref 1-3 Marine Management Organisation (2018). National Seascape Character Area Assessment for England (MMO1134).
- Ref 1-4 URS Scott Wilson on behalf of Natural England (2012). Seascape Character Area Assessment East Inshore and East Offshore marine plan areas.
- Ref 1-5 English Heritage and Lincolnshire County Council (2011). The Historic Character of The County of Lincolnshire
- Ref 1-6 North East Lincolnshire Council (2010). North Lincolnshire Landscape Character Assessment.
- Ref 1-7 East Riding of Yorkshire Council (2018). East Riding of Yorkshire Landscape Character Assessment.
- Ref 1-8 JBA Consulting on behalf of North Lincolnshire Council (n.d.). North Lincolnshire Landscape Character Assessment – a review by JBA Consulting on behalf of North Lincolnshire Council (no publication date).