

# REPORT

## Boston Alternative Energy Facility – Environmental Statement

### Chapter 9 Landscape and Visual Impact Assessment

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## Executive Summary

This chapter of the Environmental Statement (ES) considers the predicted landscape and visual effects that would result from development of the Facility. Preparation of the Landscape and Visual Impact Assessment (LVIA) follows recognised guidance and is written by a landscape architect, an expert in LVIA. It should be noted that due to the minor works proposed at the Habitat Mitigation Area (where no built structures are proposed, and with low-level works taking place in a period of up to one week only using very limited plant and equipment) it is highly unlikely for potential significant effects to occur and this area is not included within this assessment.

The assessment describes the existing characteristics of the landscape and views within the Study Area (as shown in **Figure 9.1**), through desk top research, site survey and analysis. This establishes the 'baseline' from which the effects of the Facility can be determined. Landscape effects include both physical effects on features (for example loss of existing trees) and effects on the character of the landscape. Visual effects relate to the effect on views and visual amenity experienced by people, including residents, users of public rights of way, road users and recreational users. Visual effects are assessed from a series of viewpoints, selected to represent the range of views people experience within the Study Area.

With the exception of the small Habitat Mitigation Area the Facility lies within the existing Riverside Industrial Estate, on land designated under local plans as a Proposed / Existing Employment Area and an Allocated Waste Area. As such the site, surrounding landscape and associated views are strongly influenced by existing large industrial buildings, busy roads, commercial vessels using The Haven and other features, including very tall electricity pylons that often dominate local views. Views towards the site are across a flat landscape and are often limited by tree belts, hedgerows and existing buildings. Flood defence banks alongside The Haven help screen views from residential properties to the east but also provide open, close range views from footpaths that follow the tops of the banks. Existing views are dominated by industrial units and associated lorry movements, noise and dust with tall pylons often prominent. Views are both visually and perceptually poor in quality and character.

The Facility is an extensive development and includes several large-scale industrial buildings, structures, stacks and a riverside wharf. The Lightweight Aggregates (LWA) Plant is the tallest proposed building (excluding the stacks), located alongside The Haven. The Facility will be seen in context of the existing Biomass UK No. 3 Ltd facility, also comprising of tall buildings and a stack.

Given the existing industrial context of the Principal Application Site and surrounding area the Facility will not cause significant effects to landscape character. Effects are predicted to be minor adverse during construction and operation. There will be no significant physical landscape effects. It is anticipated that similar types of plant equipment would be required to decommission the Facility as would be used during the construction phase. As such, it is considered that decommissioning impacts would give rise to no greater significance of effect to those predicted for construction.

Effects to views during the construction stage are predicted to be the worst case scenario. Views from footpaths along the eastern bank of The Haven will be most affected with close range, open views to construction of the wharf and LWA Plant being most prominent. Effects may be moderate major adverse. Views from certain residential properties to the west of the Principal Application Site are predicted to be moderate adverse, with views of tall cranes and emerging buildings. Visual effects during operation will be slightly less adverse, although close range views of the Facility from The Haven corridor to the east will remain moderate adverse.

Mitigation measures to reduce landscape and visual effects will include additional tree and shrub planting within existing, established belts of vegetation and planting of new belts of dense tree, shrubs and hedgerow around the Facility. Long term establishment of tree and shrub planting will provide some screening to lower sections of buildings in certain views but will not reach sufficient height to fully screen tall buildings and structures.

## 9 Landscape and Visual Impact Assessment

### 9.1 Introduction

9.1.1 This chapter of the Environmental Statement (ES) describes the existing environment in relation to the landscape and visual resource and details the assessment of the potential impacts during the construction, operational and decommissioning phases of the Boston Alternative Energy Facility (the Facility). Mitigation measures are provided, and a discussion of the residual effects given where significant effects were identified.

9.1.2 The Landscape and Visual Impact Assessment (LVIA) chapter is supported by appendices and figures:

- Appendix 9.1: LVIA Methodology.
- Appendix 9.2: Representative Viewpoint Analysis Tables.
- Figure 9.1: Site Location and Study Area.
- Figure 9.2: Aerial Photograph of Study Area & Photograph Locations.
- Figure 9.3: Landscape Character.
- Figure 9.4: Visual Receptors.
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9.1.3 This chapter was prepared by DRaW (UK) Ltd. The chapter makes reference to the Overarching National Policy Statement (NPS) for Energy (EN-1) and NPS for Renewable Energy Infrastructure (EN-3). LVIA methodology is based on recognised national guidelines and is outlined in the following sections. Full methodology is included in **Appendix 9.1**.

## 9.2 Legislation, Policy and Guidance

### Legislation

9.2.1 Various European Union (EU) Directives underpin the requirement for Environmental Impact Assessment (EIA) (which includes LVIA) and are consolidated in Directive 2011/92/EU; The assessment of effects of certain public and private projects on the environment. The EU Directive is implemented in England by The Infrastructure Planning (Environmental Impact Assessment) Regulations 2017. Landscape is specifically identified as an environmental topic to be investigated under EIA.

9.2.2 The European Landscape Convention (ELC, Council of Europe, 2000) highlights the importance of all landscapes within the member states and encourages their protection, management and planning. The UK signed up to the Convention in 2006.



## National Planning Policy

### National Policy Statements – Overarching National Policy Statement for Energy (EN-1) and National Policy Statement for Renewable Energy Infrastructure (EN-3)

9.2.3 For Nationally Significant Infrastructure Projects, EN-1 requires a Landscape and Visual Impact Assessment (LVIA) to be undertaken as part of an Environmental Statement (Department of Energy and Climate Change (DECC), 2011a). EN-1 outlines generic LVIA methodology and landscape and visual effects that may result from biomass / waste development.

9.2.4 EN-3 provides details of the specific considerations that apply to biomass / waste development (DECC, 2011b). The Infrastructure Planning Commission (now the Planning Inspectorate) are asked to take into account a range of considerations including:

*Para 2.5.49 ‘Good design that contributes positively to the character and quality of the area will go some way to mitigate adverse landscape / visual effects. Development proposals should consider the design of the generating station, including the materials to be used in the context of the local landscape.*

*2.5.50 Mitigation is achieved primarily through aesthetic aspects of site layout and building design including size and external finish and colour of the generating station to minimise intrusive appearance in the landscape as far as engineering requirements permit. The precise architectural treatment will need to be site-specific.*

*2.5.52 The IPC should expect applicants to seek to landscape waste / biomass combustion generating station sites to visually enclose them at low level as seen from surrounding external viewpoints. This makes the scale of the generating station less apparent, and helps conceal its lower level, smaller scale features. Earth bunds and mounds, tree planting or both may be used for softening the visual intrusion and may also help to attenuate noise from site activities.’*

## National Planning Policy Framework 2019 (NPPF)

9.2.5 National planning policy guidance in relation to landscape and visual matters is set out in the NPPF (Ministry of Housing, Communities & Local Government (MHCLG), 2019) as follows:

9.2.6 Under chapter 12 ‘Achieving well-designed places’, paragraph 127 states:

*“Planning policies and decisions should ensure that developments:*

*[...]*

*b) are visually attractive as a result of good architecture, layout and appropriate and effective landscaping;*

*c) are sympathetic to local character and history, including the surrounding built environment and landscape setting [...].”*

9.2.7 Chapter 15 ‘Conserving and enhancing the natural environment’ states at paragraph 170:

*“Planning policies and decisions should contribute to and enhance the natural and local environment by:*

*a) protecting and enhancing valued landscapes ... (in a manner commensurate with their statutory status or identified quality in the development plan);*

*b) recognising the intrinsic character and beauty of the countryside, and the wider benefits from natural capital and ecosystem services – including... trees and woodlands;” [...]*

*“f) remediating and mitigating despoiled, degraded, derelict, contaminated and unstable land, where appropriate.”*

9.2.8 At paragraph 180 the NPPF states:

*“Planning policies and decisions should also ensure that new development is appropriate for its location .... In doing so they should:*

*c) limit the impact of light pollution from artificial light on local amenity, intrinsically dark landscapes [...].”*

## **Natural Environment Planning Practice Guidance**

9.2.9 The NPPF is supported by Planning Practice Guidance (PPG) notes. Landscape is covered under the Natural Environment PPG. The introductory section to the Natural Environment PPG reflects NPPF guidance in that:

*“planning should recognise the intrinsic character and beauty of the countryside”.*

9.2.10 The PPG notes “*This includes designated landscapes but also the wider countryside.*”

### Local Planning Policy

#### The Lincolnshire Minerals and Waste Local Plan, Adopted June 2016

9.2.11 The Lincolnshire Minerals and Waste Local Plan relates to waste management and waste development and its policies are relevant to the Facility (Lincolnshire County Council (LCC), 2017). Under the Site Locations (December 2017) document the site is located within Allocated Waste Area WA22-BO. The area is identified as having a variety of waste-related uses including the potential for ‘Energy Recovery’. The Core Strategy and Development Management Policies document (Adopted June 2016) includes the following policies.

9.2.12 Policy DM3: Quality of Life and Amenity refers to the importance of reducing visual intrusion ‘*to an absolute minimum*’. It states:

*‘Planning permission will be granted for minerals and waste development provided that it does not generate unacceptable adverse impacts arising from...visual intrusion... to occupants of nearby dwellings and other sensitive receptors’.*

9.2.13 Measures to make living near to a ‘waste site’ acceptable include the creation of bunds and natural vegetation for screening. Waste development should be well designed and contribute positively to the character and quality of the area.

9.2.14 Policy DM6: Impact on Landscape and Townscape states:

*‘Planning permission will be granted for minerals and waste development provided that due regard has been given to the likely impact of the proposed facility on landscape and townscape, including landscape character, valued or distinctive landscape features and elements, and important views. If considered necessary by the County Council, additional design, landscaping, planting and screening will be required. Where planting is required it will be subject to a minimum 10-year maintenance period.*

*Development that would result in residual, adverse landscape and visual impacts will only be approved if the impacts are acceptable when weighed against the benefits of the scheme. Where there would be significant adverse impacts on a valued landscape considerable weight will be given to conservation of that landscape’.*

South-East Lincolnshire Local Plan 2011-2036 (Adopted March 2019)

9.2.15 Planning decisions for non-waste (or mineral) developments within Boston Borough are guided by the South-East Lincolnshire Local Plan 2011-2036 (Adopted March 2019) (South East Lincolnshire Joint Strategic Planning Committee, 2019). The following section summarise local plan policy that can also be considered relevant to this assessment.

9.2.16 The Principal Application Site encompasses land areas defined as 'Existing Main Employment Area' and 'Proposed Main Employment Area'. Eastern margins of the Principal Application Site and the whole of the Habitat Mitigation Area is located within areas defined as 'Countryside'. Policies relating to 'Countryside' are not considered relevant to this chapter and are not considered further.

9.2.17 In considering attributes of sustainable development Policy 2: Development Management states that:

*'Proposals requiring planning permission for development will be permitted provided that sustainable development considerations are met, specifically in relation to:*

*1. size, scale, layout, density and impact on the amenity, trees, character and appearance of the area and the relationship to existing development and land uses;*

*2. quality of design and orientation;...*

*6. impact upon neighbouring land uses by reason of noise, odour, disturbance or visual intrusion;...'*

9.2.18 Policy 2 is considered relevant to 'any type of proposal whether large or small'.

9.2.19 Policy 3: Design of New Development, effectively provides a list of issues to be considered, consistent with NPPF.

*All development will create distinctive places... Design which is inappropriate to the local area, or which fails to maximise opportunities for improving the character and quality of an area, will not be acceptable.*

*Development proposals will demonstrate how the following issues, where they are relevant to the proposal, will be secured:*

*1. creating a sense of place by complementing and enhancing designated and non designated heritage assets; historic street patterns; respecting the density, scale, visual closure, landmarks, views, massing of neighbouring buildings and the surrounding area;...*

*3. the landscape character of the location;...*

*10. the appropriate treatment of facades to public places...*

*11. residential amenity;...*

*14. the incorporation of existing hedgerows and trees and the provision of appropriate new landscaping to enhance biodiversity, green infrastructure, flood risk mitigation and urban cooling;...*

#### 9.2.20 Policy 31: Climate Change and Renewable and Low Carbon Energy

##### *'A. Climate Change*

*All development proposals will be required to demonstrate that the consequences of current climate change has been addressed, minimised and mitigated by:*

*1. employing a high-quality design;...*

*5. incorporating measures which promote and enhance green infrastructure and provide an overall net gain in biodiversity as required by Policy 28 to improve the resilience of ecosystems within and beyond the site...*

##### *B. Renewable Energy*

*With the exception of Wind Energy the development of renewable energy facilities, associated infrastructure and the integration of decentralised technologies on existing or proposed structures will be permitted provided, individually, or cumulatively, there would be no significant harm to:*

*1. visual amenity, landscape character or quality, or skyline considerations;...'*

## 9.3 Consultation

9.3.1 Consultation undertaken throughout the pre-application phase informed the approach and the information provided in this chapter. A summary of the consultation of particular relevance to LVIA is detailed in **Table 9-1**.

**Table 9-1 Consultation and Responses**

Consultee and Date	Response	Chapter Section Where Consultation Comment is Addressed
Neil McBride Lincolnshire County Council 12 <sup>th</sup> November 2018, email	LCC confirmed proposed representative viewpoints were appropriate. Suggested minor adjustment to locations of two views and the inclusion of two additional views.	Representative viewpoints and photomontage views form the basis of the LVIA chapter as described in <b>Appendix 9.2</b> .
Neil McBride Lincolnshire County Council 28/01/2019, email	LCC confirmed the amended view locations and two additional views are acceptable. Preliminary photomontage locations acceptable.	Representative viewpoints and photomontage views form the basis of the LVIA chapter as described in <b>Appendix 9.2</b> .
The Planning Inspectorate, Scoping Opinion, July 2018	Proposed parameters. Dimensions of the stacks and cranes, along with any other temporary or permanent structures should be included within the ES.	Detailed dimensions of structures are provided in <b>Chapter 5 Project Description</b> with an outline summary of key dimensions relevant to the LVIA given at given in <b>Section 9.7</b> .
The Planning Inspectorate, Scoping Opinion, July 2018	Study Area should be determined according to the extent of the anticipated impacts. Relevant receptors may include those experiencing views from the River Witham, and consideration should be given to this matter in the ES.	The extent of the Study Area has been determined in accordance with recognised LVIA methodology to encompass all receptors that may experience significant effects.
The Planning Inspectorate, Scoping Opinion, July 2018	The ES should also assess impacts to visual amenity resulting from the introduction of artificial lighting during all phases of the Facility.	Effects of lighting are outlined within this chapter at <b>Section 9.8</b> .
Lincolnshire County Council (consultee response to Planning Inspectorate)	Assessment of the effects of lighting should be considered in the ES, in view of the proximity of sensitive receptors to the east of The Haven.	Effects of lighting are outlined within this chapter at <b>Section 9.8</b> .
Marine Management Organisation (consultee response to Planning)	The LVIA should assess the effects of the visual impact from the river, as seen by approaching vessels.	Representative viewpoints are described in <b>Appendix 9.2</b> . Views from The Haven corridor are considered to be representative of recreational users of The Haven waterway.

Consultee and Date	Response	Chapter Section Where Consultation Comment is Addressed
Inspectorate)		
Natural England (consultee response to Planning Inspectorate)	Require landscape character areas to be mapped, assessment of visual and landscape (including physical) effects. Assess changes in topography. Use of recognised LVIA methodologies. Consider the character and distinctiveness of the area with the siting and design of the proposed development. Assess potential cumulative effects. Make reference to relevant NCA's.	Landscape Character Areas and National Character Areas NCAs are mapped on <b>Figure 9.3</b> . Landscape and visual impacts are addressed within the LVIA chapter, based upon recognised methodology ( <b>Appendix 9.1</b> ). Potential landscape and visual cumulative effects are addressed in <b>Section 9.10</b> .
Section 42 Consultation Response – Lincolnshire County Council (LCC), 1 <sup>st</sup> August 2019	The scale of development entailed within this application has the potential to significantly impact the landscape in and around Boston.	Predicted landscape effects are addressed in <b>Section 9.4</b> .
	The Council were consulted on designated viewpoints by Estell Warren in November 2018. The viewpoints were reviewed and comments were made to Estell Warren regarding minor changes to Viewpoints 9 and 14. These changes were noted and consequently captured in the PEIR and this ES. The Council are therefore content with the methodology used and selected viewpoints.	Noted.
	The Council agree with the description provided for the study area. However, in respect of the proposed landscaping mitigation measures consideration should be given to 'off site' landscaping particularly to the south and west of the proposed site.	The proposed scheme does not include off site landscape mitigation measures, only measures that are proposed to be secured within the Order limits by the Development Consent Order.
Section 42 Consultation Response – Natural England, 6 <sup>th</sup> August 2019	Natural England welcomes the landscape and visual impact assessment (LVIA) that has been undertaken and provided within this chapter. We support the use of the publication Guidelines for Landscape and Visual Impact Assessment (2013, 3rd edition) which has been followed in the chapter's methodology. We also welcome reference to the National Character Areas (NCA).	Noted.
	We note that the visual impact on Public Rights of Way and Access has been included including long distance and recreational footpaths (at 9.6.22). We note from (Chapter 19 Traffic & Transport) that	The visual impact of views from the proposed diverted route following closures of public rights of way is included within <b>Section 9.8</b> .

Consultee and Date	Response	Chapter Section Where Consultation Comment is Addressed
	the England Coast Path is to be diverted around the site, but it is unclear from this chapter if the visual impact of this change has been considered.	

## 9.4 Assessment Methodology

### Landscape and Visual Impact Assessment Methodology

9.4.1 The methodology for the LVIA is based on the general recommendations set out in Guidelines for Landscape and Visual Impact Assessment, 3rd Edition, LI & IEMA, 2013. The guidelines are not prescriptive and set out a general approach that should be tailored to the specific circumstances of the project that is being assessed. The methodology adopted for this assessment is set out in **Appendix 9.1**. Briefly, the assessment process comprises the following stages:

- Establishment of the baseline landscape and visual conditions within the Study Area, including reference to any existing landscape character assessments that may be available;
- Identification of potential landscape and visual receptors and assessment of their sensitivity to change;
- Commentary (and specific assessment where appropriate) of the effects of the Facility on receptors at the construction stage; and
- Assessment of the effects of the Facility after completion. Post completion stages to be assessed are at year 1 and at year 15. At year 1, the Facility would be complete but with no additional benefit of mitigation planting. At year 15, the Facility would be complete, and the effects of established mitigation planting can be taken into account.

9.4.2 Landscape effects and visual effects are considered separately. Landscape effects relate to both direct physical effects of the Facility (for example loss of existing trees) and effects on wider landscape character, including perceptual effects. Visual effects relate to the effect on views and visual amenity experienced by various receptors including residents, users of public rights of way, road users and recreational users. Views from conservation areas, listed buildings and scheduled monuments are also considered where these features include recognised viewpoints, e.g. used by tourists or other receptors. It should be noted that the LVIA addresses effects on recognised views from cultural heritage resources; effects on 'setting' are not considered in this assessment and are



presented in **Chapter 8 Cultural Heritage**.

- 9.4.3 Effects are identified as being either reversible or irreversible and the duration of effects is also considered. Effects are described as being either beneficial or adverse depending on whether they are considered to have a positive or negative respective effect on the landscape or within views.
- 9.4.4 Impact assessment and project development is an iterative process, with the overall aim of avoiding environmental impacts or reducing identified impacts to acceptable levels. Based on the findings of this assessment, landscape and visual mitigation measures were designed to help integrate the Facility into its landscape setting and mitigate any specific visual or physical impacts that were identified. The LVIA considered the effects of mitigation measures being in place and identified residual effects.
- 9.4.5 The extent of the Study Area adopted for this assessment was derived from a combination of desktop study, site investigation and use of Zone of Theoretical Visibility (ZTV) analysis. The extent of the Study Area is shown on **Figure 9.1**. Given the nature of the Facility and characteristics of the Study Area, significant landscape and visual effects would not be expected beyond a 2 km zone from the Principal Application Site boundary. However, high sensitivity receptors within the wider Study Area were also identified and considered in the assessment where appropriate.
- 9.4.6 The proposed Habitat Mitigation Area (HMA) will include minor ground level works requiring limited use of plant and equipment over a very short period of time (up to one week). There will be no built development within the HMA. (See **Chapter 5 Project Description** for full details). The HMA is not therefore included within the scope of the LVIA chapter due to the unlikely potential for significant effects to occur. Distance offsets illustrated in the LVIA figures are based upon the Principal Application Site boundary and do not take into account the HMA boundary.
- 9.4.7 ZTV analysis was undertaken using the following parameters:
- OS Terrain 5 data were used to form the topographical basis of the model;
  - Significant areas of mature woodland and buildings were incorporated into the terrain model at 10 m above ground level, hedgerow and other vegetation at 4 m above ground level.
  - The tallest proposed building ridge heights were used in the ZTV analysis;

- Viewer height within the model was set to 1.7 m eye level.

9.4.8 The significance of predicted landscape and visual effects was considered within the LVIA. Predicted visual effects were assessed based on a series of 'representative viewpoints' (**Appendix 9.2, Figure 9.2, and Figures 9.6 to 9.16**). These were selected to represent the experience of different types of visual receptor, including users of public rights of way, residential properties, transport routes, heritage and recreational sites. Selected viewpoints may include specific locations that are popular vantage points or tourist destinations. Viewpoints may also be used to illustrate landscape character effects or discuss cumulative effects of the Facility. The number and location of representative viewpoints was agreed with Lincolnshire County Council.

9.4.9 Landscape and visual effects identified as being moderate, moderate major and major were considered to be significant effects (in EIA terms) and should be taken into account during the decision-making process.

### Cumulative Impact Assessment

9.4.10 Cumulative landscape and visual effects are defined as the additional changes caused by a proposed development in conjunction with other similar developments, or as the combined effect of a set of developments taken together. Cumulative visual effects can be caused where an observer is able to see two or more developments from one viewpoint and/or sequential effects which occur when the observer has to move to another viewpoint to see different developments.

### Transboundary Impact Assessment

9.4.11 Transboundary Impact Assessment is not relevant to this chapter; there are no cross-boundary LVIA effects.

## 9.5 Scope

### Data Sources

9.5.1 The assessment was undertaken with reference to six key data information sources, as detailed in **Table 9-2**.

**Table 9-2 Key Information Sources**

Data Source	Reference
Landscape Institute & Institute of Environmental Management and Assessment.	Guidelines for Landscape and Visual Impact Assessment, 3rd Edition (2013)
Ordnance Survey	Ordnance Survey 1-25000 digital and raster mapping
Ordnance Survey	Terrain 5 Digital Terrain Model data
Natural England	National Character Area profile: 46. The Fens
Boston Borough Council	Landscape Character Assessment of Boston Borough (July 2009)
Historic England online resource	Register of Historic Parks and Gardens

### Assumptions and Limitations

- 9.5.2 ZTV mapping uses Ordnance Survey Terrain 5 data as the basis for the Digital Terrain Model (DTM). The data is based on a grid of heightened points, at 5 m intervals. It is considered to be a mid-resolution DTM product, suitable for use across wide study areas.
- 9.5.3 Woodland and other significant areas of vegetation were incorporated into the DTM using online aerial mapping and site observation. Buildings were incorporated into the DTM model using digital OS data. Heights used for both vegetation and building modelling were generic heights that are considered to be conservative estimates. ZTV mapping cannot incorporate the myriad of varying features and heights of those features. Mapping is assumed to present a 'worst case' scenario and is used as a *guide only* for site-based survey to enable the selection of representative viewpoint locations and determine the possible extent of landscape areas affected.
- 9.5.4 ZTV mapping is based on analysis points set to the tops of tallest proposed structures. Mapping does not therefore differentiate between the full extent of a proposed building being visible or only the very top section being visible.
- 9.5.5 Site assessment was undertaken by a qualified landscape architect using publicly accessible viewpoints. Assessment of effects from residential property and other non-accessible receptors was estimated, based on ground level views obtained from publicly accessible areas in proximity to the receptor.

9.5.6 Whilst the LVIA is based on a worst case (wintertime) scenario, representative viewpoint photography and photographs used in photomontage images were taken with vegetation 'in leaf'. Given the scale and height of proposed structures and often limited intervening existing vegetation seen in the photographic views, it has not been considered necessary to replicate photographic images to illustrate both 'in-leaf' and 'out of leaf' views. Seasonal effects of vegetation does not materially affect the 'representativeness' of the selected views or the effects of the Facility, as illustrated in the photomontage images.

## 9.6 Existing Environment

9.6.1 This section of the assessment describes the baseline landscape and visual conditions for the site and its surroundings, against which the potential impacts of the Facility were identified. Baseline conditions are considered under the following sub-headings:

- Existing physical landscape characteristics of the Principal Application Site and its immediate surroundings;
- Surrounding landscape context, including physical and human characteristics, landscape character and planning context; and
- Visual analysis including factors which influence both the character and availability of views to the site (e.g. visual detractors, local horizons etc.).

### The Existing Site and Immediate Surroundings

9.6.2 The Principal Application Site is located to the south of Boston town on the eastern side of the Riverside Industrial Estate. The eastern Principal Application Site boundary extends along The Haven river channel for approximately 510 m. The south-eastern margins wrap around the existing Biomass UK No. 3 Ltd gasification plant and extend along the densely vegetated sea bank and boundary to the adjoining landfill site. The southern site area extends across arable fields. Immediately south are industrial and workshop units within the neighbouring Haven Business Park. The western site margins adjoin development within Riverside Industrial Estate, including a household waste recycling centre on Nursery Road. The central Principal Application Site boundary follows a section of densely vegetated sea bank (called Roman Bank (or 'Sea Bank')) and wraps around an existing waste management facility.

9.6.3 The Principal Application Site covers an area of approximately 25.3 hectares (ha). The north-eastern area includes the existing riverbank and waterside margin to The Haven. There are access tracks to areas of rough open grassland that

include temporary material stockpiles. Roman Bank is included within the central eastern Principal Application Site boundary; a feature that winds its way through the industrial estate from the southern Study Area. The southern Principal Application Site area encompasses agricultural fields bounded by drainage ditches and low banks. The central western portion of the Principal Application Site includes areas of rough grassland either side of Nursery Road; areas to the east of the road are bounded by galvanised steel security fencing. The area includes temporary compounds and material stockpiles.

- 9.6.4 The Principal Application Site forms part of a wider emerging industrial / commercial area, as defined by local planning documents. An eclectic mixture of large and small industrial / business units is located to the north-west, west and south of the site. There are occasional pockets of scrub and emerging woodland areas in 'vacant' parcels of land between buildings. Certain boundaries are defined by tall conifer hedges. A 132 kV overhead powerline on pylons traverses the Principal Application Site from north to south and bisects Biomass UK No. 3 Ltd site. There are large industrial units to the east of the site along the opposite bank of The Haven off Fishtoft Road (Metsä Wood and the former Fogarty's employment area).

### **Wider Study Area Context**

- 9.6.5 The north western Study Area is dominated by Boston town and the adjoining settlement of Wyberton. Areas to the east and south of the Study Area are predominantly expansive areas of flat, arable farmland, criss-crossed by numerous lanes and minor roads. The village of Fishtoft is located to the east of the Study Area on the opposite side of The Haven, and there are village and hamlet settlements in outlying areas.

### **Topography and Watercourses**

- 9.6.6 The Study Area is essentially flat, with topography varying only very slightly in elevation; typically, between two or three metres Above Ordnance Datum (mAOD). Localised topographical features are often characterised by flood defence banks; those flanking The Haven are at an elevation of approximately 6 mAOD. Smaller scale flood defences, 'sea banks', are found meandering through landscape areas to the east and west of The Haven. They are often densely vegetated and provide slightly elevated routes for public footpaths.
- 9.6.7 A notable topographical feature is the landform of the Boston Landfill Site to the south-east of the Principal Application Site. The landfill site lies alongside the west bank of The Haven and comprises two raised landforms separated by open

water lagoons and excavated ground. The northern capped, rough grass landform abuts the south-eastern site boundary and rises to approximately 20 mAOD on relatively steep 1 in 10 slopes. The southern landform rises to approximately 17 mAOD.

- 9.6.8 Man-made, rectilinear drains and dykes are a key characteristic of the area with an absence of natural, meandering watercourses. The primary watercourse is the River Witham that cuts across the Study Area from the north-west, through Boston and on to the south-east as The Haven; the tidal section of the river leading to The Wash. The river banks are raised as engineered flood defences. Other substantial drains include South Forty Foot Drain, Maud Foster Drain and Hobhole Drain.
- 9.6.9 Arable fields are often bounded by a network of drains and ditches; generally irregular and organic in pattern, particularly to the south and east of the Study Area.

### Road Infrastructure

- 9.6.10 Boston is the hub of the transport infrastructure within the Study Area. Major roads are:
- The A52 is a major road across the East Midlands running between the east Lincolnshire coast and Stoke on Trent. The road lies within the northern Study Area between Haltoft End and the centre of Boston, running to the west;
  - The A16 is the major north – south link across Lincolnshire. The road cuts a straight line across the Study Area from Kirton through the centre of Boston and the northern Study Area; and
  - The B1397, located to the west of the A16, links Kirton to Boston.
- 9.6.11 The Riverside Industrial Estate is accessed from the east of the A16 via Marsh Lane. Marsh Lane then heads south through the industrial estate. The existing link into the Principal Application Site is via Nursery Road to the east of Marsh Lane. Bittern Way links Marsh Lane and Nursery Road to the south west of the Principal Application Site.
- 9.6.12 Wyberton Low Road heads south from Skirbeck Quarter, running parallel with Marsh Lane to the south, towards agricultural areas with a dense pattern of narrow lanes. Lanes to the south of the site, between the A16 road corridor and The Haven include:

- Low Road, leads from Wyberton Low Road to Wyberton / Wyberton Park;
- Heron Way from Marsh Lane leading on to Slippery Gowt Lane;
- Closshill Lane, Green Lane, Wybert Lane, Bunkers Hill Lane, Causeway (East), Church Lane, Silt Pit Lane and Rowdyke Lane are short, interconnected lanes to the north and east of Wyberton Park;
- Saundergate Lane East, Streetway and Wyberton Roads form a west to east link across the central southern Study Area;
- Millfield Lane East, Hall Lane and Frampton Roads traverse the southern Study Area between Frampton and The Wash.

9.6.13 In the eastern Study Area, Fishtoft Road links Skirbeck to the village of Fishtoft. Church Green Road, Gaysfield Road and Scalp Road provide north-south links to the village.

#### **Settlements, Industry, Commerce and Leisure**

9.6.14 The town of Boston is the primary settlement area, historically an important river port serviced from the North Sea via The Wash and The Haven. Outlying areas of the town include Skirbeck, located to the north-east of the Principal Application Site on the east bank of The Haven. Skirbeck Quarter is located to the west of the site, beyond the Riverside Industrial Estate; the area extends along the B1397 road corridor and is effectively contiguous with Wyberton to the south-west.

9.6.15 A number of smaller village settlements are located across the Study Area and include properties at Wyberton Park, approximately 1.5 km to the south-west of the site, and the village of Fishtoft 2 km to the east. The village of Kirton is located on the outer south-western edge of the Study Area and Frampton approximately 3 km to the south of the site. Haltoft End and Freiston lie beyond the densely vegetated banks of Hobhole Drain to the north-east of the Study Area.

9.6.16 There are numerous individual properties and clusters of properties distributed along narrow country lanes throughout the area, in particular across open farmland to the south and east of the site, and to the east of The Haven along approach lanes to Fishtoft, including Scalp Road. Two properties lie in immediate proximity to the site; Beeston Farm, off Nursey Road on the western Principal Application Site boundary and Ivy House, within the southern area of Haven Business Park to the south. There are clusters of residential properties along Marsh Lane and Wyberton Low Road to the west of the site.

9.6.17 Industrial development is widespread and conspicuous to the south of Boston.

The Port of Boston and associated docks are located to the north-west of the site, north of The Haven. The port area includes large industrial units, very tall storage silos and lifting cranes. To the west of the port area, between South Forty Foot Drain and the A16, is Redstone Industrial Estate comprising of medium-sized industrial and workshop units.

- 9.6.18 The largest industrial zone within the Study Area is the Riverside Industrial Estate and the Principal Application Site is within it. The estate covers a large tract of land between Skirbeck Quarter and The Haven and includes large scale industrial units. The industrial estate is identified as an 'Allocated Waste Area'. A household waste recycling centre is located to the south-west of the Principal Application Site, accessed via Bittern Way. Land to the south-east of the industrial estate includes a landfill site, designated under planning as a waste disposal site. The Haven Business Park is located to the south of the Principal Application Site.
- 9.6.19 The largest industrial buildings are located to the east of The Haven and south of Skirbeck on the Metsä Wood and the former Fogarty's employment area. There are other large works areas within Skirbeck Quarter, including a timber products factory (Calders and Grandidge). There are retail and business areas to the west of Boston alongside South Forty Foot Drain.
- 9.6.20 Within agricultural areas there are food processing and packaging plants. Large glasshouse buildings are located to the west of Fishtoft.

### Approved and Emerging Residential Areas

- 9.6.21 Land in the vicinity of the Principal Application Site is designated within the South East Lincolnshire Local Plan (Adopted March 2019) as Housing Allocation and Housing Commitment areas. Certain approved sites are under construction or close to construction start at the time of writing. The baseline of this assessment includes the following larger scale developments (illustrated on **Figure 9.4**):
- Mixed use at The Quadrant (Q1 Boston). The development includes large scale residential areas in the western area of the development (west of the A16 road) with commercial and retail facilities either side of the A16 road and a Community Stadium and sports facility to the east of the road. Approximately 1.2 km west of the Principal Application Site.
  - Medium sized housing development of approximately 100 units on land off Heron Way, located 400 m to the south west of the proposed Principal Application Site. The site is currently under construction.



- Two sites to the north of Tytton Lane East and west of Stephenson Close of approximately 220 units, 820 m west of the Principal Application Site.
- Residential development to the north of Middlegate Road, Kirton, 3.6 km south west of the Principal Application Site.

### Public Rights of Way and Access

9.6.22 There is an existing public right of way network concentrated along The Haven corridor, with continuous footpath routes following both riverside banks and outer, sea bank defences to the east and west of the river. There are continuous footpath links between The Haven and Fishtoft and between Skirbeck Quarter and Frampton in the south.

9.6.23 Five sections of public rights of way lie within the Principal Application Site:

- Bost/14/4 & Bost/14/5 traverse the eastern site margin alongside The Haven and forms part of the Macmillan Way (which forms a 286-mile route between Boston and the Dorset coast);
- Bost/14/9 follows a section of the Sea Bank through the eastern Principal Application Site boundary;
- Bost/14/11 follows the vegetated Sea Bank alongside central sections of the Principal Application Site boundary with a short section located within the site;
- Bost/14/10 forms a link between Bost/14/5 & Bost/14/9 across the eastern site area.

9.6.24 As a general observation, footpath routes along the western bank of The Haven (in proximity to the Facility) and those within the site, appear to be infrequently used; paths appear to be overgrown with little sign of surface wear. In contrast, footpaths to the east of The Haven appear well used, with frequent observations of pedestrian activity.

9.6.25 The emerging England Coast Path route that follows the coastal margins of The Wash to Skegness is affected by the Facility. The initiative is part of the Natural England project to create a new National Trail around all of England's coast. Part of the route uses public rights of way that front The Haven through the Principal Application Site. These routes will be closed, and an alternative route will be provided via the existing Bost/14/11 public right of way.

9.6.26 The Cross Britain Way passes through the Study Area. This is a 279-mile coast to coast walk from Boston to the Welsh coast. The route starts at the centre of

Boston and heads south through Skirbeck Quarter alongside the A16, past Wyberton Park and onto Frampton. This route is unaffected by the Facility.

- 9.6.27 The Sustrans National Cycle Network Route 1 (also named as the North Sea Cycle Route) passes through the centre of Boston and south through the Study Area following minor roads to Frampton.

### Designated Landscape

- 9.6.28 Boston Cemetery is listed in the Historic England Register of Historic Parks and Gardens for its special historic interest and is located on the outer northern Study Area. There is no intervisibility between the two sites and the cemetery is not considered further in this report.

- 9.6.29 There are no other designated landscape areas within the Study Area.

### Landscape Character

- 9.6.30 As shown in **Figure 9.3**, there are no designated areas of high landscape value within the Study Area.

### National / Regional Scale Landscape Character

- 9.6.31 The Principal Application Site and Study Area fall within National Character Area (NCA) 46 The Fens, as identified by Natural England in the England-wide mapping of landscape character at a broad, regional scale.

- 9.6.32 Several key characteristics identified for NCA 46 are relevant to the LVIA, as follows:

*Page 7: '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. 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...'*

*Page 8: '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.*

*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'.*

9.6.33 Descriptive commentary in NCA 46 relating to 'recent landscape change' identifies that:

*Page 39: 'There has been a significant increase in the number of larger industrial scale units, mainly related to the agricultural / horticultural industry with minimal screening to assimilate the structures into the open landscape'. In addition, 'Light pollution is an increasing issue but this may decrease with new, energy-efficient more directional lighting technology'.*

### Local Scale Landscape Character

9.6.34 At the local scale, landscape character within Boston Borough was assessed in the 'Landscape Character Assessment of Boston Borough', July 2009.

9.6.35 The Study Area encompasses four Landscape Character Types (LCT's) that are subdivided into seven Landscape Character Areas (LCA's), detailed in **Table 9-3**.

**Table 9-3 Landscape Character Types & Areas**

Landscape Character Types:	Landscape Character Areas:
A - Reclaimed Fen	A1 - Holland Reclaimed Fen
B - Settled Fen	B1 - Bicker to Wyberton Settled Fen B2 - Frampton to Fosdyke Settled Fen B3 - Wrangle to Cowbridge Settled Fen
C - Reclaimed Saltmarsh	C1 - Welland to Haven Reclaimed Saltmarsh C2 - Glebe Farm Reclaimed Saltmarsh
D - Wash Saltmarsh	D1 - Welland to Haven Wash Saltmarsh

9.6.36 The Principal Application Site lies within two LCA's:

- C1 – Welland to Haven Reclaimed Saltmarsh LCA, part of the generic '*Reclaimed Saltmarsh Landscape Character Type*'. The northernmost tip of this LCA encompasses the northern and eastern margins of the Principal Application Site.
- B1 – Bicker to Wyberton Settled Fen LCA, part of the generic '*Settled Fen Landscape Character Type*'. The most north-easterly area of this LCA encompasses the western margins of the Principal Application Site.

9.6.37 LCA B3 is located immediately to the east of the Site (refer to **Figure 9.3**). B1, B3 and C1 are considered in below.

9.6.38 Based upon site observation and professional judgment, the Facility would incur no significant effects upon landscape character within the remaining LCT's due to a combination of distance from the Principal Application Site and / or general lack of intervisibility. As such those remaining LCA's are not discussed further in the LVIA.

### C1 – Welland to Haven Reclaimed Saltmarsh Landscape Character Area

9.6.39 Key characteristics identified for the C1 LCA are as follows:

- A fairly remote man-made, flat landscape of reclaimed saltmarsh which is surrounded and enclosed by sea banks of varying ages.

- Views to big skies within the area are contained at ground level by grassed and hedged sea banks.
- Longer views from the tops of the sea banks extend towards The Wash and the Norfolk coast.
- The inner part of The Haven is a major estuarine inlet and shipping channel leading to Boston port and is contained by large embankments.
- A predominantly geometric pattern of medium to large scale fields bordered by open ditches and dykes.
- Land use is a mix of pasture and intensive arable and pasture for cattle, and also small areas for the outdoor rearing of pigs.
- Tree and hedgerow cover is mostly confined to the inland relict sea bank and also shelter belts around farmsteads and dwellings.
- Sparsely populated with occasional farmsteads and dwellings.
- Limited access via a very small number of minor roads and farm tracks.
- A series of public rights of way run along the top of the coastal flood defence and the inner Roman ('Sea') bank.
- A newly constructed extension to Frampton Marsh Nature Reserve.
- The area includes the Havenside Country Park, landfill site and sewage works alongside The Haven downstream from Boston town.

9.6.40 Forces for change for C1 LCA are identified in the Boston Borough assessment as:

- Grazing of the coastal sea banks.
- The extension of Frampton Marsh Nature Reserve changing the land use from agriculture to nature conservation and flood alleviation.
- New screen tree planting around Boston landfill site.
- Extension of urban influences on the outskirts of Boston town.
- Further intensification of farming methods.
- New tree and hedgerow planting.
- Countryside and Environmental Stewardship Schemes, affecting the vegetation and appearance of field edges and dykes, particularly the buffer strips around field edges through changed farming management and practices.

9.6.41 In addressing Landscape Sensitivity (the inherent sensitivity to change of a landscape in terms of its landscape character) the Boston Borough assessment concludes;

*Page 53: 'The overall landscape character sensitivity of Welland to Haven Reclaimed Saltmarsh is considered to be moderate. The landscape may be less sensitive on the immediate outskirts of Boston due to the urban influences...'*

## **B1 – Bicker to Wyberton Settled Fen**

9.6.42 Key characteristics identified for the B1 LCA are as follows:

- A 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.
- A distinctive, cohesive and legibly evolving agricultural landscape, which is peaceful in parts but not particularly remote.

9.6.43 Forces for change for B1 LCA identified in the Boston Borough assessment include:

- Expansion and modernisation of the infrastructure associated with intensive agriculture.
- Countryside and Environmental Stewardship Schemes are affecting the appearance of buffer strips around arable field edges and dyke vegetation, through changed farming and management practices.
- Boston Woods Project with small areas of newly planted amenity woodland.
- Views to Bicker windfarm outside the character area.
- Urban expansion on the outskirts of Boston town including leisure, residential, industrial and commercial developments which could in future merge with outlying settlements.

9.6.44 In addressing landscape sensitivity, the Boston Borough assessment describes Bicker to Wyberton Settled Fen as *'a fairly distinctive and intact working landscape with some detractors'*. It goes on to state:

*Page 53: 'Location of future developments should be concentrated around existing settlements or developments near to the main roads to prevent any further loss of the rural landscape. At the same time developments should be designed to avoid the reduction of the openness of views by merging developments or the planting of large screening belts'.*

9.6.45 The Boston Borough assessment concludes;

*Page 36: 'The overall landscape character sensitivity of Bicker to Wyberton Settled Fen is considered to be moderate. There may be less sensitive areas on the immediate outskirts of Boston due to the urban influences, but site specific assessments would be required to confirm this'.*

9.6.46 Neither the B1 LCA or C1 LCA include 'industrial' or 'urban' features as part of the description of key characteristics, although the northern edges of both LCA's encompass areas within the existing Riverside Industrial Estate (including the Principal Application Site). The Riverside Industrial Estate forms part of a wider, 'Allocated Waste Area', as defined in the Lincolnshire Minerals and Waste Local Plan.

9.6.47 Industrial development and infrastructure to the south of Boston has increased since publication of the *'Landscape Character Assessment of Boston Borough'* and will continue to do so. Existing industry is considered to exert a significant

effect upon local landscape character and this is not reflected with sufficient gravitas in the Boston Borough assessment. The assessment does however, recognise that *'there may be less sensitive areas on the immediate outskirts of Boston'* (see above). As such, site-specific work to review and reappraise landscape sensitivity (both within the Principal Application Site and adjoining areas) was undertaken as part of the LVIA process. The findings are summarised in **Section 9.8**.

### **B3 – Wrangle to Cowbridge Settled Fen**

9.6.48 The LCA is located to the east of the Principal Application Site, abutting the east bank of The Haven. Key characteristics identified for the B3 LCA are as follows:

- Largely flat, but slightly elevated above the drained fenland to the west and the reclaimed coastal marsh to the east.
- Some open views with big skies and others foreshortened by settlements within groups of trees.
- Views to windmills, water towers, and church towers and spires set amongst mature trees in villages. Also, to Boston Pilgrim Hospital and Boston Stump.
- A small to medium scale pattern of winding roads, ditches and dykes infilled with a mix of both geometric and irregularly shaped arable fields.
- An evolving intensively farmed landscape with associated large scale infrastructure of glasshouses, packing sheds and food processing plants.
- Fertile soils with multiple croppings per year.
- A distinctive line of historic villages along the busy and winding A52 road, with a string of many smaller settlements and dwellings in between.
- Scattered hamlets, farmsteads and dwellings alongside minor roads in the rest of the area.
- A scattering of visible heritage features including archaeological earthworks, Listed Buildings and designated Conservation Areas in villages.
- Visible references to WWII with gun emplacements and pillboxes alongside sea banks, bridges and along the Hobhole Drain.
- Relatively tranquil away from the A52 but not remote with the frequent traffic of farm workers, farm and goods vehicles.

9.6.49 Forces for change for B3 LCA identified in the Boston Borough assessment include:



- Countryside and Environmental Stewardship Schemes are affecting the appearance of buffer strips around arable field edges and dyke vegetation, through changed farming and management practices.
- Expansion and modernisation of the infrastructure associated with intensive agriculture.
- Urban expansion on the outskirts Boston town including leisure, residential, industrial and commercial developments which could in future merge with outlying settlements.

9.6.50 In considering landscape sensitivity of B3 LCA the Boston Borough assessment states on page 47: *‘Wrangle to Cowbridge Settled Fen is a distinctive and very intact worked landscape with some detractors’*. The overall landscape character sensitivity of the LCA is considered to be moderate to high.

9.6.51 Public consultation was undertaken in preparation of the Landscape Character Assessment of Boston Borough. Recorded comments and observations regarding highly valued landscape features included:

- Watercourses, contributing to the unique character and sense of place within the borough, providing historical and ecological value alongside functional benefits;
- Sea banks are prominent and a reminder of the process of land reclamation from the sea. They provide elevated views from footpaths that often follow their course;
- Trees in the landscape and the role of trees. Comments varied between trees potentially having a negative impact on open character, affecting views, to a desire for more tree planting to provide shelter. Loss of trees and hedgerow was a concern; and
- Views in the landscape which were described as being highly appreciated included the following:
  - Views of vast flocks of migrating birds in the autumn;
  - Framed views of St Botolph’s church;
  - Views to boats along waterways, and entering and leaving Boston port;
  - Open views with wide horizons and big skies, in particular over the fenlands and saltmarshes; and
  - Lack of light pollution allowing enjoyment of starry night skies.

9.6.52 Some consultees to the Landscape Character Assessment of Boston Borough

expressed a dislike of the large-scale pylons close to Bicker windfarm and those radiating from Boston town. Other features that were disliked were large sheds and an untidy industrial area on London Road. Improving access to the countryside for leisure and appreciation of landscapes by the provision of more footpaths and circular routes was also suggested.

## Visual Analysis

### Views towards the Principal Application Site

- 9.6.53 The combination of flat landscape and lack of significant elevated vantage points often limits the overall extent of views within the Study Area. Other intervening features such as vegetated sea banks, treed field boundaries, urban, industrial and residential buildings further influence the nature and extent of views. A sense of openness and exposure is often evoked by the low horizon that increases the vastness of sky.
- 9.6.54 Close range views towards the site are obtained from footpaths along the east side of The Haven that follow the top of the sea defence bank to the north of the Principal Application Site and along the river corridor to the south. Views are open, across the wide river and intertidal mud flats. Existing views to the ground level of the Principal Application Site are screened by the raised western flood bank and belts of scrubby hedgerow. The Biomass UK No. 3 Ltd development is clearly visible against the skyline. In more distant views from the south-east, the raised, wooded southern slopes of the landfill site provide screening to the Principal Application Site. The upper section of the Biomass UK No. 3 Ltd stack is visible above the treed horizon. Study Area photographs, Views 5, 6, 7 and 8 illustrate a range of views from the east bank of The Haven (refer to **Figures 9.7, 9.8 & 9.9**).
- 9.6.55 Several high sensitivity residential receptors are in close proximity to the Principal Application Site, although views are either screened or limited by intervening features. Properties on the western margins of Skirbeck are located within 140 m of the Principal Application Site boundary, across the river. Ground level views from properties at Skirbeck are screened by the intervening raised sea defence bank along The Haven, in combination with dense property boundary hedgerows and vegetation along the river corridor. Upper storey flats off Rectory Road, 400 m to the north of the Principal Application Site, will obtain elevated, partially filtered views to the south towards the Principal Application Site, seen beyond existing industrial units at Riverside Industrial Estate.
- 9.6.56 Footpaths running along eastern and central Principal Application Site boundaries

follow densely vegetated sea banks with outward views often substantially filtered (refer to View 9, **Figure 9.9**). Existing views are dominated by industrial units and associated lorry movements, noise and dust with tall pylons often prominent. Views are both visually and perceptually poor in quality and character.

- 9.6.57 There are individual properties and clusters of residential properties located along Slippery Gowt Lane to the south of Principal Application Site, Marsh Lane to the west and an individual property (Beeston Farm) on Nursery Road immediately adjacent to the Principal Application Site boundary. Large industrial units dominate the existing scene and either obstruct views towards the Principal Application Site entirely or limit views to narrowed corridors. Existing, emerging vegetation further filters or limits the view (refer to Views 10, 11 and 12, **Figures 9.10** and **9.11**).
- 9.6.58 Although landscape areas to the south and east of the Principal Application Site are the most open in character, intervening features often interrupt views of the Principal Application Site. Views from lanes and properties to the south of the Principal Application Site are illustrated in Views 13, 14, 15 and 16 (**Figures 9.11**, **9.12** and **9.13**). Intervening dense vegetation along the sea bank and within the landfill site substantially screens the direct view to site. Views from properties along the Causeway, to the south-west, are typical of the area; across open foreground farmland with a horizon line comprising of a tree belt interspersed with taller electricity pylons, industrial units and residential frontages.
- 9.6.59 Distant views are available from properties at Frampton in the south, View 17 (**Figure 9.13**). Views are across expansive, open farmland. The existing Biomass UK No. 3 Ltd development is visible seen above Haven Business Park, although its significance is reduced in context of the expansive panoramic view.
- 9.6.60 Distant views are also obtained from outlying areas to the east of The Haven (Views 1 to 6, **Figures 9.6**, **9.7** and **9.8**). Views of the Principal Application Site are typically screened by intervening vegetation, residential property or industrial units and the raised landform within the landfill site. Views are often characterised by open, extensive and flat foreground farmland with the Principal Application Site and its urban / industrial environs appearing as a very narrow 'sliver' of developed land seen across the horizon line below a vast sky.
- 9.6.61 Views towards the Principal Application Site from the north and north-west are prevented by intervening urban areas at Boston and a combination of residential and industrial areas in Skirbeck Quarter and Riverside Industrial Estate. Potential views are limited to outer margins of residential areas, the lack of elevated

vantage points and intervening buildings preventing views from within the urban conurbation. Properties at Chain Bridge (approximately 3 km to the west of the Principal Application Site, View 18, **Figure 9.14**) obtain distant views towards the Principal Application Site, seen across an expansive area of farmland and a treed horizon that includes urban and industrial features.

## Visual Detractors

9.6.62 There are numerous visual detractors within the Study Area:

- Industrial estates and business parks in immediate proximity to the Principal Application Site often comprise of brightly coloured, large-scale buildings, highly functional and of ordinary or poor visual quality. Boundaries are varied and can include high security fences, mesh fencing, walls or vegetation. Occasional lines of poplar trees are incongruous and highly prominent on the horizon. Certain frontage areas are open allowing views to lorry parking and storage yards. Overall visual character is highly discordant.
- Overhead electricity lines on pylons. There are a numerous overhead electricity lines that track across the Study Area and converge to the south of Boston at a substation on the south bank of The Haven. Six very tall pylons take electricity cables across The Haven and are highly prominent across most of the Study Area. Electricity pylons are the most prominent vertical element within the Study Area, seen clearly above the horizon line and against the sky.
- Port of Boston to the north of the site includes a range of tall buildings, silos and industrial units. Tall gantry and other cranes are visible in the local skyline.
- Redstone Industrial Estate.
- Industrial areas within Skirbeck Quarter.
- Tall floodlighting masts at the Community Stadium, Wyberton.
- Very large industrial units to the east of the Principal Application Site, south of Skirbeck on the east bank of The Haven.
- Large glass houses to the west of Fishtoft.
- Unrestored and working areas within the landfill site to the south-east.
- The busy A16 road corridor.

## Anticipated Evolution of the Baseline Condition

9.6.63 The Principal Application Site lies predominantly within land areas designated in the South-East Lincolnshire Local Plan as 'Proposed Main Employment Area' and 'Existing Main Employment Area'. Areas to the west of the site are designated as 'Countryside'. Within the Lincolnshire Minerals and Waste Local Plan the site is designated as an 'Allocated Waste Area'. Without the implementation of the proposed Facility extant planning policy is likely to determine that the site and its environs will be developed for industry and / or waste processing.

## 9.7 Proposed Structures and Embedded Mitigation Measures

### Proposed Structures

9.7.1 A detailed description of the Facility is provided in **Chapter 5 Project Description**. The Facility includes a number of large scale buildings and associated development. Key buildings and structures of relevance to LVIA are summarised below and form the basis of the assessment. General heights of structures above proposed ground levels are approximate only (**Figure 5.1**).

- A 400 m long wharf alongside The Haven with mobile cranes and ship berthing points. The wharf will form the new flood defence line and will be raised to 7.2 mAOD, which is higher than the current height of the existing flood defence bank (approximately 6.4 mAOD) over which it will be constructed.
- An external bale storage area located on land to the west of the proposed wharf with mobile cranes and ancillary buildings. Bale storage will be a maximum height of approximately 4 m above ground level and ancillary buildings less than 6 m above ground level.
- Lightweight Aggregate (LWA) Plant comprising of 3 stepped roof ridgelines at approximately 25 m, 29 m and the tallest at approximately 44 m. Associated storage silos to north are at approximately 31 m height.
- 2no. LWA Plant stacks, one at approximately 3.5 m in width, the other 2.5 m wide and both up to 80 m height.
- 2no. enclosed storage silos for finished aggregate product (one for aggregate produced from ash, the other for aggregate produced from air pollution control residues). Each silo approximately 25m tall.

- A ground level conveyor to move material from bale storage areas to the EfW Plant. The conveyor rises to just under 23 m above ground at the point of entry into the plant building.
- EfW Processing Plant, located in the central southern Principal Application Site, overall height to ridges 44 m.
- 3no. EfW Plant Stacks; approximately 3 m wide and 80 m in height.
- Turbine Generator Hall, overall height of building approximately 20 m to ridge.
- Air Cooled Condenser building, overall height of building 30 m to ridge.
- 2no. carbon capture buildings, approximately 12 m to ridge.
- Plant Workshop building, 15 m to ridge.
- Power Export Zone to the south of the EfW Plant, that will provide a connection to the National Grid. Comprises of a substation and new pylon.
- The Facility will include other buildings such as offices, visitor centre, control room building, fuel storage bunds, welfare facilities and workshops. There will be areas of hardstanding, vehicular routes, a lorry parking area and weighbridge facilities.

### Embedded Mitigation Relating to Facility Design

9.7.2 The Facility was designed to incorporate landscape and visual mitigation measures at the outset. These measures take into account potential landscape and visual impacts identified at an early stage in the LVIA process. The following considerations were made to reduce potential effects of the Facility:

- Location of the Facility to the west of the existing raised landform of the landfill site. The landform provides substantial visual screening of proposed structures in views from the east. In addition, the units of the Facility are located immediately to the west of the existing Biomass UK No. 3 Ltd energy facility; massing of proposed buildings will appear contiguous with existing tall structures at the Biomass UK No. 3 Ltd site.
- Retention and reinforcement of existing woodland / scrub and hedgerow along the sea banks. Existing vegetation provides some visual structure to the Principal Application Site and potentially screens or filters views to ground level features and activity. Existing vegetation belts will be reinforced by the introduction of tree planting; taller growing species providing long-term screening benefits.

- Building facades were designed to be clean and uncluttered. The colour palette for the external cladding will be based around a complimentary series of muted 'grey / greens', or other similar colour palette agreed with the local authority. The stacks will be a light grey to reduce their prominence when seen against the sky.
- External lighting will be designed to minimise night time light spill, as described in **Chapter 5 Project Description**.

### Proposed Landscape Mitigation Measures

- 9.7.3 Proposed landscape mitigation measures include the establishment of mixed species woodland planting along the southern, western and northern margins of the Principal Application Site (refer to **Figure 9.21**). Planting along southern and western margins will be on low earth mounds and provide effective screening more quickly in the short-term and enhance screening in the long-term. Mounding will improve the screening of close range views of proposed ground level features.
- 9.7.4 Native species hedgerow with hedgerow trees will also be established along certain boundaries to the Principal Application Site. Hedgerows will provide screening towards site in certain local views and reinforce local landscape character. Other measures include the introduction of species rich grassland, scrub and enhancement of existing ditches and waterbodies. These measures will further increase biodiversity and landscape value.
- 9.7.5 A palette of native tree and shrub species will be selected that are appropriate to the location. Faster growing tree species such as willow, birch and poplar will be used to provide quicker screening / filtering effects.
- 9.7.6 In the long-term, proposed woodland planting will not be effective in screening upper sections of taller buildings and structures. Planting will be effective in filtering and screening local views to lower level structures and ground activity, including vehicular movements and effects of night-time lighting. Measures will provide a visual framework to the Facility and visual separation to neighbouring industrial units. Overall, the perceived scale of the Facility will be reduced, visual effects of taller structures 'softened' by the filtering effect of vegetation and local landscape character improved.

## 9.8 Landscape and Visual Effects

- 9.8.1 This section describes the significance of landscape and visual effects on baseline conditions during the construction and operational stages of the Facility. The significance of landscape and visual effects is determined by professional judgement, based on the sensitivity of the receptor, combined with the magnitude of the effect.
- 9.8.2 The ZTV of the Facility is shown on **Figure 9.5**. The ZTV provides a broad picture of the predicted theoretical extent of visibility of the Facility within the landscape. The ZTV does not, however, take into account minor variations in landform, vegetation cover or buildings, all of which can affect the degree to which a development is visible or perceived within the landscape or a specific view.
- 9.8.3 The potential effects of the Facility were assessed from a series of representative viewpoints located within the ZTV (see **Appendix 9.2** and **Figure 9.2**, these viewpoints are representative of the current conditions). The viewpoint assessments were used to identify effects on specific receptors and also to form the basis for making professional judgement of the potential effects upon other receptors in similar geographical locations to the relevant representative viewpoint.

### Landscape Sensitivity

- 9.8.4 For landscape receptors, sensitivity takes into consideration landscape value and susceptibility of the landscape to change. The following section summarises landscape sensitivity of the existing site and surrounding LCAs.

#### Landscape Sensitivity – Principal Application Site and Environs

- 9.8.5 The 'Landscape Character Assessment of Boston Borough' identified that both the *B1 - Bicker to Wyberton Settled Fen and C1 - Welland to Haven Reclaimed Saltmarsh*, (within which the Principal Application Site is located) are of moderate sensitivity to change. The Boston assessment does recognise that '*there may be less sensitive areas on the immediate outskirts of Boston*'. It is clear that at a local scale the sensitivity to change of the landscape, both within the Principal Application Site and its immediate environs, are at variance to the general sensitivity of the wider character areas in which it is located. The sensitivity to change of the landscape within, and surrounding the Principal Application Site, is therefore reviewed below. The area reviewed is indicated on **Figure 9.3**.



9.8.6 GLVIA3 (paragraph 5.39) identifies that the sensitivity of a landscape receptor to change can be identified by combining judgements of its value with its susceptibility to the type of change or development proposed. The value, susceptibility to change and sensitivity of the landscape within the Principal Application Site and its environs are discussed below.

#### Landscape Value – Principal Application Site and Environs

9.8.7 GLVIA3 sets out a series of criteria (Box 5.1, page 84) that can be used to assess the relative value of a landscape. These criteria are discussed below and in **Table 9-5** and an overall value was then derived for the landscape within the Principal Application Site and its environs.

**Table 9-4 Landscape Value of the Principal Application Site and Environs**

Aspect	Description	Value
Landscape quality (condition)	The area comprises of flat topography, numerous large, medium and small-scale industrial buildings, hardstanding, access roads, overhead pylons and land areas often of rough / amenity grassland subject to blown litter and temporary material stockpiles. The southern Principal Application Site area does encompass areas of arable farmland bounded by ditches. Densely vegetated sea banks define the south-eastern site boundary, cutting across the northern area. To the west of The Haven flood defence bank there is dense hedgerow with occasional gaps. Overall, these features are in poor or average condition.	Low
Scenic quality	The area acts as a detractor within the local landscape and includes dominant industrial and infrastructure features. Scenic quality of the area is poor.	Low
Rarity	The area does not contain any rare features and does not display characteristics of any rare Landscape Character Types.	Low
Representativeness	The area is strongly urban industrial in character and does not include important features or elements.	Low
Conservation interests	The area contains commonplace features. Historic or cultural heritage interest is limited to the raised sea banks; a characteristic feature of the local landscape.	Low
Recreation value	The area includes a network of public rights of way that follow the low sea banks and the western flood defence bank of The Haven, although these footpaths do not appear well used compared to the footpath on the opposite side of The Haven.	Low
Perceptual aspects	The area is subject to haulage / lorry movements and constant background noise of vehicles, machines and industrial activity. Large cargo vessels frequent The Haven channel. The area is perceived as strongly urban/ industrial, with poor perceptual qualities overall.	Low
Associations	The Principal Application Site and environs have no known significant artistic, literary or historical associations. Sea banks are a recognised and valued feature of the landscape and a record of the historical reclamation of land from the sea;	Medium

Aspect	Description	Value
	there are sea banks both within and adjacent to the Principal Application Site. The Haven and Port of Boston provide an important historical trading route that remains to this day. The Haven was the scene of the first attempt of the Scrooby Pilgrims to leave England in 1607; an event commemorated at the Pilgrims Father Memorial, located 2.5 km downstream from the Principal Application Site.	

9.8.8 GLVIA3 indicates at paragraph 5.45 that:

*“...the value of landscape receptors will to some degree reflect landscape designations and the level of importance which they signify, although there should not be over-reliance on designations as the sole indicator of value.”*

9.8.9 The following categories may be used as a scale for reporting landscape value:

- High value - Internationally valued landscapes (for example World Heritage Sites) and nationally valued landscapes (for example National Parks, areas of Outstanding Natural Beauty).
- Medium value – Locally valued landscapes (for example local authority landscape designations such as Areas of High Landscape Value or landscapes assessed as being of equivalent value using appropriate criteria).
- Low value – landscapes which do not fall into the above categories, but which may nevertheless be valued at a community level.

9.8.10 Given the consistent low scoring against the value criteria, an absence of landscape designations or features, the landscape of the Principal Application Site and environs was assessed as being of Low value.

### Susceptibility to Change

9.8.11 The susceptibility of a landscape to development change is discussed in paragraph 5.40 of GLVIA3:

*“This means the ability of the landscape receptor (whether it be the overall character or quality/ condition of a particular landscape type or area, or an individual element and /or feature, or a particular aesthetic and perceptual aspect) to accommodate the proposed facility without undue consequences for the maintenance of the baseline situation and /or the achievement of landscape planning*

*policies and strategies.”*

- 9.8.12 The majority of the landscape area under consideration falls within an ‘Allocated Waste Area’ within the Lincolnshire Minerals and Waste Local Plan; and the South-East Lincolnshire Local Plan designates it as ‘Existing Main Employment Area’ and ‘Proposed Main Employment Area’. The area includes large-scale industrial and infrastructure features. It does not exhibit rare or unusual features. Existing features that do contribute to the character of the area include the low raised sea defence banks and flood defence bank along The Haven with dense belts of scrub / hedgerow vegetation alongside to the west. Vegetated banks are considered to be more susceptible to change and, although are in no way ‘exceptional’, they do provide some relief to existing industrial features and some visual containment at ground level in an otherwise open, industrial landscape.
- 9.8.13 Overall, the Principal Application Site and its environs are strongly industrial in character. The perceptual character is poor due to the presence of existing industry, vehicular movements and general lack of tranquillity due to related background noise and activity. Existing planning designations and predicted future industrial / waste related development within the area will only serve to further reinforce existing industrial character.
- 9.8.14 The form of the Facility is comparable to that which already exists in the area. The Principal Application Site and its environs were therefore considered to be of low susceptibility to change for the proposed type of development.

#### Sensitivity

- 9.8.15 The landscape of the Principal Application Site and its environs is identified as being of *low value* and of *low susceptibility* to change. It is therefore considered to be of **low sensitivity** to change in respect of the proposed type of development.

#### **Sensitivity of Visual Receptors**

- 9.8.16 Visual effects are summarised for each of the Representative Viewpoints (refer to **Appendix 9.2** and **Figures 9.2** and **9.4**). Views discussed are illustrated on **Figures 9.6** to **9.14**. Selected views were used to present a photomontage image of the Facility, superimposed onto the existing view. Photomontage views are illustrated in **Figures 9.15** to **9.20**.

#### Sensitivity

- 9.8.17 The sensitivity of visual receptors to change is dependent on the nature of the receptor and the activity they are undertaking. The relative sensitivity of visual

receptors used in this assessment is set out in **Appendix 9.1**.

#### Effects upon views from designated landscapes

9.8.18 Boston Cemetery is included on the Register of Historic Parks and Gardens and is located on the outer northern Study Area. There would be no effect to the site resulting from the Proposed Development. There are no other designated landscapes of special quality or character within the Study Area.

#### **Effects During Construction**

9.8.19 Construction stage activity would be a visually disruptive phase of the Facility development; however, landscape and visual effects would be temporary and short term. Physical effects to existing landscape features would occur during the site clearance phase of construction.

9.8.20 The north western Principal Application Site area is allocated for temporary, construction related facilities. The area is approximately 4 ha, located either side of Nursery Road, and will accommodate site cabins, offices, welfare facilities, vehicular parking, materials storage and processing facilities.

9.8.21 Site activity during construction would be varied and include stripping and temporary stockpiling of soils and materials, setting up site welfare facilities, storage areas, hoarding and fencing. In addition to the construction of large scale buildings and structures, the Facility also includes areas of hardstanding, access roads, car parks and ancillary features. There would be constant and varied vehicular movements and on-site activity. Construction phases would require the use of high-level cranes, gantries and scaffolding. Crane positions would shift as development progresses; boom and lifting operations would present a constantly changing feature on the horizon, visible to receptors in surrounding parts of the Study Area. During winter working hours and low light there would be lighting of external spaces and emerging structures.

9.8.22 Construction of the wharf, LWA Plant, stacks and associated structures would be particularly intrusive to high sensitivity receptors using footpaths along the eastern bank of The Haven. Views towards the Principal Application Site would be close range and open.

9.8.23 Latter stages of a development phase would incur the 'worst case' landscape and visual impacts; buildings would be at maximum heights and at the most visually prominent, with construction activity ongoing and temporary features remaining in place. There may be views to incomplete outer facades and upper sections of

buildings, scaffolding and protective, temporary sheeting. High-level crane activity would remain prominent.

- 9.8.24 Predicted significance of effects resulting from construction related activity would not be expected to significantly exceed the landscape and visual effects of completed development phases. Construction stage effects relating to visual receptors are summarised for each of the Representative Viewpoints. Construction stage effects relating to landscape receptors are discussed in the following sections of this chapter and, where relevant, included in the Representative Viewpoint text.

### Impact 1: Landscape – Construction Stage Effects

#### Effects on Physical Landscape Features

- 9.8.25 There would be no loss of significant landscape features within the Principal Application Site. The Facility would result in the loss of arable agricultural areas to the south and areas of rough grassland on the northern and western site margins that includes scattered shrubs/ scrub. Development of the wharf and remodelling of The Haven flood bank would result in the loss of established, gappy hedgerow. Scrub and hedgerow vegetation along the sea bank to the west of the LWA Plant would be retained and protected during construction phases.
- 9.8.26 Dense vegetation along Roman Bank prevents or restricts access along the existing public right of way. Management works, including cutting back and coppicing of vegetation, will be undertaken to allow unhindered access along the path.

#### Effect on Landscape Character

- 9.8.27 There would be no significant effect upon either the character of the Principal Application Site, its immediate environs or adjoining landscape areas during construction stages of the Facility. Construction activity would be seen in context of an existing, strongly industrial landscape that includes large-scale industrial buildings (of note the neighbouring Biomass UK No. 3 Ltd development), infrastructure (highly prominent overhead electricity pylons / cranes) and transport infrastructure that includes freight lorry movement and commercial shipping. The Principal Application Site and immediate environs are identified as being of *low sensitivity* to change for facility of this type. Landscape character areas across the wider Study Area are identified as being of *medium sensitivity* to change where industrial features are less influential upon character and representative landscape features are more prevalent and intact.

- 9.8.28 Construction works would include the removal of a section of intertidal riverside margins and rough grassland flood defence bank. A hedgerow with occasional gaps to the west of the flood defence bank would also be removed. Both have some value as recognised features of local landscape character.
- 9.8.29 Loss of existing features and the visual disruption of construction-related activity would introduce localised landscape character effects only. Construction activity associated with the development of the wharf and LWA Plant would be most prominent from areas of landscape immediately to the east of the Principal Application Site (alongside The Haven). Notable effects would be limited to the river corridor only; views from the wider landscape to the east would be mostly screened by intervening vegetation and industrial buildings. In views from landscape areas to the south and west, upper sections of proposed construction works would be seen above intervening industrial facilities.
- 9.8.30 Night time lighting effects during construction phases are predicted to be slightly more intrusive than the existing baseline or predicted future operational stages. Effects from temporary, construction related lighting would be limited to late afternoon wintertime working periods. Effects of lighting would be in context of existing, extensive lighting derived from neighbouring industrial areas, transport corridors, the Port of Boston and surrounding urban areas. The magnitude of impact associated with construction lighting would be minimised as best practice lighting principles would be employed as embedded mitigation (detailed in **Chapter 5 Project Description**).
- 9.8.31 Construction stage effects on landscape character of the Principal Application Site and its immediate environs are predicted to incur a **low medium adverse** magnitude of change with the following significance of effect:
- 9.8.32 *Low sensitivity + low medium adverse* magnitude of change = **minor negligible adverse** significance of effect.
- 9.8.33 The magnitude of change across surrounding landscape areas is dependent on proximity to the Principal Application Site, the nature and extent of views to existing industry and degree of intervisibility with proposed construction-related activity and emerging structures.
- 9.8.34 Predicted construction stage effects upon landscape character in surrounding areas would generally be limited. Within the wider Study Area (LCA's; B1 Bicker to Wyberton Settled Fen, B3 Wrangle to Cowbridge Settled Fen and C1 Welland to haven Reclaimed Saltmarsh) existing industry and associated infrastructure is

a feature of the landscape; LCA's within the Study Area either encompass, or are influenced by, existing industry and infrastructure. In more distant areas of adjoining landscape the visual effects of construction-related activity (upon existing landscape character) would be further reduced. Potential effects would be seen in context of wider, distant views that encompass an intermix of features including expansive areas of agriculture (typically the dominant feature in the near and middle distance), vegetated boundaries, urban fringes, industrial units, electricity pylons and cranes. Construction stage effects would not significantly alter existing landscape character within surrounding landscape areas.

9.8.35 Construction stage effects on landscape character within the wider Study Area are predicted to vary between **low medium adverse** to **low adverse** magnitude of change. A worst case significance of effect would be as follows:

9.8.36 *Medium sensitivity + low medium adverse* magnitude of change = **minor adverse** significance of effect upon landscape character of surrounding areas during the construction period.

9.8.37 Construction stage effects would be short term, temporary and at a local scale.

#### Impact 2: Visual – Construction Stage Effects

9.8.38 Representative viewpoint analysis indicates that significant construction stage effects would be limited to receptors in close proximity to the Principal Application Site, typically within 500 m of the site boundary. No significant effects to receptors beyond 1 km of the Principal Application Site were identified. Construction stage effects would be the most visually disruptive phase of the Facility; however, these would be temporary and short-term.

9.8.39 High sensitivity receptors within more distant landscape areas to the east of The Haven include residential properties along Church Green Road, at Fishtoft, along Scalp Road and users of a footpath to the west of Fishtoft. Receptor viewpoints (Views 2, 3, 4 and 6) indicate that, whilst construction activity may be visible, a combination of the expansive view, relative distance to the Principal Application Site and existing industrial and infrastructure features, would limit the perceived magnitude of change experienced by the viewer. Effects were predicted to be **minor negligible** or **minor adverse**.

9.8.40 Users of the footpath routes and recreational boats along The Haven are in close proximity to the Principal Application Site and would obtain close range, open views towards the Facility. Footpaths along the eastern flood defence bank are regularly used. Receptor locations to the north of the site (View 8) and to the east

of the site (View 7) were selected as representative viewpoints.

The local public right of way path along the western bank of The Haven is proposed to be diverted along existing footpaths that pass through the central site area (Bost 14/9 and Bost 14/11) and its existing route within the eastern site area would be closed. Existing views from the proposed diverted route are significantly affected by industrial features. The Facility would incur additional adverse visual effects to those sections of path that cross the central site area. Close range and high level construction activity would incur **moderate adverse** effects.

- 9.8.41 Construction stage effects would be a visually disruptive phase of the development. Works associated with the wharf would be highly intrusive in views, seen against a backdrop of construction activity within the main site and construction of the LWA Plant adjacent to the riverbank. Although existing views are strongly industrial in character, construction of the Facility would significantly intensify visually intrusive features and activity. Initial construction effects are predicted to be **moderate major adverse** in views from the banks of The Haven to the north and east of the site. Adverse visual effects would reduce in magnitude in views obtained from more southerly sections of The Haven corridor (demonstrated in View 6). Construction activity and emerging structures would become less significant in these more distant views, with the raised landfill site more effectively screening views to the main Facility. Significance of effects would progressively reduce from **minor moderate** to **minor adverse** in views obtained from southerly sections of The Haven.
- 9.8.42 It should be noted that although the Facility is in close proximity to residential properties to the north (on the southern fringes of Skirbeck) and to the east of The Haven, ground level views are screened by a combination of intervening vegetation, the flood defence bank and garden boundary fences.
- 9.8.43 Close range views were assessed from a footpath to the south and residential property receptors to the west of the site (Views 9, 10 and 11). Existing views are significantly influenced by existing industry and infrastructure. Tall electricity pylons and cables are often a dominant feature in the foreground. In all cases construction activity would be prominent; seen above existing horizons with emerging tall structures and cranes appearing in the skyline. Effects are predicted to be **minor moderate** or **moderate adverse**.
- 9.8.44 Middle distant receptor locations include views from properties at Wyberton Park, individual properties and users of the narrow country lanes to the south of the site (Views 12, 13 and 14). The Facility and construction activity would be seen in



context of existing industrial buildings, pylons and cranes. The perceived magnitude of change views would be reduced by existing visual detractors and the overall distance to the site from receptor locations. Predicted construction stage effects would be **minor moderate adverse** or **minor adverse**.

- 9.8.45 Long distant views include those from Frampton (View 15), north of Kirton (the B1397 London Road, View 16) and from West End Road to the north-west of Wyberton (View 17). Views obtained by road users are considered to be of low sensitivity to change, although the view from West End Road is also in proximity to residential property and a footpath. In all cases construction related activity would be visible in the distant view and seen in context of existing industrial features. Views would be intermittent and glimpsed. Predicted effects upon views would not be significant; either **minor** or **minor negligible adverse**.

## Effects During Operation

### Impact 1: Landscape – Year 1 Effects

- 9.8.46 There would be no significant effects upon either the character of the Principal Application Site, its immediate environs or adjoining landscape character areas following completion of the Facility. The Facility would be in context with the existing, strongly industrial landscape that includes large-scale industrial buildings, infrastructure and transport corridors. These are key features of the landscape and as such the Facility would not significantly alter existing character.
- 9.8.47 Whilst the presence of existing industry and infrastructure would reduce the magnitude of change in landscape effects and provide some visual integration, proposed buildings and stacks would be significantly larger in height and size than existing neighbouring features. The wharf, LWA Plant and stacks would be highly prominent from areas of landscape alongside The Haven to the east. The extensive wharf would appear as a strongly engineered feature. At low tide the full height of the wharf would be apparent and present a marked and contrasting feature to the existing baseline of intertidal mud flats and grass banks.
- 9.8.48 Effects across the wider landscape to the east would be limited by existing intervening features. In views from landscape areas to the south and west upper sections of the Facility and stacks would be seen above intervening industrial facilities.
- 9.8.49 Overall landscape character effects of the Facility are predicted to incur **medium adverse** magnitude of change with the following significance of effect:

- 9.8.50 *Low sensitivity + medium adverse* magnitude of change = **minor adverse** significance of effect on the landscape character of the Principal Application Site and immediate environs, during initial operational stages.
- 9.8.51 In all surrounding landscape areas (LCA's; B1 Bicker to Wyberton Settled Fen, B3 Wrangle to Cowbridge Settled Fen and C1 Welland to Haven Reclaimed Saltmarsh) LCA's either encompass, or are influenced by, existing industry and infrastructure. In more distant areas of landscape the visual effects upon existing landscape character will be further reduced; with visibility to upper sections of proposed buildings and stacks. Where views are obtained towards the Facility it would be seen in context of existing, comparable industry and infrastructure. Although the Facility and associated stacks would appear noticeably taller more substantial than comparable neighbouring features, they would not significantly alter existing landscape character within surrounding areas.
- 9.8.52 Night time lighting effects would be slightly more intrusive than the existing baseline. Effects of lighting would be in context of existing, extensive night time lighting, derived from neighbouring industrial areas (most notably the neighbouring Biomass UK No. 3 Ltd development), transport corridors, the Port of Boston and surrounding urban areas.
- 9.8.53 Effects at year 1 upon the wider landscape character within the Study Area are predicted to incur a **low medium adverse** magnitude of change with the following significance of effect:
- 9.8.54 *Medium sensitivity + low medium adverse* magnitude of change = **minor adverse** significance of effect upon landscape character in surrounding areas.

#### Impact 2: Landscape – Year 15 Effects

- 9.8.55 At Year 15 proposed woodland planting belts, in combination with enhancement of existing landscape features within the Principal Application Site, would have established sufficiently to have some screening benefit and provide improved visual integration with existing landscape features. The perceived scale of the Facility would be reduced, and visual effects of taller structures 'softened' by the filtering effect of vegetation.
- 9.8.56 In overall terms, landscape character effects at Year 15 would remain comparable to those at Year 1. The Facility would incur similar effects on both the immediate and wider landscape, with taller buildings and stacks remaining highly prominent within surrounding landscape areas.

9.8.57 Whilst proposed mitigation measures would introduce slight benefit in terms of longer-term landscape character, the overall assessment of significance of effect would remain as Year 1; **minor adverse**.

#### Impact 3: Effects of Proposed Lighting on Landscape Character

9.8.58 Night-time landscape character is strongly influenced by existing urban lighting within industrial zones, residential areas and along road corridors. Existing lighting within the Biomass UK No 3 Ltd development adjacent to the Principal Application Site and at the Port of Boston are notable sources of night time lighting.

9.8.59 Predicted effects of proposed lighting on the existing character of the night-time landscape would be limited. Effects would be an intensification of existing lighting, rather than a perceived extension of lighting across adjoining areas of landscape. Effects are predicted to be **minor adverse**. Long term establishment of woodland and hedgerows trees within the Facility would have some benefit in filtering certain local views to lighting and reducing local light spill.

#### Impact 4: Visual – Year 1 Effects

9.8.60 Selected representative viewpoint locations were used to present a photomontage image of the Facility, superimposed onto the existing view. Photomontage views are illustrated in **Figures 9.15 to 9.20**, and should be referred to in the following sections.

9.8.61 Effects described below are considered to be worst case and include the assumption that plumes would be visible from the proposed stacks. Generation of visible stack plumes would only occur during certain meteorological conditions. The visual effects of stack plumes are widely varied and dependent upon the observer's line of sight and distance to plumes, sun angle, degree of contrast against the sky and time of day. ~~The average plume length has been calculated as 21 m distance from the stack, although under certain circumstances this could increase to nearly 925 m. Refer to **Chapter 14 Air Quality**~~

~~9.8.61~~ 9.8.62 ~~y. Refer to Chapter 14 Air Quality (document reference 6.2.14(1)).~~ The plume visibility assessment in Chapter 14 Air Quality (document reference 6.2.14(1)) identifies that each of the three EfW Plant stacks will generate the same visible plumes in terms of duration with a maximum length of 508 m and an average length, considerably less, varying between 57 m to 72 m. The two LWA Plant stacks (LWA1 & LWA2) will each generate slightly varied durations of visible plumes with a maximum length of 793 m and 486 m respectively. Average LWA

Plant stack plume lengths are comparable to the EfW Plant stacks.

9.8.629.8.63 Representative viewpoint analysis indicates that significant effects at year 1 would be limited to receptors in close proximity to the Principal Application Site, typically within 500 m of the boundary. No significant effects to receptors beyond 1 km of the site were identified.

9.8.639.8.64 Predicted visual effects upon high sensitivity receptors located in the eastern Study Area would be limited. Selected receptor viewpoints (Views 2, 3, 4 and 6) indicate that upper sections only of buildings would be visible, seen above a horizon comprising of mature trees, the landfill site or existing large industrial units at the Metsä Wood and the former Fogarty's employment area. The Facility would be slightly more prominent on the horizon and distant view. A combination of the expansive view, relative distance to site and existing industrial and infrastructure features, would limit the perceived magnitude of change experienced by the viewer. Effects are predicted to be **minor negligible** or **minor moderate adverse**.

9.8.649.8.65 Users of the footpath routes and recreational boats along The Haven are considered to be amongst the most significant receptors within the Study Area. Footpaths along the eastern flood defence bank are regularly used, with views towards the Principal Application Site both close range and open in character. Receptor locations to the north of the site (View 8) and to the east of the site (View 7) were selected as representative viewpoints.

9.8.659.8.66 The existing public rights of way within the Principal Application Site boundary that follow the western bank of The Haven are proposed to be diverted along existing footpaths that pass through the central site area. Existing views from the proposed diverted route are significantly affected by industrial features and the existing path appears to have limited use. The Facility would incur additional adverse visual effects to those sections of path that cross the central site area. Close range views of substantial Facility buildings and stacks would incur **moderate adverse** effects. For the views from public rights of way crossing the central site area (the proposed diverted route of the footpaths on the western bank of The Haven)), the magnitude of effect would diminish rapidly along sections of path leading away from the Principal Application Site; views would be less influenced by the Facility and existing dense vegetation alongside the paths would more effectively screen views towards the Facility.

9.8.669.8.67 At Year 1 the proposed LWA Plant, very tall stacks and Aggregate silos would be highly prominent from the View 7 location, seen clearly in the skyline.

The wharf, cranes and moored vessels would also strongly feature in the view. Taller structures within the southern Facility area would be clearly seen above the raised former landfill site. Existing industry and infrastructure features would form a backdrop to the Facility and provide some visual integration. Although proposed structures would be highly prominent in views the perceived magnitude of change in the view would be reduced by existing industrial features. Effects are predicted to be **moderate adverse**.

9.8.679.8.68 Year 1 effects in views from the banks of The Haven to the north and east of the site are also predicted to be significant. View 8 is looking south towards the site. The Facility would be highly prominent in the view, seen clearly against the skyline. The wharf structure and associated vehicular movements, wharf side crane activity and vessel movements would significantly increase levels of visual intrusion.

9.8.689.8.69 The perceived magnitude of change in the view would be relatively high. Although the Facility would be seen in context of existing industry and infrastructure (overhead electricity pylons) these features are generally less prevalent in views south than they are looking north (towards the port and very tall pylons that take cables cross The Haven). The influence of existing industry is slightly further reduced in views south by the presence of woodland alongside the eastern bank of The Haven and the grassed landform of the landfill site that forms part of the visual horizon. As such the Facility is considered to introduce a slightly greater degree of contrast in the view. Moving south from this view location, the wharf and associated loading / unloading and vessel activity would become significant features in the close range view. The overall Year 1 effects in views from The Haven corridor to the north and east of the site were predicted to be **moderate adverse**.

9.8.699.8.70 As noted above, residential properties to the north (on the southern fringes of Skirbeck) and to the east of The Haven, have ground level views screened by a combination of intervening vegetation, the flood defence bank and garden boundary fences.

9.8.709.8.71 In views obtained from southerly sections of The Haven corridor (View 6) the Facility would become less significant in the more distant view. The raised landfill site would mostly screen views to the Facility in southern areas of the Principal Application Site. Significance of effects would reduce to **minor adverse** in views obtained from more southerly sections of The Haven.

9.8.719.8.72 Close range views were assessed from a footpath to the south and

residential property receptors to the west of the site (Viewpoints 9, 10 and 11). Existing views are significantly influenced by existing industry and infrastructure with electricity pylons and cables often a dominant feature in the foreground. In all cases the Facility would be prominent and seen above existing horizons. Effects were predicted to be **minor moderate** or **moderate adverse**.

9.8.729.8.73 Middle distant receptor locations are representative of views from properties at Wyberton Park, individual properties and users of the narrow country lanes to the south of the Principal Application Site (Viewpoints 13, 14, 15 and 16). In all views the Facility would be seen in context of either existing industrial buildings, pylons or cranes. The perceived magnitude of change in the view is reduced by existing visual detractors and the overall distance to the Principal Application Site from receptor locations. Predicted Year 1 effects would be **minor adverse** and **minor moderate adverse** from View 13 where Facility structures would introduce a slightly higher degree of contrast in comparison to the existing view.

9.8.739.8.74 Long distant views include those from Frampton (View 17) and from West End Road to the north-west of Wyberton (View 18). Views obtained by road users are considered to be of low sensitivity to change, although the view from West End Road is also in proximity to residential property and a footpath. The Facility would be visible in the distant view and seen in context of existing industrial features. Views would be intermittent and glimpsed. Predicted effects upon views would not be significant; either **minor** or **minor negligible adverse**.

#### Impact 5: Visual – Year 15 Effects

9.8.749.8.75 Establishment of planting belts along southern, western and northern site margins and the enhancement and retention of existing belts of vegetation would introduce some beneficial long-term effects to certain views.

9.8.759.8.76 In View 8 to the north of the site, establishment of new planting would partially screen existing structures to the north of the Facility and lower level activity and structures within the Principal Application Site. Planting would provide some beneficial visual integration with existing planting along the sea bank and flood defence banks of the river. In the long-term, views from The Haven to the north of the site would be slightly improved and effects reduced to **minor moderate adverse** with the Facility remaining prominent in the view. Effects in close range views from The Haven immediately to the east of the site (opposite the proposed wharf and in proximity to the LWA Plant) would remain as **moderate adverse** and a permanent effect.

9.8.769.8.77 There would be a minimal benefit in views from more southerly sections of The Haven, although these would not be sufficient to alter the overall significance of effect identified at Year 1.

9.8.779.8.78 Other long-term beneficial effects were identified from Views 10 and 11 to the west of the site. Long-term establishment of proposed woodland would slightly improve visual screening to lower sections at the Principal Application Site and provide some visual integration with existing vegetation. Initial Year 1 effects (**moderate adverse**) would be reduced to **minor moderate adverse**. Views receptors to the south of the site (View 13) would experience slight improvement in the long-term, with some improved screening and visual integration, although taller structures would be relatively prominent with effects remaining **minor moderate adverse**.

9.8.789.8.79 Proposed mitigation planting would have long-term benefits to a number of view locations within the Study Area, however in most cases upper sections of taller buildings and stacks would remain prominent and seen above the horizon. In these cases, the limited beneficial effects of established woodland planting would not significantly change the degree of effect identified at Year 1.

## Decommissioning

9.8.799.8.80 It is anticipated that similar types of plant equipment would be required to decommission the Facility as would be used during the construction phase. As such, it is considered that decommissioning impacts would give rise to no greater significance of effect to those predicted for construction.

## 9.9 Compliance with Planning Policy

9.9.1 The Facility was assessed against relevant planning policy and guidance identified in **Section 9.2** of this chapter in **Table 9-5** below.

**Table 9-5 Compliance with Planning Policy**

Policy/ guidance	Compliance commentary
EN-1; Undertake LVIA for Nationally Significant Infrastructure Projects	Complies
EN-3, paragraph 2.5.50; Good design that contributes positively to the character and quality of the area.	Consideration was given from the outset to development layout, building massing and external colouring. Landscape & visual mitigation measures include the retention and enhancement of existing landscape features and the introduction of new belts of woodland planting; species selection will provide visual screening benefit whilst reinforcing existing local landscape character and biodiversity.

Policy/ guidance	Compliance commentary
EN-3, paragraph 2.5.51; Mitigation is achieved primarily through aesthetic aspects of site layout and building design.	The Facility is large scale and extensive and as such there are limitations to the range of practical measures that can be adopted. Consideration was given from the outset to development layout, building massing and external colouring.
EN-3, paragraph 2.5.52; The IPC should expect applicants to seek to landscape waste / biomass combustion generating station sites to visually enclose them at low level.	Proposed mitigation measures include, where possible, the retention and reinforcement of existing woodland / scrub / hedgerow and provision of woodland planting to site boundaries. The location of the development to the west of a raised landfill site landform provides screening to the development in views from the east.
<b>NPPF 2019</b>	
Paragraph 127: well-designed places that have effective landscaping and are sympathetic to local setting/ character.	The Facility complies with landscape-related parts of paragraph 127 of the NPPF in that it would provide effective landscaping and would be sympathetic to local character and landscape setting.
Paragraph 170: protecting valued landscapes, recognising the intrinsic character and beauty of the countryside and the benefits of natural capital including trees and woodlands.	<p>There are no designated sites of landscape value within the Study Area.</p> <p>The proposals respond to the value of existing vegetation features across the site and would enable the retention, management and reinforcement of these features wherever possible.</p> <p>The Facility complies with paragraph 170 of the NPPF by avoiding impact on valued landscapes and recognising and reinforcing the benefits derived from trees and woodlands.</p>
Paragraph 180: limiting the impact of light pollution.	<p>Within the context of the local night time environment the Facility would not cause significant adverse effects to existing night time character. The Facility would be seen in context of existing industrial and port infrastructure that includes extensive night time lighting.</p> <p>The Facility would comply with paragraph 180 of the NPPF in that it would limit the impact of light pollution on local amenity and the surrounding countryside (as described in <b>Chapter 5 Project Description</b>).</p>
Natural Environment PPG: use of landscape character assessment in the planning process.	Landscape character assessment was used as a tool to inform the LVIA process and mitigation strategy.
<b>The Lincolnshire Minerals and Waste Local Plan, Adopted June 2016</b>	
Policy DM3: Quality of Life and Amenity; reduce visual intrusion. creation of bunds	Certain local significant adverse effects were identified; however, these would be localised, and, in context of the existing environment, effects are not considered to introduce substantial



Policy/ guidance	Compliance commentary
and natural vegetation for screening	harm to the overall visual amenity of other nearby land users. Mitigation proposals include the introduction of tree and shrub planting belts.
Policy DM6: Impact on Landscape and Townscape; regard to impact on landscape and townscape, including landscape character, valued or distinctive landscape features and elements, and important views.	The Principal Application Site and the landscape of the wider Study Area do not contain any areas of landscape or landscape features that have been designated for their landscape value. There would be no significant townscape effects. Adverse landscape effects would be localised. The Facility recognises the value of existing vegetation features across the site and would enable the retention, management and reinforcement of these features wherever possible.
<b>South-East Lincolnshire Local Plan 2011-2036 (Adopted March 2019)</b>	
Policy 2: Development Management; to meet sustainable development considerations relating to ...impact on the amenity, trees, character and appearance of the area and the relationship to existing development and land uses; quality of design; impact upon neighbouring land uses by reason of ...visual intrusion;...'	The Principal Application Site is located within an area of existing large scale industry and infrastructure. The area is designated as Existing Main Employment Area, Proposed Main Employment Area and an Allocated Waste Area. The perceived magnitude of effect upon both the landscape and visual resource is considerably reduced by the existing industrial context. Certain local significant adverse effects were identified; however, these would be localised, and, in context of the existing environment, effects are not considered to introduce substantial harm to the overall amenities of other nearby land users. Existing landscape features will be retained within the site wherever possible and proposed mitigation measures would include planting of appropriate tree and shrub species.
Policy 3: Design of New Development; create distinctive places, improve character...and provision of appropriate landscaping	The Facility will be appropriate to the character of the industrial setting and include the retention and reinforcement of existing features and the introduction of new planting belts. Building facades are designed to be clean and uncluttered and will adopt the use of complimentary, muted colours.
Policy 31: Climate Change...; high quality design, enhance green infrastructure...no significant harm to visual amenity, landscape character / quality or skyline...	Refer also to commentary above relating to Policy 2.

## 9.10 Cumulative Impacts

9.10.1 This section provides an overview of potential cumulative landscape and visual effects.

**Table 9-6 Summary of Projects considered for the CIA in Relation to LVIA**

Project	Status	Development Period	Distance from the Principal Application Site
Boston Barrier Flood Defence	Transport and Works Act Order consented	Ongoing - completed August 2021	500 m
6MW Gas Fired Power Generation Site		2019 - ongoing	320 m

9.10.2 Potential effects of ongoing construction of the Boston Barrier Flood Defence would be limited to combined visibility of tall cranes at the flood defence site seen in combination with similar high level crane and other construction activity at the Facility. Given the context of the site and presence of existing tall structures and industrial features the magnitude of change in views would not be significant, with **minor adverse** combined effects overall. Furthermore, it is noted that the construction of the Barrier will be completed before the construction phase begins for the Facility. There would be no cumulative effects during the operational phases of the developments.

9.10.3 There would be no significant effects resulting from the proposed gas fired power generation site development due to the lack of inversibility between the two sites.

## 9.11 Summary and Conclusions

9.11.1 A summary of the LVIA is provided below in **Table 9-7**.

**Table 9-7 Summary of Landscape and Visual Effects**

Potential Impact	Receptor	Sensitivity	Magnitude	Significance
<b>Construction</b>				
Impact 1: Landscape – Construction Stage Effects	Proposed Site and Environs	Low	Low medium adverse	Minor negligible adverse
	B1 - Bicker to Wyberton Settled Fen	Medium	Low medium adverse	Minor adverse
	B3 - Wrangle to Cowbridge Settled Fen	Medium	Low medium adverse	Minor adverse
	C1 – Welland to Haven Reclaimed Saltmarsh	Medium	Low medium adverse	Minor adverse

Potential Impact	Receptor	Sensitivity	Magnitude	Significance
Impact 2: Visual – Construction Stage Effects	View 2; Looking south west from Church Green Road near Fishtoft.	High	Negligible adverse	Minor negligible adverse
	View 3; Looking west from Footpath (Fish/3/1) at Fishtoft.	High	Low adverse	Minor adverse
	View 4; Looking north west from Scalp Road, near property Appleside.	High	Low adverse	Minor adverse
	View 6; Looking north west from Footpath Fish/13/10 at junction with Footpath Fish/13/9 on the north bank of The Haven.	High	Low adverse	Minor adverse
	View 7; Looking north west from the junction of Footpaths Fish/13/2, Fish/13/5 and Fish/13/7 on the north bank of The Haven.	High	Low medium adverse	Minor moderate adverse
	View 8; Looking south from Footpath Bost/13/3 near St Nicholas's Church, Skirbeck Conservation Area and properties off The Featherworks / Skirbeck Gardens.	High	Medium high adverse	Moderate major adverse
	View 9; Looking north from Footpath Bost/14/8.	High	Low medium adverse	Minor moderate adverse
	View 10; Looking east from Marsh Lane near property Cremorne and opposite property Coronation Villa.	High	Medium adverse	Moderate adverse
	View 11; Looking east from Slippery Gowt	High	Medium adverse	Moderate adverse

Potential Impact	Receptor	Sensitivity	Magnitude	Significance
	Lane alongside properties off Wyberton Low Road (near Sustrans Route 1 / North Sea Cycle Route)			
	View 13; Looking north from Silt Pit Lane near property Silt Pit Farm.	High	Low adverse	Minor adverse
	View 14; Looking north east from Church Lane at Wyberton Park near property Denemere	High	Low adverse	Minor adverse
	View 15; Looking north from near properties off Rowdyke Road.	High	Low adverse	Minor adverse
	View 16; Looking north east from properties off Causeway.	High	Low adverse	Minor adverse
	View 17; Looking north from Frampton Roads.	High	Low adverse	Minor adverse
	View 18; Looking east from Chain Bridge.	High	Negligible adverse	Minor negligible adverse
<b>Operation</b>				
Impact 1: Landscape – Year 1 Effects; and	Proposed Site and Environs	Low	Medium adverse	Minor negligible adverse
Impact 2: Landscape – Year 15 Effects	B1 - Bicker to Wyberton Settled Fen	Medium	Low medium adverse	Minor adverse
	B3 - Wrangle to Cowbridge Settled Fen	Medium	Low medium adverse	Minor adverse
	C1 – Welland to Haven Reclaimed Saltmarsh	Medium	Low medium adverse	Minor adverse
Impact 3: Effects of Proposed Lighting on Landscape Character	All receptors	Medium	Low medium adverse	Minor adverse
Impact 4: Visual – Year 1 Effects	View 2; Looking south west from	High	Negligible adverse	Minor negligible

Potential Impact	Receptor	Sensitivity	Magnitude	Significance
	Church Green Road near Fishtoft.			adverse
	View 3; Looking west from Footpath (Fish/3/1) at Fishtoft.	High	Low medium adverse	Minor moderate adverse
	View 4; Looking north west from Scalp Road, near property Appleside.	High	Low medium adverse	Minor moderate adverse
	View 6; Looking north west from Footpath Fish/13/10 at junction with Footpath Fish/13/9 on the north bank of The Haven.	High	Low medium adverse	Minor moderate adverse
	View 7; Looking north west from the junction of Footpaths Fish/13/2, Fish/13/5 and Fish/13/7 on the north bank of The Haven.	High	Medium adverse	Moderate adverse
	View 8; Looking south from Footpath Bost/13/3 near St Nicholas's Church, Skirbeck Conservation Area and properties off The Featherworks / Skirbeck Gardens.	High	Medium adverse	Moderate adverse
	View 9; Looking north from Footpath Bost/14/8.	High	Low medium adverse	Minor moderate adverse
	View 10; Looking east from Marsh Lane near property Cremorne and opposite property Coronation Villa.	High	Medium adverse	Moderate adverse
	View 11; Looking east from Slippery Gowt Lane alongside properties off Wyberton	High	Medium adverse	Moderate adverse

Potential Impact	Receptor	Sensitivity	Magnitude	Significance
	Low Road (near Sustrans Route 1 / North Sea Cycle Route)			
	View 13; Looking north from Silt Pit Lane near property Silt Pit Farm.	High	Low medium adverse	Minor moderate adverse
	View 14; Looking north east from Church Lane at Wyberton Park near property Denemere	High	Low medium adverse	Minor moderate adverse
	View 15; Looking north from near properties off Rowdyke Road.	High	Low adverse	Minor adverse
	View 16; Looking north east from properties off Causeway.	High	Low adverse	Minor adverse
	View 17; Looking north from Frampton Roads.	High	Low adverse	Minor adverse
	View 18; Looking east from Chain Bridge.	High	Negligible adverse	Minor negligible adverse
Impact 4: Visual – Year 15 Effects	View 2; Looking south west from Church Green Road near Fishtoft.	High	Negligible adverse	Minor negligible adverse
	View 3; Looking west from Footpath (Fish/3/1) at Fishtoft.	High	Low medium adverse	Minor moderate adverse
	View 4; Looking north west from Scalp Road, near property Appleside.	High	Low medium adverse	Minor moderate adverse
	View 6; Looking north west from Footpath Fish/13/10 at junction with Footpath Fish/13/9 on the north bank of The Haven.	High	Low medium adverse	Minor moderate adverse

Potential Impact	Receptor	Sensitivity	Magnitude	Significance
	View 7; Looking north west from the junction of Footpaths Fish/13/2, Fish/13/5 and Fish/13/7 on the north bank of The Haven.	High	Medium adverse	Moderate adverse
	View 8; Looking south from Footpath Bost/13/3 near St Nicholas's Church, Skirbeck Conservation Area and properties off The Featherworks / Skirbeck Gardens.	High	Medium adverse	Moderate adverse
	View 9; Looking north from Footpath Bost/14/8.	High	Low medium adverse	Minor moderate adverse
	View 10; Looking east from Marsh Lane near property Cremorne and opposite property Coronation Villa.	High	Low medium adverse	Minor moderate adverse
	View 11; Looking east from Slippery Gowt Lane alongside properties off Wyberton Low Road (near Sustrans Route 1 / North Sea Cycle Route)	High	Low medium adverse	Minor moderate adverse
	View 13; Looking north from Silt Pit Lane near property Silt Pit Farm.	High	Low medium adverse	Minor moderate adverse
	View 14; Looking north east from Church Lane at Wyberton Park near property Denemere	High	Low medium adverse	Minor moderate adverse
	View 15; Looking north from near properties off Rowdyke Road.	High	Low adverse	Minor adverse
	View 16; Looking north east from	High	Low adverse	Minor adverse

Potential Impact	Receptor	Sensitivity	Magnitude	Significance
	properties off Causeway.			
	View 17; Looking north from Frampton Roads.	High	Low adverse	Minor adverse
	View 18; Looking east from Chain Bridge.	High	Negligible adverse	Minor negligible adverse

- 9.11.2 This chapter identified predicted landscape and visual effects associated with the Facility, located to the south of Boston in Lincolnshire. The Principal Application Site lies within the Riverside Industrial Estate on land designated under local plans as an Allocated Waste Area and a Proposed / Existing Employment Area.
- 9.11.3 The Principal Application Site comprises former areas of agricultural fields and other land adjacent to The Haven, including its western riverbank. The boundary wraps around the existing Biomass UK No. 3 Ltd gasification plant to the east. Large industrial workshop buildings, business units and a waste recycling centre are located to the south and west of the Facility. An overhead powerline on pylons traverses the Principal Application Site from north to south, bisecting the Biomass UK No. 3 Ltd development and the Facility. Large scale industry is also present to the east of The Haven and to the north, including the Port of Boston with associated tall crane structures and storage silos.
- 9.11.4 The Principal Application Site does not include any features of landscape value, nor are there designated landscapes of value within its proximity. Site features are of ordinary or poor quality and the overall character is strongly industrial. Existing landscape features include the densely vegetated sea bank and a belt of scrub / hedgerow along the western flood defence bank. The site is considered to be of low value and low susceptibility to change to the proposed type of development.
- 9.11.5 The Study Area is located within National Character Area 46: The Fens. The site itself lies within the Bicker to Wyberton Settled Fen and the Welland to Haven Reclaimed Saltmarsh landscape character types, as identified in the landscape character assessment undertaken by Boston Borough Council. The overall landscape character sensitivity of both character types is considered to be moderate, however the Boston Borough assessment recognises that the landscape may be less sensitive on the immediate outskirts of Boston due to



urban influences. This report concurs with that supposition; urban, industrial and infrastructure features are a key characteristic of the existing landscape. Busy road corridors, lorry movements and general noise from industrial and agricultural activity adversely affect overall perceptual character. Landscape character sensitivity of the site and its immediate surroundings is therefore considered to be low.

- 9.11.6 Close range views of the Principal Application Site are obtained from footpaths along the east bank of The Haven. Potential views from other high sensitivity receptors in proximity to the Facility are limited. Views from properties at Skirbeck to the north and east are screened by the intervening raised sea defence bank along The Haven, in combination with dense property boundary hedgerows and vegetation along the river corridor. There are residential flats to the north of the Principal Application Site and two individual properties located in close proximity to the boundary to the south and west. Visual receptors to the west include properties along Marsh Lane and Wyberton Low Road.
- 9.11.7 In all close-range views, existing industrial buildings and infrastructure (notably electricity pylons) are often a dominant feature in the scene. Industrial units, in combination with vegetation belts, often screen or limit potential views toward the Principal Application Site, particularly in views from the west. The raised landform of the landfill site, adjacent to the Facility, substantially screens views from receptors to the east and south east.
- 9.11.8 This chapter also identifies middle and long distant views towards the site, mainly within the eastern and southern Study Area, across more open landscape.
- 9.11.9 The Facility is an extensive development located adjacent to the existing Biomass UK No. 3 Ltd facility. It includes large-scale industrial buildings and tall stacks. A substantial wharf structure extends to the north alongside The Haven with bale storage areas on adjoining land. Materials transfer between the eastern, wharfside facilities and the main southern site area will be via a low, covered conveyor. The power export zone will include the construction of an electricity pylon, of comparable height to existing neighbouring pylons.
- 9.11.10 The Facility will incorporate specific landscape mitigation measures. These include earth bunding and establishment of woodland planting belts along site boundaries, hedgerows and other features that will enhance biodiversity value and be of benefit to local landscape character. Existing planting within the site will be retained where possible and enhanced by additional planting, including trees to improve visual screening.

- 9.11.11 The LVIA identified predicted landscape and visual effects that would arise from construction stage activity and at both early and long-term operational stages of the Facility.
- 9.11.12 Physical effects upon existing landscape features include the loss of areas of scattered scrub and gappy hedgerow along the western flood defence bank. These are of low value and are replaceable, as such effects upon physical landscape features would not be significant.
- 9.11.13 Construction stage activity is considered to be a disruptive phase of the Facility. Activity would be seen in context of an existing, strongly industrial landscape that includes large-scale industrial buildings, infrastructure and transport infrastructure. The Principal Application Site and immediate environs were identified as being of low sensitivity to change for a Facility of this type. Landscape character areas across the wider Study Area were identified as being of medium sensitivity to change.
- 9.11.14 Construction stage effects upon the landscape character of the Principal Application Site and its immediate environs were predicted to incur a low medium adverse magnitude of change with minor negligible adverse significance of effect. Across the wider Study Area, a **minor adverse** significance of effect would occur during the construction period.
- 9.11.15 During operational phases overall effects upon landscape character within the Principal Application Site and its environs would remain low; the Facility would be in keeping with the existing, strongly industrial landscape character. Significance of effects would be **minor adverse** and across the wider Study Area. Long-term establishment of proposed woodland planting belts would introduce some limited beneficial effect upon local landscape character. The Facility would, however, remain a permanent feature of the landscape.
- 9.11.16 Using a series of representative viewpoints, the LVIA identified that significant adverse visual effects would be limited to receptor locations in relatively close proximity to the Principal Application Site. Close range, open views towards the Principal Application Site are obtained from well-used footpaths along the eastern flood defence bank of The Haven. Paths allow views towards the Principal Application Site from the north, east and south-east. Construction works will be highly intrusive in views, seen against a backdrop of activity within the Principal Application Site. Views from The Haven to the north and east of the Principal Application Site would be a **moderate major adverse** significance of effect, however these effects would be temporary and short term. These effects would

progressively reduce in adversity in views obtained from more distant, southerly sections of The Haven.

- 9.11.17 Receptors at close proximity to the south and west of the Principal Application Site would experience **moderate adverse** significance of effects with proposed construction activity and structures seen high in the skyline.
- 9.11.18 Visual effects during construction stages would progressively reduce in significance, largely depending on the overall proximity of the receptor to the site. Middle distance receptors may experience **minor adverse effects**. Receptors at greater distance (within 1.5 to 3 km of site) would experience insignificant effects, either **minor** or **minor negligible adverse**.
- 9.11.19 Effects during early operational stages of the Facility would in general be slightly reduced in comparison to construction stage effects. Effects to close range views from The Haven would remain significant; the LWA Plant, stacks, wharf and shipping activity would remain highly prominent, seen against the backdrop of tall Facility buildings to the south. Visual effects were predicted to be **moderate adverse**. Visual effects progressively reduce from middle and long-distance receptor locations.
- 9.11.20 The long-term establishment of proposed woodland planting on earth bunds and the reinforcement and enhancement of existing retained planting would have benefit in reducing early operational stage visual effects. Planting to the north of the Principal Application Site would benefit certain views from The Haven, improving screening of site activity and improving visual continuity with existing landscape features.
- 9.11.21 Other slight reductions in visual impact would be experienced from receptors in close proximity to the south and west of the Principal Application Site. Improved screening of lower sections of buildings and continuity with existing vegetation would reduce certain effects to **minor moderate adverse**.
- 9.11.22 In overall terms, development of the Facility would comply with national and local planning policy relating to landscape and visual factors. The site and immediate environs are strongly industrial in character. Industry, infrastructure and urban areas feature across the wider Study Area. In this context landscape character effects incurred by the Facility would be limited and not significant effects. Effects upon certain close-range receptors would be considered significant during construction and early operational phases. Landscape mitigation measures would have some benefit in reducing long-term visual effects. Significant,



permanent effects would remain to close-range views from sections of footpath and recreational users of The Haven, located immediately to the east of the Principal Application Site.

## 9.12 References

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