



# Humber Low Carbon Pipelines

Preliminary Environmental Information Report  
Volume II Chapter 11 Landscape and Visual  
October 2022

nationalgrid

# Contents

---

<b>11.</b>	<b>Landscape &amp; Visual Impacts</b>	<b>3</b>
11.1	Introduction	3
11.2	Legislation, policy and guidance	4
	Legislation	4
	Policy	5
	Guidance	10
11.3	EIA Scoping Opinion and engagement	11
	Response to the EIA Scoping Opinion	11
	Engagement undertaken to date	27
11.4	Assessment methodology and significance criteria	34
	Study Area	34
	Baseline Data Collection	35
	Impact assessment methodology	36
	Significance criteria	44
	Assumptions and limitations	44
11.5	Baseline conditions	45
	Existing baseline	45
	Future baseline	62
11.6	Design development, impact avoidance and embedded mitigation	62
11.7	Preliminary assessment of potential impacts	66
	Construction	66
	Operation	72
	Decommissioning	75
11.8	Mitigation and enhancement measures	75
	Construction	75
	Operation	76
	Decommissioning	76
11.9	Summary of the preliminary assessment of potential significant effects	77
11.10	Next steps	79
11.11	References	80

# 11. Landscape & Visual Impacts

## 11.1 Introduction

- 11.1.1 This Chapter reports the results of the preliminary assessment of the potential impacts and effects of the Project on Landscape and Visual Impacts and describes:
- Relevant, legislation, policy and guidance;
  - Engagement undertaken to date;
  - The proposed assessment methodology and associated significance criteria;
  - Preliminary baseline conditions;
  - Potential impacts of construction, operation, and decommissioning;
  - Potential design, mitigation, and enhancement measures;
  - Summary of the preliminary assessment of potential significant effects; and
  - Next steps.
- 11.1.2 This assessment considers the simultaneous construction of a dual pipeline system (one for carbon dioxide and one for hydrogen), as well as the associated Above Ground Installations (AGIs). The majority of the carbon dioxide pipeline would be up to 600 mm (24") nominal diameter and the hydrogen pipeline would be up to 900 mm (36") nominal diameter. This is referred to as the Base Case in this Preliminary Environmental Information Report (PEIR). Also under consideration is the possibility of deploying a larger carbon dioxide pipeline, with a diameter up to 750 mm (30") (with the hydrogen pipeline remaining the same diameter as within the Base Case). This is referred to in this PEIR as Sensitivity 1. Further details regarding the Base Case and Sensitivity 1, as well as the diameter and capacity of the pipelines are provided in Sections 2.3 and 2.4 of Chapter 2: Project Description (Volume II). This chapter assesses the impacts and effects associated with the Base Case. It is anticipated that the types of potential impacts for the Base Case and Sensitivity 1 would be the same, although the magnitude of impacts may differ. A full assessment of Sensitivity 1 would be undertaken and recorded within the Environmental Statement (ES) if the larger carbon dioxide pipeline diameter is taken forward into the Development Consent Order (DCO) application.
- 11.1.3 This Chapter (and its associated figures and appendices) is intended to be read as part of the wider PEIR.
- 11.1.4 This chapter is supported by the following figures:
- Figure 11.1 – Landscape Designations (Volume IV);
  - Figure 11.2 – PRoWs, Residential Properties and Representative Viewpoints Plan (Volume IV);
  - Figure 11.3 – Landscape Character Areas (Volume IV); and
  - Figure 11.4 – Representative Viewpoints (Type 1) (Volume IV).
- 11.1.5 This chapter is supported by the following appendices:

- Appendix 11.1 – Landscape Character Areas Summary Tables (Volume III); and
- Appendix 11.2 – Preliminary Assessment of Impacts Table (Volume III).

## 11.2 Legislation, policy and guidance

- 11.2.1 A summary of the international, national, and local legislation, planning policy and guidance relevant to the Landscape and Visual assessment for the Project is set out below.

### Legislation

#### European Landscape Convention (ELC), Council of Europe (2004) (Ref 11.1)

- 11.2.2 Created by the Council of Europe, the ELC is the first international convention to focus specifically on landscape. The convention promotes landscape protection, management and planning, and European co-operation on landscape issues and was signed by the UK Government in February 2006 (the ELC became binding from March 2007). One of its defining principles is that it applies to all landscapes, including ordinary or even degraded landscapes, as well as those that are afforded formal protection.
- 11.2.3 The ELC defines landscape as:
- “‘Landscape’ means an area, as perceived by people, whose character is the result of the action and interaction of natural and/or human factors”.*
- 11.2.4 The explanatory report which accompanies the ELC expands on this definition and states that:
- “‘Landscape’ is defined as a zone or area as perceived by local people or visitors, whose visual features and character are the result of the action of natural and/or cultural (that is, human) factors. This definition reflects the idea that landscapes evolve through time, as a result of being acted upon by natural forces and human beings. It also underlines that a landscape forms a whole, whose natural and cultural components are taken together, not separately.”*
- 11.2.5 In other words, particular combinations of natural and or human factors, such as: geology, hydrology, landform, soils, vegetation, ecology, land use, field patterns, historic or cultural features/associations, and human settlement, and the interaction between these elements consistently across an area or zone, create character and in turn give an area a sense of place.
- 11.2.6 The explanatory note also highlights the purpose of the ELC in relation to the role of local planning authorities, which applies to all authorities within England. It states that:
- “The general purpose of the Convention is to encourage public authorities to adopt policies and measures at local, regional, national and international level for protecting, managing and planning landscapes throughout Europe so as to maintain and improve landscape quality and bring the public, institutions and local and regional authorities to recognise the value and importance of landscape and to take part in related public decisions.”*



## Policy

- 11.2.7 The preliminary assessment undertaken in this Chapter adheres to National and Local policy as set out below.
- 11.2.8 A summary of policies contained within each local plan is set out below

### **National Policy Statement for Energy (EN-1) (July 2011) (Ref 11.2) and Draft Overarching National Policy Statement for Energy (draft EN-1) (November 2021) (Ref 11.3)**

- 11.2.9 The Overarching National Policy Statement (NPS) for Energy EN-1 (Ref 11.2) recognises that energy infrastructure projects are likely to have landscape and visual impacts, due to the nature of energy infrastructure projects, and landscape and visual impacts are considered to be 'Generic Impacts' in need of assessment.
- 11.2.10 The draft NPS for Energy EN-1 (Ref 11.3) is to be subject to public consultation along with an appraisal of sustainability and parliamentary scrutiny. This was last requested to be concluded by 28 February 2022 by the Secretary of State for Business, Energy and Industrial Strategy.
- 11.2.11 Section 5.9 of the NPS for Energy EN-1 (Ref 11.2) and section 5.10 of the Draft NPS for Energy EN-1 (Ref 11.3) sets out generic considerations to be given to landscape and visual impacts. Section 5.9 of NPS for Energy EN-1 (Ref 11.2) states the following relevant advice:
- "The landscape and visual assessment should include reference to a landscape character assessment and associated studies as a means of assessing landscape impacts relevant to the proposed project."*
- "The assessment should include the visibility and conspicuousness of the project during construction and of the presence and operation of the project and potential impacts on views and visual amenity. This should include light pollution impacts, including on local amenity, and nature conservation."*
- "The assessment should also demonstrate how noise and light pollution from construction and operational activities on residential amenity and on sensitive locations, receptors and views, will be minimised."*
- "It may be helpful for applicants to draw attention, in the supporting evidence to their applications, to any examples of existing permitted infrastructure they are aware of with a similar magnitude of impact on sensitive receptors."*
- "Within a defined site, adverse landscape and visual impacts may be minimised through appropriate siting of infrastructure within that site, design including colours and materials, and landscaping schemes, depending on the size and type of the proposed project. Materials and designs of buildings should always be given careful consideration."*
- 11.2.12 The Project does not lie within, or within the setting of, any landscape designated at a national level for its landscape or scenic value (such as a National Park) so those parts of the NPS EN-1 relating to these designated landscapes are not relevant to the Project. EN-1 does also recognise the value of locally designated landscapes, though notes that these designations should not be used in themselves to refuse consent, as this may unduly restrict acceptable development.

## **National Policy Statement for Gas Supply Infrastructure and Gas and Oil Pipelines (EN-4) (Ref 11.4) and Draft National Policy Statement for Gas Supply Infrastructure and Oil Pipelines (draft EN-4) (Ref 11.5)**

- 11.2.13 Section 2 of National Policy Statement for Gas Supply Infrastructure and Gas and Oil Pipelines EN-4 (Ref 11.4) and Draft National Policy Statement for Gas Supply Infrastructure and Gas and Oil Pipelines EN-4 (Ref 11.5) sets out principles to be applied in the assessment and mitigation design specific to Gas and Oil Pipelines. The assessment and any mitigation design will incorporate these principles and the following relevant advice will be considered:

*“Additional considerations apply during the construction of a pipeline (which, without mitigation, can affect both landscape and ecology). These comprise the impact upon specific landscape elements within and adjacent to the pipeline route, such as grasslands, field boundaries (hedgerows, hedgebanks, drystone walls, fences), trees, woodlands, and watercourses. There will also be temporary visual impacts caused by the need to access the working corridor and to remove flora and soil.”*

*“The applicant should also include proposals for reinstatement of the pipeline route as close to its original state as possible and take into account any requirements for agreements with the landowner to access areas for aftercare and management work. Where it is unlikely to be possible to restore landscape to its original state, the applicant should set out measures to avoid, mitigate, or employ other landscape measures to compensate for, any adverse impact on the landscape.”*

## **National Planning Policy Framework, (2021) (Ref 11.6)**

- 11.2.14 The latest version of the National Planning Policy Framework (NPPF), published by the Ministry of Housing, Communities and Local Government in July 2021, sets out the Government’s planning policies for conserving and enhancing the natural environment. Policies of relevance to this assessment of the Project are highlighted in the following paragraphs.
- 11.2.15 With regard to the status of a local planning authority’s strategic policies Paragraph 20 of the NPPF highlights that these *“should set out an overall strategy for the pattern, scale and quality of development, and make sufficient provision for d) conservation and enhancement of the natural, built and historic environment, including landscapes and green infrastructure [...].”*
- 11.2.16 Section 15 of the NPPF promotes planning decisions which *“contribute to and enhance the natural and local environment”* by *“protecting and enhancing valued landscapes”*; recognising the *“intrinsic character and beauty of the countryside”*; and *“remediating and mitigating despoiled, degraded, derelict, contaminated and unstable land, where appropriate”* (Paragraph 174).
- 11.2.17 With regards to designated landscapes, paragraph 175 of the NPPF requires local planning authorities to *“distinguish between the hierarchy of international, national and locally designated sites; allocate land with the least environmental or amenity value”* within their plans.
- 11.2.18 In addition, Paragraph 185 encourages planning decisions which *“identify and protect tranquil areas which have remained relatively undisturbed by noise and are prized for their recreational and amenity value for this reason.”*; and *“limit the impact of light pollution from artificial light on local amenity”* and *“intrinsically dark landscapes”*.

- 11.2.19 Section 16 of the NPPF addresses “*Conserving and enhancing the historic environment*”. With regards to landscape character impact assessment this section requires local planning authorities when determining applications to take account of the “*desirability of new development making a positive contribution to local character and distinctiveness*” and “*opportunities to draw on the contribution made by the historic environment to the character of a place*” (Paragraph 190).

### **East Riding Local Plan Policy (2012-2029) (Ref 11.7) and East Riding Local Plan Update 2020-2039 (Ref. 11.8)**

- 11.2.20 Policy ENV 1: ‘Integrating high quality design’ sets out that new development should safeguard and respect the diverse character and appearance of East Riding through design, layout, construction and use. Development that optimises the potential of the site and which contributes to a sense of place will be supported. In particular new development should have regard to characteristics of the site’s wider context and character of the surrounding area and be of appropriate scale, density, massing, height and material. Proposals should also incorporate hard and/or soft landscaping, alongside boundary treatment of appropriate scale and size to enhance setting and views and incorporate where possible nature conservation and biodiversity enhancement, paying attention to the use of local materials, architectural styles and features that have a strong association with the area’s landscape.
- 11.2.21 Policy ENV2: ‘Promoting high quality landscape’ requires that new development should be sensitively integrated into the existing landscape and that proposals should have an understanding of the intrinsic qualities of the landscape setting, seeking opportunities to protect and enhance landscape characteristics and features. Proposals should protect and enhance existing landscape character as described in the East Riding Landscape Character Assessment.
- 11.2.22 Policy ENV3 ‘Valuing our heritage’ requires that both designated and non-designated heritage assets should be conserved especially those which contribute to East Riding’s distinctive historic character including: Historic Parks and Gardens and key views in and out of these landscapes.
- 11.2.23 Policy ENV5: ‘Strengthening green infrastructure’ states that existing and/or new green infrastructure features should be incorporated within new design proposals.

### **Selby District Core Strategy Local Plan (2013) (Ref 11.9)**

- 11.2.24 Policy SP18 ‘Protecting and Enhancing the Environment’ states that the historic and natural environment, landscape character and setting of areas of acknowledged importance should be safeguarded. Locally distinctive landscapes, areas of tranquillity and Public Rights of Way (PRoW) should also be protected and enhanced.
- 11.2.25 Policy SP19 ‘Design Quality’ states that designs should have regard for local character, identity and context including historic townscapes, settlement patterns and the open countryside. It also sets out key requirements for new development including making the best, most efficient use of land without compromising local distinctiveness, character and form and which positively contributes to an area’s identity and heritage in terms of scale, density and layout.

### **Selby District Local Plan (2005) (Ref 11.10)**

- 11.2.26 Policy DL1 relates to ‘development in the countryside, outside the Green Belt and development limits’. Development will only be permitted if appropriate in a rural area

and considered appropriate, it must be located and designed so as not to have significant adverse impact on residential amenity or the character and appearance of an area.

- 11.2.27 Policy ENV1 relates to 'design quality' and states that proposals for development will be permitted provided a good quality of development would be achieved. Account will be taken of a development's impact upon the character of the area, amenity of adjoining occupiers, the standard of layout, design and materials (in relation to the site and surroundings) and associated landscaping.
- 11.2.28 Policy ENV3 states that proposals involving outdoor lighting will only be permitted where lighting schemes do not detract significantly from the character of a rural area.
- 11.2.29 Policy ENV16 states that proposals affecting historic parks or gardens will only be permitted where the appearance, setting, character or amenity of an historic park or garden would not be harmed.
- 11.2.30 Policy ENV18 states that the council will take into account the contribution of trees to public amenity in relation to applications to fell or carry out other works to trees subject to tree preservation orders.
- 11.2.31 Policy ENV20 requires that where there is inadequate landscaping relating to a large-scale development or development at the edge of settlements, proposals will be required to incorporate substantial element of strategic landscaping (which may be off-site.)
- 11.2.32 Policy ENV21 (A) requires that where appropriate proposals should incorporate landscaping as an integral element in the layout and design, including the retention of existing trees and hedgerows and planting of native and locally occurring species.
- 11.2.33 Policy ENV25 states that development within or affecting a conservation area will be permitted provided the proposal would preserve or enhance the character or appearance of the conservation area.

#### **North Lincolnshire Local Development Framework Core Strategy (2011) (Ref 11.11)**

- 11.2.34 CS5: 'Delivering Quality Design in North Lincolnshire' requires that all new development should be well designed and appropriate for their context and contribute to creating a sense of place. It goes on to state that design which is inappropriate to the local area or fails to maximise opportunities for improving the character and quality of the area will not be acceptable. Appropriate landscaping and planting which enhances biodiversity or geological features whilst contributing to the creation of a network of linked greenspaces across the area should be incorporated into development proposals.
- 11.2.35 CS16: 'North Lincolnshire's Landscape, Greenspace and Waterscape' states that development on or adjacent to strategic and locally important spaces will not be permitted where it would result in unacceptable conflict with the function(s) or characteristic of the area. Where appropriate proposals will be required to improve the quality and quantity of accessible landscape, greenspace and waterscape and protect trees, hedgerows and historic landscapes.

#### **North Lincolnshire Local Plan Publication Plan (October 2021) (Ref 11.12)**

- 11.2.36 The North Lincolnshire Local Plan is currently at publication stage.
- 11.2.37 DQE1: 'Protection of landscape, Townscape and Views' states that proposals that would cause unacceptable harm and do not protect the distinctive character and quality



of the landscape or important features or views will not be permitted. The policy goes on to state that the most up to date Lincolnshire Landscape Character Assessment should be taken into account. The policy also states that proposals should maintain and respond positively to any natural and man-made features within the landscape and townscape which positively contribute to the character of the area. The policy sets out the requirements for proposals and the design including relation to topography, siting, scale and layout and long-term management for landscape proposals.

- 11.2.38 DQE1: 'Protection of landscape, Townscape and Views' also states that priority would be given to the protection and enhancement of the landscape character, natural beauty and setting of the proposed extension to the Lincolnshire Wolds Area of Outstanding Natural Beauty (AONB).
- 11.2.39 DQE12: 'Protection of Trees, Woodland and Hedgerows' states that particular regard will be given for the protection of the amenity of trees, woodland and hedgerows within settlements and ancient woodlands and historic hedgerows. It further states that planning permission will be refused for development that results in the loss, deterioration or fragmentation of irreplaceable habitats including ancient woodland and aged veteran trees unless the need for, and benefits of the development in that location outweighs the harm. The policy also states that landscaping and tree and hedgerow planting schemes will be required where appropriate.
- 11.2.40 HE2: 'Area of Special Historic Landscape Interest' sets out the requirements for the Isle of Axholme which is designated as an area of Special Historic Interest. Within this area development will not be permitted which would destroy, damage or adversely affect the character or appearance or setting of the historic landscape, or any of its features.

### **North Yorkshire Minerals and Waste Plan (2022) (Ref 11.13)**

- 11.2.41 D06 states that proposals will be permitted where it can be demonstrated that there will be no unacceptable impact on the quality or character of the landscape including any proposed mitigation measures.

### **Central Lincolnshire Local Plan (2017) (Ref 11.14)**

- 11.2.42 LP17: 'Landscape, Townscape and Views' requires that proposals should maintain and respond positively to any natural and man-made features which positively contribute to the character of the area. All proposals should take account of views in to, out of and within development areas and should be designed to preserve or enhance key local views and vistas.
- 11.2.43 LP25: 'The Historic Environment' requires that development proposals should protect, conserve and seek opportunities to enhance the historic environment of Central Lincolnshire.
- 11.2.44 LP26 'Design and Amenity' sets out the design principles for all development. Proposals should have regard for topography, landscape character, siting, height, scale, massing and form. Proposals should incorporate and retain as far as possible existing natural and historic features and incorporate appropriate landscape treatment to ensure the development is assimilated into the surrounding area. Important local views into, out of or through the site should be protected. Appropriate materials should be used which reinforces or enhances local distinctiveness.

- 11.2.45 LP29 'Protecting Lincoln's Setting and Character' states that proposals should seek to make a positive contribution to the built and natural environment. Proposals should take into account the Lincoln Townscape Assessment (2012).

## Guidance

- 11.2.46 The preliminary assessment undertaken in this Chapter adheres to professional standards and guidance as set out below.

### National Planning Practice Guidance (July 2021) (Ref 11.15)

- 11.2.47 The *National Planning Practice Guidance* (Ref 11.21) (NPPG) is a supplementary suite of guidance prepared by the Ministry of Housing, Communities & Local Government covering a variety of topics.

#### *Natural Environment - Landscape*

- 11.2.48 In respect of the planning policies which the Project must accord to, paragraph 036 (Reference ID: 8-036-20190721, Revision date: 21-07-2019) states that:

*"Where landscapes have a particular local value, it is important for policies to identify their special characteristics and be supported by proportionate evidence. Policies may set out criteria against which proposals for development affecting these areas will be assessed. Plans can also include policies to avoid adverse impacts on landscapes and to set out necessary mitigation measures, such as appropriate design principles and visual screening, where necessary. The cumulative impacts of development on the landscape need to be considered carefully."*

### Guidelines for Landscape and Visual Impact Assessment, 3<sup>rd</sup> Edition (GLVIA3) (Ref 11.16)

- 11.2.49 GLVIA3 provides guidance upon the range of methodologies that can be employed in the preparation of LVIA's. A number of statements of clarification to this have been issued by the Landscape Institute (Ref 11.16) (LI).

### Landscape Institute (LI) Technical Guidance Note: Visual Representation of Development Proposals (Landscape Institute, 2019) (Ref 11.17)

- 11.2.50 LI provides guidance on appropriate choices of technique when seeking visual representations of developments (Ref 11.17).

### Assessing Landscape Value Outside National Designations – Landscape Institute Technical Guidance Note 02/21 (Landscape Institute, 2021) (Ref 11.18)

- 11.2.51 LI provides guidance on how to identify 'valued landscapes' (Ref 11.18).

### An Approach to Landscape Character Assessment (Ref 11.19)

- 11.2.52 Natural England have produced guidance on the various approaches to Landscape Character Assessment including an Approach to Landscape Character Assessment which provides a best practice approach to Landscape Assessment and understanding of landscape character to provide baseline evidence for development and landscape planning.

## 11.3 EIA Scoping Opinion and engagement

- 11.3.1 A summary of the Environmental Impact Assessment (EIA) Scoping Opinion from the Planning Inspectorate (PINS) and responses to this EIA Scoping Opinion are outlined below. Furthermore, all relevant engagement undertaken to date is outlined in this Section.

### Response to the EIA Scoping Opinion

- 11.3.2 An EIA Scoping Opinion (Appendix 1.2: EIA Scoping Opinion (Volume III)) was received by the Applicant from PINS on 20 May 2022. Table 11.1 lists the comments that PINS and consultation bodies made in relation to Landscape and Visual and shows how the Applicant is responding to these.

**Table 11.1: Summary of EIA Scoping Opinion in relation to Landscape and Visual**

Section reference	Applicant's proposed matter	Inspectorate's / consultation bodies comments	Response
3.7.1	Changes to landscape character and visual amenity of surrounding sensitive receptors due to the pipelines - operation	<p><i>The Applicant proposes to scope out impacts to landscape character and existing visual amenity of receptors during operation of the pipelines on the basis that the land above the pipelines would be reinstated following installation and/ or other appropriate mitigation measures would be implemented. The Applicant indicates that this position is agreed with relevant consultation bodies.</i></p> <p><i>The Inspectorate is content that significant impacts on landscape character and visual amenity are not likely to arise from operation and maintenance of the buried pipelines and agrees that these matters can be scoped out of the ES. However, the Inspectorate advises that consideration should be given to the potential for operational phase impacts to landscape character and visual amenity as a result of any planting restrictions imposed by easements. The ES should assess any likely significant impacts.</i></p>	<p>The PEIR includes indication of locations of planting restrictions imposed by easements (if known) and of likely significant impacts at these locations during the operational phase.</p> <p>Further details of this will follow in the ES when the route of the pipelines has been determined in the light of public consultation, design development and assessment work.</p>
3.7.2	Receptors beyond a 1.5km radius of the AGIs (except Pumping Facility at Easington, where the radius is 5km) – construction and operation	<p><i>The Applicant proposes to scope out landscape and visual receptors beyond a 5km radius from the centre of the Easington Pumping Facility, and beyond a 1.5km radius for all other AGIs, on the basis that initial desktop review has indicated it is unlikely significant impacts would be experienced beyond these distances. The initial desktop review is informed by zone of theoretical visibility (ZTV) modelling and ground truthing through site visits in February/ March 2022. The Applicant indicates that this position is agreed with relevant consultation bodies.</i></p> <p><i>The Inspectorate considers that, given the nature and scale of the AGIs it is unlikely that they would give rise to likely</i></p>	<p>The PEIR assessment is based on a preliminary understanding of the location and sizing of AGIs, which are subject to continuing public consultation, and ongoing assessment work.</p> <p>The ZTVs provided at ES stage will be based on the maximum parameters of the AGIs which will include allowance for the tallest components such as vent stacks (worst case parameters).</p>



Section reference	Applicant's proposed matter	Inspectorate's / consultation bodies comments	Response
		<p><i>significant landscape and visual impacts to receptors beyond the stated distances.</i></p> <p><i>However, the ZTV modelling has not been provided with the Scoping Report and it is unclear whether it has been based on the maximum parameters of the AGIs, as the description at paragraph 10.4.3 does not refer to the temporary vents that would be the tallest component (described in Table 2.3 as having a maximum height 15m). It is not clear how frequently and for what duration the temporary vents would be required. At this stage there is also an absence of certainty about the location of construction activities and facilities.</i></p> <p><i>The Inspectorate considers that the potential for significant impacts from construction and operation of the AGIs beyond the stated distances cannot be excluded. The ES should demonstrate that the ZTV is based on a worst case envelope or provide an assessment of receptors based on the maximum parameters where significant impacts are likely.</i></p>	
3.7.3	Receptors beyond a 1km radius for pipelines – construction and operation	<p><i>The Scoping Report proposes to scope out receptors beyond a 1km radius for the proposed pipelines on the basis that it is unlikely that they would experience significant impacts.</i></p> <p><i>The Inspectorate considers that in the absence of certainty regarding the location of construction activities and facilities, the potential for significant impacts during construction of the pipelines beyond a 1km radius cannot be excluded. The ES should assess impacts on all receptors where significant impacts are likely or otherwise present a justification in the ES as to why significant impacts are not likely, once further detail regarding construction facilities is available.</i></p> <p><i>As described above, the Inspectorate is content that significant impacts on landscape character and visual amenity</i></p>	<p>Assessment of pipelines during operation have been scoped out. This matter is not assessed further within the PEIR and will not be assessed within the ES.</p> <p>The EIA Scoping Report and PEIR uses professional judgement to assess any likely significant impacts resulting from the construction of the pipelines. The 1 km radius has been assessed as justified for the type of pipeline construction proposed. ZTVs that will be produced to support the</p>

Section reference	Applicant's proposed matter	Inspectorate's / consultation bodies comments	Response
		<i>are not likely to arise from operation and maintenance of the pipelines. On that basis, receptors located beyond 1km radius of the pipelines can be scoped out of the assessment of operational impacts.</i>	ES and provide further justification for the 1 km radius.  However, this 1 km buffer remains flexible and any wider impacts will be assessed as appropriate following the detailed ZTV modelling.
3.7.4	Residential visual amenity assessment – construction and operation	<p><i>The Scoping Report identifies occupiers of residential properties could be affected by the Project but seeks to scope out a residential visual amenity assessment. Impacts on views from private properties would be assessed using representative viewpoints from publicly accessible locations and use of professional judgment.</i></p> <p><i>The Inspectorate notes that the Scoping Route Corridor and study area for landscape and visual impacts is generally sparsely populated and rural agricultural in nature, with some industrial land use and low density residential areas.</i></p> <p><i>Considering the nature of the study area and the Project, the Inspectorate is content that a residential visual amenity assessment can be scoped out of the ES and that visual impacts to occupiers of residential properties can be undertaken on the basis described in the Scoping Report.</i></p>	Noted. Residential amenity will not be considered further within the LVIA.
3.7.5	Decommissioning	<i>Paragraph 10.9.6 of the Scoping Report describes the scenarios that are proposed to be assessed, which includes the decommissioning phase. However, Table 10.2, which describes matters to be scoped in or out of the ES, does not reference the decommissioning phase. For the avoidance of doubt, the Inspectorate considers that impacts during decommissioning should be scoped in to the ES. Please refer</i>	Noted. Decommissioning will be scoped in to the LVIA.

Section reference	Applicant's proposed matter	Inspectorate's / consultation bodies comments	Response
		<i>to the Inspectorate's further comments at Row ID 2.2.2 of this Scoping Report.</i>	
3.7.6	Receptors	<i>A list of potential visual receptors is provided at paragraph 10.5.2 of the Scoping Report. In addition to the categories listed, consideration should also be given to other potential visual receptors, such as users of canals and waterways, cycle networks, and visitors to the Brocklesby Registered Park and Garden of Historic Interest where significant impacts are likely to occur.</i>	Noted. These additional potential visual receptors have been considered and included in the PEIR where relevant.
3.7.7	Landscape features	<i>The ES should consider features such as trees, hedgerows and areas of agricultural land in terms of their contribution to landscape character and setting.</i>	Noted. This is assessed in the PEIR and will be assessed in the ES.
3.7.8	Landscape baseline	<i>The Scoping Report identifies that there are no nationally designated landscapes within the study area but no reference is made to local landscape designations. Information about local landscape designations, such as Areas of Great Landscape Value at Searby/ Bigby escarpment and Brocklesby Park, should be included in the baseline description and considered in the ES, where significant impacts are likely to occur.</i>	Noted. This is assessed in the PEIR and will be assessed in the ES.
3.7.9	Visual baseline	<i>The Scoping Report does not include the ZTV modelling used to inform areas of potential visibility of the Project but 'it is anticipated that they [ZTV] will be presented in the PEIR [Preliminary Environmental Information Report] and ES.' The ZTV modelling plays an integral role in establishing the baseline used in the visual impact assessment. The Inspectorate considers that it should be presented in the ES, together with a description of how it has been prepared.</i>	<p>ZTV modelling has not been used for the purposes of the PEIR as the design and siting of the AGIs is subject to ongoing consultation and design development and assessment work.</p> <p>The PEIR therefore used professional judgement based on desk study and site visits to make</p>

Section reference	Applicant's proposed matter	Inspectorate's / consultation bodies comments	Response
			<p>initial assessments of the visual baseline. This was considered appropriate at this stage to gain a preliminary understanding of the likely effects.</p> <p>ZTVs will be produced at ES stage.</p>
3.7.10	Baseline information and surveys	<i>The Inspectorate notes that the Project has the potential to affect existing hedgerows during construction and operation. It is considered that a hedgerow survey should be undertaken to establish the baseline condition, including whether there are any important hedgerows under the Hedgerow Regulations 1997. The ES should include information about the outcomes of the survey.</i>	Noted. Please refer to the Chapter 7: Ecology and Biodiversity .
3.7.11	Mitigation	<i>Paragraph 10.7.6 of the Scoping Report refers to mitigation for landscape and visual impacts after completion of works forming part of a landscape and biodiversity strategy. The Inspectorate considers that an outline or draft of the strategy should be submitted as part of the ES.</i>	A draft Landscape and Ecological Management Plan (LEMP) will be submitted at the ES stage.
3.7.12	Assessment methodology – representative viewpoints	<i>The Inspectorate notes that the Applicant proposes to produce representative viewpoints to inform the impact assessment from a maximum of 49 viewpoint locations dependent on the final layout of proposed AGIs. An indicative list of the locations has not been provided with the Scoping Report. The Applicant states that these will be agreed with the local authorities through further consultation. The Inspectorate welcomes this confirmation and advises the Applicant to make effort to agree the locations with other relevant consultation bodies, for example the Canal and River Trust.</i>	<p>Following consultation with the Canal and River Trust in July 2022, the majority of viewpoints which consider the potential impact upon users of the waterways (and their publicly accessible towpaths/adjacent riverside paths) were agreed to have been included.</p> <p>Further justification for the viewpoint selection and any requirements for further viewpoints will be provided in</p>



Section reference	Applicant's proposed matter	Inspectorate's / consultation bodies comments	Response
		<p><i>In finalising the viewpoint locations, the Applicant should give consideration to the production of representative viewpoints from the network crossings of the Aire and Calder Navigation and Stainforth and Keadby Canal and a view of the pipeline from the River Ouse to support a comprehensive assessment of visual impact to waterways.</i></p> <p><i>The Inspectorate considers that Historic England's published setting advice, The Setting of Heritage Assets: Historic Environment Good Practice Advice in Planning Note 3 (Second Edition) (GPA3) is of relevance to the assessment of impacts to the landscape setting of heritage assets. The Applicant should consider the production of dynamic and kinetic assessments that engage with movement through the landscape (not just fixed point views) and the need for viewpoints from locations that are not publicly accessible.</i></p> <p><i>The assessment should not be limited to a summary of the viewpoints and should aim to describe and assess the full impacts of the Project on landscape and visual receptors, including through the use of mapping of impacts to illustrate geographical extent.</i></p>	<p>the ES. following further consultation and further details of the pipeline construction and AGI locations.</p> <p>The viewpoints selected will also aid the assessment of the dynamic and kinetic visual impacts of the Project upon users traveling through the landscape in which it is situated.</p> <p>The landscape setting of heritage assets is addressed within the Cultural Heritage section of the PEIR.</p>
3.7.13	Guidance	<p><i>The Inspectorate notes that the Landscape Institute published Technical Guidance Note (TGN) 02-21: Assessing landscape value outside national designations in May 2021. The ES should reference this guidance where relevant.</i></p>	<p>Noted. This document has been used in preparation of this PEIR and will be used to inform the ES.</p>
3.7.14	Topographical survey	<p><i>The Applicant should make effort to agree the need for proportionate topographical survey for above ground elements of infrastructure with the relevant local planning authorities.</i></p> <p><i>The Applicant's attention is drawn to the joint consultation response from North Yorkshire County Council and Selby</i></p>	<p>Noted. LiDAR surveys using remote sensing technology (Light Detection and Ranging) have been undertaken to create 3D models and maps of the area. These are considered proportionate surveys at ES stage.</p>

Section reference	Applicant's proposed matter	Inspectorate's / consultation bodies comments	Response
		<i>District Council in this regard (see Appendix 2 of this Opinion).</i>	Further consultation will be undertaken with the relevant authorities.
Natural England Consultation Response (received after Scoping Opinion - 25 May 2022)	National and Local Character Assessment Areas Methodology and Guidance Cumulative Impacts Design Guides and Local Policies	<p>Natural England stated the following:</p> <p><i>The environmental assessment should refer to the relevant National Character Areas. Character area profiles set out descriptions of each landscape area and statements of environmental opportunity.</i></p> <p><i>The ES should include a full assessment of the potential impacts of the development on local landscape character using landscape assessment methodologies. We encourage the use of Landscape Character Assessment (LCA), based on the good practice guidelines produced jointly by the Landscape Institute and Institute of Environmental Assessment in 2013. LCA provides a sound basis for guiding, informing, and understanding the ability of any location to accommodate change and to make positive proposals for conserving, enhancing or regenerating character.</i></p> <p><i>A landscape and visual impact assessment should also be carried out for the proposed development and surrounding area. Natural England recommends use of the methodology set out in Guidelines for Landscape and Visual Impact Assessment 2013 ((3rd edition) produced by the Landscape Institute and the Institute of Environmental Assessment and Management. For National Parks and AONBs, we advise that the assessment also includes impacts on the 'special qualities' of the designated landscape, as set out in the statutory management plan for the area. These identify the particular landscape and related characteristics which</i></p>	<p>Noted. This is all considered within the PEIR and will be further assessed in the ES.</p> <p>More detail will be provided at ES stage on how the final choice of AGI locations were made with justification of the selected options in terms of landscape impact and benefit. The design of the AGIs will be detailed further along with how the landscaping around them responds to and enhances the local landscape character etc.</p>

Section reference	Applicant's proposed matter	Inspectorate's / consultation bodies comments	Response
		<p><i>underpin the natural beauty of the area and its designation status.</i></p> <p><i>The assessment should also include the cumulative impact of the development with other relevant existing or proposed developments in the area. This should include an assessment of the impacts of other proposals currently at scoping stage.</i></p> <p><i>To ensure high quality development that responds to and enhances local landscape character and distinctiveness, the siting and design of the proposed development should reflect local characteristics and, wherever possible, use local materials. Account should be taken of local design policies, design codes and guides as well as guidance in the National Design Guide and National Model Design Code. The ES should set out the measures to be taken to ensure the development will deliver high standards of design and green infrastructure. It should also set out detail of layout alternatives, where appropriate, with a justification of the selected option in terms of landscape impact and benefit.</i></p>	
<p>Canal and River Trust (CRT)</p> <p>Consultation Response (received as part of Scoping Opinion - 9 May 2022)</p>	<p>Visual Receptors</p> <p>Details of construction methods and details</p>	<p>CRT stated the following:</p> <p><i>We request that consideration is given towards waterway users within the list of receptors in Section 10.5. We note that the list of receptors include 'people engaged in outdoor sport and recreation'. However, this terminology is vague. Due to the likely proximity of works to our waterways, we request that towpaths, waterways and marinas should be recognised as visual receptors in the LVIA, as that any impact towards them can be fully assessed.</i></p> <p><i>Table 10.1 makes note that a number of representative views would be provided along the route. We request that this should cover the two network crossings and a view of pipeline</i></p>	<p>See also 3.7.6 and 3.7.12. Meeting with CRT to discuss comments on 13-07-22 (see notes in Table 11.2).</p> <p>These additional potential visual receptors have been considered and included in the PEIR where relevant.</p> <p>Following further consultation with the CRT in July 2022, the majority of viewpoints which consider the potential impact upon users of the waterways (and their publicly accessible towpaths/adjacent</p>

Section reference	Applicant's proposed matter	Inspectorate's / consultation bodies comments	Response
		<p><i>from the River Ouse's outward perspective. This would enable a full assessment to be carried out upon the visual impact from our waterways, which would be in the interests of protecting the waterways visual amenity, setting and promoting beauty on the door step.</i></p> <p><i>Paragraph 10.7.1 highlights that efforts will be taken to sympathetically set out site construction compounds, with consideration given to the restoration of areas of temporary works. We request that the Trust is kept informed by the applicant of any siting and activities in proximity to our waterways, so that any visual impacts upon our network from these can be fully assessed and mitigated against. Associated fencing, compound buildings and any significant engineering operations could impact upon the outward appearance of our waterways, and we request that this is considered as part of the final design and establishment of works.</i></p> <p><i>The submitted documents indicate that new pipework would be sited underground. This approach would help to minimise any impact on the visual appearance of our waterway corridors and is preferred by the Trust in principle to any above-waterway routing via pipe bridge. It would also minimise any potential harm to navigation that could be caused through the positioning of cables above navigable channels.</i></p> <p><i>Should the scheme be amended to incorporate above ground crossings, then we advise that the Scoping Report would need to be amended to ensure that the visual impacts of the pipework would be considered and mitigated for. Consideration would also be required with regards to the impact on Navigation Clearance.</i></p>	<p>riverside paths) were agreed to have been included.</p> <p>Further justification for the viewpoint selection and any requirements for further viewpoints will be provided in the ES. following further consultation and further details of the pipeline construction and AGI locations.</p> <p>The viewpoints selected will also aid the assessment of the dynamic and kinetic visual impacts of the Project upon users traveling through the landscape in which it is situated.</p> <p>The landscape setting of heritage assets is addressed within the Cultural Heritage section of the PEIR.</p>



Section reference	Applicant's proposed matter	Inspectorate's / consultation bodies comments	Response
<p>Historic England (HE)</p> <p>Consultation Response (received as part of Scoping Opinion - 10 May 2022)</p>	Assessment Methodology	<p>HE stated the following:</p> <p><i>Proposed assessment methodology: LVIA is not a substitute for structured setting assessment (see GPA3) as it is a methodologically distinct approach which can tend to take landscape as a blank slate instead of understanding and assessing the harm to significance in terms of the heritage of human habitation and placemaking. Dynamic and kinetic assessments which engage with movement through the landscape should be explored not just using fixed point views. This is particularly relevant to the proposed built structures and their likely (or not) visibility.</i></p>	<p>See also 3.7.12. Meeting with HE to discuss comments on 05-08-22 (See notes in Table 11.2)</p> <p>Following further consultation with HE, it was agreed that further consideration will be given to the dynamic and kinetic assessments in relation to movements through the landscape. This will be considered within the PEIR and will be further assessed in the ES. Any requirements for further viewpoints that illustrate this will be considered within the ES.</p>

Section reference	Applicant's proposed matter	Inspectorate's / consultation bodies comments	Response
Selby District Council (SDC)  Consultation Response (received as part of Scoping Opinion - 10 May 2022)	LVIA Methodology	<p>In relation to Landscape and Visual impacts, I am generally supportive of the proposed ES methodology set out in chapter 10 but I also have the following comments:</p> <p>LVIA Methodology – I would support the proposed methodology, that the LVIA should follow guidance as set out in GLVIA Third Edition (LI and IEMA, 2013), Landscape Institute (2013) GLVIA3 Statement of Clarification 1/13, and Landscape Institute Technical Guidance Note 06/119: Visual Representation of Development Proposals.</p>	Noted. This is all considered within the PEIR and will be further assessed in the ES.
	Study Area	Study Area – For the LVIA I would generally support the parameters and scope of the study area as listed in chapter 10.4, however the parameters and scope of the study area for cumulative impacts are still to be agreed.	Noted. The scope of cumulative impacts is considered in Chapter 20: Assessment of Cumulative Effects (Volume II). This will be further assessed in the ES.
	Cumulative Landscape and Visual Impacts	<p>Cumulative Landscape and Visual Impacts – the Applicant should explain how cumulative landscape and visual impacts will be assessed within the EIA. There are a number of current planning applications in the local area around Drax Power Station and in context of Drax village and Camblesforth village (including NSIPs, other major applications, screening and scoping applications). Many of these are associated with Drax Power Station or linked to energy production and energy storage.</p> <p>Within chapter 3.8 the Applicant has set out how schemes will be identified and filtered to be carried forward into the inter-project cumulative assessment and listing several major scheme types. However, all development types within the</p>	Noted. The scope of cumulative impacts is considered in Chapter 20: Assessment of Cumulative Effects (Volume II). More detail will be provided at ES stage on parameters and scope of the Study Area for cumulative impacts.

Section reference	Applicant's proposed matter	Inspectorate's / consultation bodies comments	Response
		agreed study area with the potential to cause significant adverse impacts should be considered, particularly where there is a concentration of proposed development around Drax Power Station.	
	Topographical Survey	Detailed Study of Existing Landscape Components - The Applicant should undertake a topographical survey in sufficient detail to understand and explain the all the key features and characteristics of the existing site including levels and landform, buildings and structures, existing vegetation and screening, hard / soft surfaces.	Noted. LiDAR surveys using remote sensing technology (Light Detection and Ranging) have been undertaken to create 3D models and maps of the area. These are considered proportionate surveys at ES stage.
	Further detail on Construction Compounds and Site Access Routes	Construction Compounds and Site Access Routes – temporary construction compounds and access to construction working areas should be defined where possible within the ES Proposed Scheme, particularly where this is likely to cause significant adverse landscape and visual impacts and / or loss of existing vegetation.	Noted. Chapter 15: Traffic and Transport (Volume II) provides details on Site Access Routes. Detail on Construction compounds is provided in Chapter 2: Project Description (Volume II). This will be assessed in more detail within the ES.
	Tree survey and arboricultural impact assessment	Existing Trees and Vegetation – this should be reviewed, protected and retained where appropriate. Tree survey and arboricultural impact assessment should be to BS5837:2012. This is important to minimise adverse landscape impacts and if vegetation is needed for ongoing screening of the site.	Arboricultural surveys will be carried out at the pre-construction stage.
	Viewpoints	Assessment Viewpoints, Mapping and ZTV – The principle of establishing a ZTV using a Digital Terrain Model (DTM) s acceptable but this should be verified through fieldwork to establish an accurate visual envelope.	Noted. This is all considered within the PEIR and will be further assessed in the ES.

Section reference	Applicant's proposed matter	Inspectorate's / consultation bodies comments	Response
		<p>The principle of using representative viewpoints to illustrate the experience of different types of visual receptor is acceptable, however the assessment should aim to describe and assess the full impacts of the development (not limited to a summary of viewpoints). The assessment should provide mapping of the landscape and visual impacts to help quantify and illustrate the geographical extent of all receptors and likely impacts of the development.</p> <p>The Applicant has discussed a number of potential viewpoints with the joint local authorities (December 2021 and February 2022) and in order to help facilitate photography during the winter season (not included or illustrated within the EIA Scoping Report). However, this should be reviewed once final details of scheme design and routing become available, adjusted and updated as necessary.</p>	<p>More detail will be provided at ES stage on the final review of viewpoint photograph locations</p>
	Photographs and Photomontages	<p>Photographs and Photomontages - I would welcome the proposed method and approach to photographs and photomontages, in-line with Technical Guidance Note (TGN) 06/19 Visual Representation of Development Proposals (Landscape Institute, 2019).</p> <p>I would agree that for annotated photo-panoramas TGN 06/19 Type 1 of the Project are most appropriate. Where possible these should relate to the final pipeline route, not the general Scoping Route Corridor. For AGIs I would suggest at least Type 3 wirelines / photomontages should be considered where sensitivity of context, scale and proximity of the development warrant it. I would wish to see a realistic impression of scale and detail.</p> <p>I would wish to see photomontages explain how adverse impacts will be mitigated over time. Photographs should</p>	<p>Noted. This is all considered within the PEIR and will be further assessed in the ES.</p> <p>More detail will be provided at ES stage on Type 3 wirelines / photomontages.</p> <p>Viewpoints and photomontages will be further discussed with SCD during the ES stage.</p>



Section reference	Applicant's proposed matter	Inspectorate's / consultation bodies comments	Response
		<p>include winter views where possible to explain the worst-case scenario.</p> <p>Appendix 3 and 4 in TGN 06/19 should be noted, with camera / tripod height / position in the field adjusted as necessary so that views show the full extent of the site / development and show the impact it has upon the receptor location. Views of the site should not be unnecessarily obscured by buildings, roadside hedgerows or other vegetation.</p> <p>I would welcome the opportunity to discuss viewpoints and photomontages further once the pipeline routing and final Proposed Scheme details have been produced.</p>	
	Site Design, Landscape Proposals, Mitigation, Maintenance and Aftercare	<p>Site Design, Landscape Proposals, Mitigation, Maintenance and Aftercare – I would like to see a landscape strategy for proposed scheme, which helps minimise adverse impacts and demonstrated good design. The landscape strategy should consider the wider site and future maintenance responsibilities. The proposed scheme should avoid removing or double-counting landscape mitigation previously committed as part of other planning approvals and NSIPs.</p> <p>Consideration should be given to limitations of future maintenance access and easements along the line of the pipeline, particularly where this might affect retention and replacement of vegetation.</p> <p>I would like to see consideration of both Landscape and Biodiversity objectives for the site as a clear joined-up approach.</p> <p>Landscape proposals and mitigation should be proportionate to the scale of the development and should have regard for</p>	<p>Noted. This is all considered within the PEIR and will be further assessed in the ES.</p> <p>More detail will be provided at ES stage on the Landscape Strategy for Site Design, Landscape Proposals, Mitigation, Maintenance and Aftercare.</p>

Section reference	Applicant's proposed matter	Inspectorate's / consultation bodies comments	Response
		<p>and contribute to the wider landscape character and setting, local amenity with clear aims and objectives.</p> <p>Landscape proposals should support the Government's commitment to improving green infrastructure, health and wellbeing, as set out in the 25 Year Environment Plan. The Leeds City Region Green and Blue Infrastructure Strategy, NPPF and other local policy, also recognise GI.</p>	
<p>West Lindsey District Council (WLDC)</p> <p>Consultation Response (received as part of Scoping Opinion - 10 May 2022)</p>	<p>Landscape Designations</p> <p>LVIA Methodology</p>	<p>WLDC stated the following:</p> <p>Landscape Designations - The Scoping report does not identify local landscape designations, such as the Area of Great Landscape Value (designated by the Central Lincolnshire Local Plan). There are two in close proximity to the route corridor, the first runs along the Searby/Bigby escarpment and the second covers Brocklesby Park.</p> <p>Landscape Character - This section does not appear to recognise local landscape guidance. In the West Lindsey District this is covered by the West Lindsey Landscape Character Assessment 1999 (<a href="https://www.west-lindsey.gov.uk/planning-buildingcontrol/planning/planning-policy/evidence-base-monitoring/landscape-characterassessment">https://www.west-lindsey.gov.uk/planning-buildingcontrol/planning/planning-policy/evidence-base-monitoring/landscape-characterassessment</a>).</p>	<p>Noted. This is all considered within the PEIR and will be further assessed in the ES.</p>

# Engagement undertaken to date

11.3.3 Table 11.2 below provides a summary of the engagement undertaken to inform the assessment to date.

**Table 11.2: Summary of engagement undertaken**

Consultee	Date and method of engagement	Summary of issues raised	Response
West Lindsey District Council; East Riding Council; North Lincolnshire Council; Lincolnshire County Council and North Yorkshire County Council	9 December 2021 – Virtual Introductory Meeting	<p>Provided initial project information such as the study area and baseline information as well as proposed methodology.</p> <p>North Yorkshire would like to see allowance made for any areas of woodland loss and the subsequent mitigation impacts i.e. if re-planting of woodlands need to be assessed as part of operational impacts along pipeline routes.</p> <p>North Lincolnshire were keen to ensure that screening is given more thought, as this does not always fit in with the landscape character. The project therefore would need to be consistent with other schemes and this aspect would need to be justified.</p> <p>More detail needed around the AGIs before further comments can be made</p> <p>North Yorkshire were particularly concerned with the impact around Drax as there are several ‘energy scheme’ applications in this area, so consideration of cumulative impacts is very important. Need to think of buffer radius for cumulative impacts – not just visual receptors but also landscape impacts.</p>	<p>It was agreed that:</p> <ul style="list-style-type: none"> <li>• General approach to the scope of assessment and methodology was acceptable at this stage;</li> <li>• Representative viewpoints: assumption of a maximum of 20 viewpoint locations along the pipeline routes and approximately 3-5 viewpoint locations per AGI;</li> <li>• Viewpoint locations to be agreed in a meeting once we have more scheme details and a ZTV;</li> <li>• Further screening to be considered and designed within the ES;</li> <li>• Cumulative impacts to be fully considered within the ES. This will include other energy scheme proposals around Drax; and</li> <li>• Further detailed comments would be provided once local authorities have more detail on the Proposed Order Limits and AGIs.</li> </ul>
West Lindsey District Council; East Riding Council; North	17 February 2022 - Virtual Meeting	An update on the Project and its parameters were provided. The presentation with early details of representative viewpoint locations was also shared with local authorities.	<p>It was agreed that:</p> <ul style="list-style-type: none"> <li>• In the absence of a definitive layout for the AGIs at present, the ZTV exercise</li> </ul>

Consultee	Date and method of engagement	Summary of issues raised	Response
Lincolnshire Council; Lincolnshire County Council and North Yorkshire County Council			<p>will be undertaken to support the ES.; and</p> <ul style="list-style-type: none"> <li>Representative viewpoints will assume 15-18 viewpoint locations along the Proposed Order Limits as well as the AGI locations.</li> </ul> <p>The following are to be scoped in and were discussed in both meetings:</p> <ul style="list-style-type: none"> <li>Changes to landscape character during construction of pipelines within 1 km radius;</li> <li>Changes to landscape character during construction and operation of AGIs within 1.5 km radius (5 km radius for Easington due to 45 m stack height);</li> <li>Changes to visual amenity during construction of pipelines within 1 km radius; and</li> <li>Changes to visual amenity during construction and operation once AGIs in place within 1.5 km radius (5 km radius for Easington due to 45 m stack height).</li> </ul> <p>It was agreed that the following could be scoped out:</p>



Consultee	Date and method of engagement	Summary of issues raised	Response
			<ul style="list-style-type: none"> <li>• Changes to landscape character during operation of the pipelines (as they will be buried);</li> <li>• Changes to visual amenity during operation of the pipelines (as they will be buried);</li> <li>• Receptors beyond 1.5 km radius for AGIs (5 km radius for Easington due to 45 m stack height) during construction and operation. Desk top review concluded that the 1.5 km Study Area is appropriate to the type of Project. It is unlikely that the receptors beyond 1.5 km / 5 km would experience significant impacts and therefore scoped out; and</li> <li>• Receptors beyond 1 km radius for pipelines during construction. Desk top review concluded that, the 1 km Study Area is appropriate to the type of Project. It is unlikely that receptors beyond 1 km radius would experience significant impacts and therefore scoped out.</li> </ul>
		It was agreed that comments would be provided by local authorities upon receipt of presentation and proposed AGI representative viewpoint locations. Matters agreed for the LVIA scoping include:	24 February 2022: Presentation was shared with attendees after the meeting which showed the potential route and AGIs being taken forward.

Consultee	Date and method of engagement	Summary of issues raised	Response
		<ul style="list-style-type: none"> <li>1 km radius Study Area for Proposed Order Limits and 1.5 km radius for AGIs (with exception of Easington which is 5 km due to 50 m stack height).</li> </ul>	15 March 2022: Provided further detail on proposed viewpoints with maps shared along with notes on meeting from 17 February 2022 to promote further discussion and invite responses following site visit in week of 1 March 2022.
North Yorkshire County Council	25 February 2022 email	North Yorkshire Landscape Architect responded on proposed viewpoints – recommending consideration of cumulative impacts at Drax and offering to comment further on viewpoints once details of the AGI at Drax is further progressed.	Cumulative impacts will be fully considered within the ES. This will include other energy scheme proposals around Drax.
North Yorkshire County Council	15 March 2022	North Yorkshire Landscape Architect confirmed no further comments on viewpoints and provided some advice regarding good practice for viewpoint photography.	These were taken onboard for the selection of representative viewpoint locations.
West Lindsey District Council; East Riding Council; North Lincolnshire Council; Lincolnshire County Council and North Yorkshire County Council	7 July 2022 - Virtual Meeting	Summarised the feedback given by PINS in the EIA Scoping Opinion and explained how the Project is intending to address these issues.	<p>It was agreed that:</p> <ul style="list-style-type: none"> <li>Next steps will be to produce Type 1 (annotated) visualisations at PEIR stage; and</li> <li>Information presented at PEIR to provide a good representation of the Project and likely impacts.</li> </ul>

Consultee	Date and method of engagement	Summary of issues raised	Response
CRT	13 July 2022	<p>Discussed changes since the EIA Scoping Report and the three main areas of interaction between their network and the proposed pipelines:</p> <ul style="list-style-type: none"> <li>• Aire and Calder Navigation;</li> <li>• Stainforth and Keadby Canal; and</li> <li>• Where the route passes close to the River Ouse at Drax.</li> </ul>	<p>It was agreed that:</p> <ul style="list-style-type: none"> <li>• The Stainforth and Keadby canal and the River Ouse (near Drax) were already covered by 360 degree photography;</li> <li>• The Aire and Calder Navigation will be assessed during the ES stage and any requirements for further photography will depend on the final detail of construction activities (requirements for compounds, fencing, soil heaps etc.); and</li> <li>• LVIA will identify canal users as receptors, discuss impacts in this location and set out mitigation.</li> </ul>
Heritage Working Group	21 July 2022 – Virtual Meeting	<p>Joined heritage meeting to run through the key landscape viewpoints taken to date and how these feed into assessment. Some representative views are presented within the PEIR. Heritage stakeholders were broadly comfortable with the viewpoints selected and did not request anything additional at this stage.</p>	-
Historic England	05 August 2022 – Virtual Meeting	<p>Historic England confirmed at the meeting that understanding ‘dynamic and connected movement’ in the landscape should be addressed – This is interpreted as how we see assets/infrastructure from more than one point in the landscape.</p>	<p>Noted. This will be considered within the PEIR and will be further assessed in the ES.</p>

Consultee	Date and method of engagement	Summary of issues raised	Response
		Connected movement – Historic England see the sensitive views for the AGIs at Saltend as along the A1033 and in multiple locations. Viewpoint Photograph ‘corridor 18’ provides the current best representation of this.	Noted. Viewpoint Photograph ‘corridor 18’ to be included in the ES.
		Easington Pump Facility – large aspect of views is considered to be from the sea. Historic England indicated that they would like to see images from the North Sea, looking back to the Holderness area with an interest in the impact of the Pump Facility on the visibility of the church spires at Patrington and Hedon. The church spires are known as the king and queen of Holderness for their guide in ship navigation around the Holderness Coast.	Noted. It is anticipated that the presence of the existing industrial facility (Perenco/Gassco) would be in front of the Pump Facility and the views from the North Sea would be relatively unchanged. The indicative Pump Facility dimensions are to be compared to the existing industrial facility to assess the likelihood of any potential visual impacts and this to be reported within the ES.

## 11.4 Assessment methodology and significance criteria

### Study Area

- 11.4.1 The GLVIA3 provides guidance on defining a Study Area. Paragraph 5.2 of GLVIA3 states the Study Area should be “...based on the extent of the Landscape Areas likely to be significantly affected either directly or indirectly” or “on the extent of the area from which the development is potentially visible, defined as the Zone of Theoretical Visibility, or a combination of the two.”
- 11.4.2 Based on the above guidance, the Study Area proposed is proportionate to the following factors:
- The Project components, which include the underground nature of the pipelines (once operational);
  - The Proposed Order Limits;
  - The open, low-lying character of the landscape, and the typical extensive open nature of the views;
  - Proposed location of the AGIs;
  - The wider landscape setting within which the Project has the potential to influence landscape character;
  - The extent of the area where the Project is likely to be visible/discernible in the view; and
  - The full extent of adjacent or affected landscape receptors of special value (e.g. designated landscapes) which may be influenced by the Project – see Landscape and Environmental Designations Plan (Figure 11.1). There are no designated landscapes within or close to the Study Area.
- 11.4.3 The maximum parameters and height of Project Components considered for the future ZTV modelling and for defining the Study Area is set out based on anticipated heights of the AGIs (See Chapter 2: Project Description (Volume II)). These AGIs include pipeline inspection gauge (PIG) traps, Block Valves, multi-junction installations and the Pumping Facility and are detailed below. These dimensions for the AGIs are considered realistic maximum parameters:
- Drax AGI Option A, B, C and D – PIG Trap: Approximately 120 m x 165 m operational area with a maximum building height of 8 m;
  - Block Valve KP 19.3 – Block Valve: Approximately 90 m x 90 m operational area with a maximum building height of 8 m;
  - Keadby AGI – Block Valve A, B and C: Approximately 175 m x 100 m operational area with a maximum building height of 8 m;
  - Block Valve KP 46.3 – Block Valve: Approximately 90 m x 90 m operational area with a maximum building height of 8 m;
  - British Steel AGI Option A and B – PIG Trap: Approximately 120 m x 165 m operational area with a maximum building height of 8 m;



- Block Valve KP 57.4 – Block Valve Option A and B: Approximately 90 m x 90 m operational area with a maximum building height of 8 m;
- Block Valve KP 75.1 – Block Valve Option A and B: Approximately 90 m x 90 m operational area with a maximum building height of 8 m;
- Killingholme AGI – Multi-Junction: Approximately 125 m x 185 m operational area with a maximum building height of 8 m;
- Saltend AGI Option A, B, C and D – PIG Trap: Approximately 120 m x 165 m operational area with a maximum building height of 8 m;
- Hedon AGI Option A – Multi-Junction: Approximately 180 m x 180 m operational area with a maximum building height of 8 m;
- Block Valve KP 109.6 – Block Valve: Approximately 90 m x 90 m operational area with a maximum building height of 8 m; and
- Easington Pump Facility Option A and B – Pump Facility (including PIG Trap): Approximately 500 m x 350 m operational area with a maximum building height of 8 m.

11.4.4 The Study Area has therefore initially been set at a maximum of 1 km radius from the centre of the-Proposed Order Limits and 1.5 km radius from the centre of the AGIs (except the Pump Facility) to include all likely sensitive receptors that might potentially be affected by the Project. This Study Area will be further refined based on the results of the ZTV modelling. The following considerations are also made on the Study Area:

- In the case of the Pump Facility, the Study Area will be extended to a 5 km radius in consideration of the maximum 50 m height of the station vent stack;
- It is considered that this Study Area is proportionate to the nature of the Project and the type of structures proposed. Beyond this distance it is likely that the Project would be difficult to be seen in the view and any visible features would blend in with its existing landscape context to the extent that significant landscape character and/or visual impacts would be unlikely; and
- Engagement with stakeholders such as Selby District Council, East Riding of Yorkshire Council, North Lincolnshire Council and West Lindsey District Council and other relevant bodies will continue in relation to the proposed Study Area and any variations to the parameters used in this PEIR will be reported and explained in the ES. The final Study Area will also be based on the detailed ZTV modelling.

## Baseline Data Collection

### Desk Study and Field Work

11.4.5 Baseline conditions of the Project were established during a desk study using the following:

- Review of national and local planning policy;
- Analysis of Ordnance Survey (OS) mapping and publicly available aerial imagery; and

- Analysis of published national, regional and local character assessments, together with a detailed analysis of the local landscape character within the Proposed Order Limits and local landscape designations to identify potential sensitive landscape receptors.

## Site visits and surveys

- 11.4.6 Winter site visits were undertaken in February and March 2022 which provided ‘ground truthing’ and verification for the choice of viewpoint locations. This was to enable assessment of the baseline visual amenity and to take 360 degree photography from each of the viewpoint locations.
- 11.4.7 The receptors as represented by the viewpoints are shown in Figure 11.2 (Volume IV). The approximate positions of these publicly accessible locations were agreed with the relevant local authorities as part of the engagement process.
- 11.4.8 At this stage, 49 viewpoint photographs (360 degree) were taken on site. These were refined to 21 viewpoints for the purposes of the PEIR and will be further refined and agreed with the relevant local authorities as part of further consultation and once the exact layout of the AGIs is finalised.
- 11.4.9 All photographs and visualisations will be produced in line with the Landscape Institute Technical Guidance Note (TGN) 06/19 (2019); ‘Visual Representation of Development Proposals’. Annotated photo-panoramas (to TGN 06/19 Type 1) of the Project showing Scoping Route Corridor and Photowirelines (TGN 06/19) Type 2/3) for each AGI would be produced.

## Impact assessment methodology

### Assessment methodology

- 11.4.10 The assessment has been undertaken drawing upon structured, informed and reasoned professional judgement, taking into account a combination of quantitative and qualitative data derived from desk study and fieldwork. This provided the basis of information against which to predict levels of potential impacts on resources or receptors, and to appraise the resulting significance of effects. Mitigation measures are proposed where necessary.
- 11.4.11 Potential impacts and effects of the Project on the landscape as an environmental resource have been considered. Physical change to the landscape may also result in changes to the distinctive character of that landscape and other surrounding landscapes and how they are perceived.
- 11.4.12 Landscape receptors which could be affected by a project may include:
- Specific aesthetic and perceptual aspects of the landscape; and
  - The overall character and key characteristics of the landscape.
- 11.4.13 The indicative criteria for the assessment of the likely significant impacts and effects for both landscape and visual amenity would be informed by:
- The sensitivity of the landscape receptor (value of the receptor combined with susceptibility to specific change) and the magnitude and nature of impacts on the landscape (with change being considered in terms of scale, extent, duration);

- The sensitivity of a visual receptor (value of the view combined with susceptibility of receptors to specific changes in the view) and magnitude and nature of impacts on visual amenity (with change being considered in terms of scale, extent, duration); and
- The assessment of likely magnitude and nature of impact on landscape character and landscape features will use professional judgement to consider factors such as size/scale, geographical extent, duration and reversibility. Consideration of these factors to determine the magnitude and nature of change will be further guided by the criteria set out in Chapter 5 and 6 of GLVIA3.

11.4.14 The impacts on landscape character, landscape features and elements and visual amenity will be assessed for the following scenarios:

- Construction Phase impacts will consider the worst-case situation whereby construction activity is at its peak and the height of the Project is near or at its maximum;
- Year 1 – a winter's day in the year that the Project becomes fully operational, reflecting the scenario with likely maximum mitigation from planting (where implemented);
- Year 15 – when the mitigation planting has sufficiently matured to a level that fulfils its function; and
- Decommissioning Phase – This will assess situation whereby the AGIs are removed (pipelines are expected to remain in-situ) and the landscape is returned to its former use.

11.4.15 Analysis of OS base mapping and publicly available aerial imagery has been undertaken to identify potential landscape and visual receptors and thereby set an appropriate Study Area for the appraisal. Where appropriate, additional potential receptors have been considered beyond the main study area.

11.4.16 The following plans / figures have been produced to facilitate the assessment of landscape and visual impacts:

- Figure 11.1: Landscape Designations (Volume IV);
- Figure 11.2: PRowS, Residential Properties and Representative Viewpoint Locations (Volume IV);
- Figure 11.3: Landscape Character Areas (Volume IV); and
- Figure 11.4: Representative Viewpoints (Type 1 annotated views) (Volume IV).

## Landscape Resource

11.4.17 The baseline study identified the existing character of the landscape, its constituent elements, features and its geographical and historical context. It assessed the condition of the landscape, the way it is experienced, the value attached to it and its susceptibility to change. The assessment of susceptibility to change examined whether the landscape resource as a whole could accommodate the Project without significant changes.

11.4.18 The identification of character areas was informed by published character assessments: The National Character Area (NCA) profiles published by Natural England provided the wider landscape context of the Project. The findings of the desk study were reviewed in conjunction with the survey to identify the site-specific local landscape character.

11.4.19 The assessment considered:

- The physical influences on the landscape resource – geology, soils, landform, drainage and water bodies;
- The influence of human activity – land use, land management, the character of settlement and buildings, the pattern and type of fields and enclosure; and
- The aesthetic and perceptual aspects of the landscape - scale, complexity, openness, tranquillity and wildness.

### Landscape Receptor Sensitivity

- 11.4.20 Landscape sensitivity considers the robustness of the landscape to accommodate change. The evaluation of the sensitivity of the landscape resource was based on factors and attributes which impact the value of the landscape and its susceptibility to change. These criteria are set out in the Table 11.3 below.
- 11.4.21 GLVIA3 (paragraph 3.26) states that: *“the sensitivity of the landscape character resource, and the receptors identified to be representative of this, should be determined by consideration of the ‘susceptibility’ of the receptor (to the change proposed) with the receptor’s relative ‘value’, i.e.: Landscape Sensitivity = Landscape Susceptibility + Landscape Value.”*

### Landscape Receptor Susceptibility

- 11.4.22 Landscape ‘Susceptibility’ is defined in GLVIA3 (paragraph 5.40) as *“the ability of the landscape receptor (whether it be the overall character or quality/condition of a particular type or area, or an individual element and/or feature, or a particular aesthetic and perceptual aspect) to accommodate the Proposed Development without undue consequences for the maintenance of the baseline situation and/or the achievement of landscape planning policies and strategies.”*
- 11.4.23 Reasoned professional judgements on the ‘susceptibility’ of landscape receptors are recorded as ‘high’, ‘medium’ or ‘low’, as set out within Table 11.3 below.

**Table 11.3: Susceptibility of Landscape Receptors**

Landscape Sensitivity / Value of a Receptor	Description / Typical Criteria
High	The landscape receptor is less able to accommodate the development proposed without undue negative consequences to the baseline situation. Attributes that make up the character of the landscape offer limited opportunities for accommodating the change without key characteristics being fundamentally altered, leading to a different landscape character.
Medium	The landscape receptor is partly able to accommodate the Project without undue negative consequences to the baseline situation. Attributes that make up the character of the landscape offer some opportunities for accommodating the change without key characteristics being fundamentally altered.
Low	The landscape receptor is more able to accommodate the Project without undue negative consequences to the baseline situation. Attributes that make up the character of the landscape are resilient to being changed by the Project

### Landscape Receptor Value

- 11.4.24 In contrast to ‘susceptibility’, the categorisation of landscape ‘value’ of a landscape receptor relates purely to its existing baseline, and as such is independent of any development proposal.
- 11.4.25 ‘Value’ is defined in the GLVIA3 (paragraph 5.19) as “...*the relative value that is attached to different landscapes by society, bearing in mind that a landscape may be valued by different stakeholders for a whole variety of reasons...*”
- 11.4.26 It goes on to state that “A review of existing landscape designations is usually the starting point in understanding landscape value, but the value attached to undesignated landscapes also needs to be carefully considered and individual elements of the landscape- such as trees, buildings or hedgerows -may also have value. All need to be considered where relevant.”

**Table 11.4: Landscape Value**

Landscape Value of a Receptor	Description / Typical Criteria
High  International or national: the landscape might be located in world heritage site, AONB, historic park and garden, conservation area or similarly designated.	Landscape of high scenic quality with a distinctive combination of features, elements and characteristics, outstanding views and a strong sense of place. Important cultural associations. A scarce or fragile landscape with historic or ecological elements which make major contribution to landscape character. A tranquil landscape in good condition, largely intact, with an unspoilt character and a high susceptibility to change.



Landscape Value of a Receptor	Description / Typical Criteria
<p>Medium</p> <p>Regional or district: the landscape might be located in, regional park, historic park and garden, conservation area or similar or in an undesignated area, but is of significance through literary or cultural associations or through demonstrable use.</p>	<p>Landscape of some scenic quality with a combination of features, elements and characteristics and a moderate sense of place. Some cultural associations. A landscape with mainly common but occasionally interesting features. Some historic or ecological elements which contribute to landscape character. Some high use areas, but overall medium tranquillity. A landscape in moderate condition, demonstrating change, with some unspoilt characteristics and a moderate susceptibility to change.</p>
<p>Low</p> <p>District or local: generally undesignated landscapes which might be valued by the local community, containing elements or features that might benefit from restoration or enhancement.</p>	<p>A landscape not valued for its scenic quality, with a disparate combination of features, elements and characteristics and a weak sense of place. Few cultural associations. Mainly common features and few/no historic or ecological elements that contribute to landscape character. A landscape of low tranquillity, in poor condition, demonstrating a high degree of change and a low susceptibility to change.</p>

### Overall Landscape Receptor Sensitivity

- 11.4.27 The values for ‘susceptibility’ and ‘value’ are then considered together, by use of reasoned professional judgement, to derive an overall ‘sensitivity’ for each receptor.
- 11.4.28 The ‘sensitivity’ that is determined is not absolute and relates to the type of change that is proposed. As a particular landscape receptor may exhibit differing levels of ‘*sensitivity*’ a narrative commentary is provided, to describe and justify the indicative grading levels ascribed to that or the intermediate grading between them.

### Visual Amenity

- 11.4.29 The baseline study identified local receptors in the area and designated or protected views which might be affected by the Project
- 11.4.30 The sensitivity of different receptors varies according to the interest they take in their visual environment, distance from the Project, viewing opportunity and duration. The visual receptors were categorised into the groups reflecting proximity to the Project and viewers’ expectations, as set out in Table 11.5 below.

### Nature of Visual Receptors (Sensitivity)

- 11.4.31 GLVIA3 states that the nature of visual amenity receptors, commonly referred to as their sensitivity, should be assessed in terms of the combination of the susceptibility of the receptor (to the type of change proposed) with the value attached to the receptor.

## Visual Receptor Susceptibility

- 11.4.32 As described in GLVIA3, the susceptibility of visual receptors to changes in visual amenity is a function of the “*occupation or activity of people experiencing the view*” and “*the extent to which their attention is focussed on the views and visual amenity and their experience at particular locations*”. Drawn from the guidance within GLVIA3 this is recorded as ‘high’, ‘medium’ or ‘low’ according to Table 11.5. As a particular visual receptor may exhibit differing levels of ‘susceptibility’ a narrative commentary is provided to describe the reasoned professional judgement used to justify the indicative grading level ascribed to that.

**Table 11.5: Susceptibility of Visual Receptors**

Visual Susceptibility (Indicative)	Description / Typical Receptor Criteria
High	<p>People engaged in outdoor recreation, whose attention/interest is likely to be focused on the landscape or particular views, including from PRoW;</p> <p>Visitors to heritage assets or other attractions, where views of the surroundings are an important contributor to the experience; and</p> <p>Communities where views contribute greatly to the landscape/townscape setting enjoyed by residents.</p>
Medium	<p>People engaged in outdoor recreation, whose attention/interest is not directly linked to the landscape or particular views, and who are not upon PRoW.</p> <p>Communities where views contribute moderately to the landscape/townscape setting enjoyed by residents; and</p> <p>Travellers on road, rail, or other transport routes.</p>
Low	<p>People engaged in outdoor sport/recreation which does not involve or depend upon appreciation of views of the landscape;</p> <p>Communities where views contribute little to the landscape/townscape setting enjoyed by residents; and</p> <p>People at their place of work whose attention may be focused on their work/activity and not their surroundings.</p>

## Visual Receptor Value

- 11.4.33 GLVIA3 (paragraph 6.3.7) suggests that when considering the value of a view experienced, that account should be taken of recognition of the:
- “*Value attached to particular views, for example in relation to heritage assets, or through planning designations; and*
  - *Indicators of the value attached to views by visitors, for example through appearances in guidebooks or on tourist maps, provision for their enjoyment*

*(such as parking places, sign boards and interpretative material) and references to them in literature or art”.*

- 11.4.34 Drawn from the guidance within GLVIA3 this is recorded as ‘high’, ‘medium’ or ‘low’ according to Table 9.6 below. The ‘sensitivity’ that is determined is not absolute and relates to the type of change that is proposed. As a particular landscape receptor may exhibit differing levels of ‘value’ a narrative commentary is provided, to describe the professional judgement used to justify the indicative grading levels ascribed to that or the intermediate grading between them. Where intermediate ratings are given, e.g. ‘Low/Medium’, this indicates a grading that is both less than ‘Medium’ and more than ‘Low’, rather than one which varies across the range.

**Table 11.6: Value of Visual Receptors**

Visual Value (Indicative)	Description
High	Views experienced by receptors are widely-known, well frequented and/or promoted as a beauty spot/visitor destination. The cultural associations of the visual experience are recognised in art, literature or other media. The view relates to the experience of other features, for example heritage assets.
Medium	Views experienced by receptors, whilst they may be valued locally, are not widely-known. The views experienced have no strong cultural association.
Low	Views experienced by receptors have little/no recognised value. The public are unlikely to visit to experience the views available.

### Overall Visual Receptor Sensitivity

- 11.4.35 The values for ‘susceptibility’ and ‘value’ are then considered together, by use of reasoned professional judgement, to derive an overall sensitivity for each receptor. The ‘sensitivity’ that is determined is not absolute and relates to the type of change that is proposed.

### Identification of Potential Impacts

- 11.4.36 Impacts on the landscape resource may arise from changes to overall landscape character or to individual elements or features. Factors that may affect the magnitude of change (or magnitude of impact) to the landscape resource include:
- The extent of the loss of existing landscape elements;
  - The degree to which aesthetic or perceptual aspects of the landscape are altered by the removal of existing landscape components or the introduction of new ones;
  - The scale of the geographical area affected by the Project; and
  - The duration and reversibility of the impact.

**Table 11.7: Magnitude of Change to the Landscape Resource (based on GLVIA3)**

Visual Magnitude of Change (Indicative)	Description
High	Total loss or fundamental alteration to key landscape elements and/or addition of new features that substantially alter the character of the landscape.
Medium	Partial loss or alteration to key landscape elements and/or addition of new features that form prominent new elements that are largely characteristic of their setting, but alter the character of the landscape.
Low	Minor loss or alteration to landscape elements and/or addition of new features that form largely inconspicuous elements in the landscape, resulting in a detectable change in the character of the landscape.
Negligible	No change to, or very minor loss of landscape elements and/or additions of new features that do not alter the character of the landscape.

11.4.37 Factors that may affect the magnitude of change on visual amenity include the following:

- The context of the existing view/ visual experience (for example, if it is across a natural landscape or an industrial site);
- The extent to which the view/ visual experience has been altered due to the loss/addition of features and the proportion of the view the Project would occupy;
- The scale and appearance of the Project and the degree of contrasting/integration with the existing view/ visual experience;
- The distance of the visual receptor from the Project and the angle/position of view/visual experience; and
- The duration and reversibility of the impact.

**Table 11.8: Magnitude of Change to Visual Amenity (based on GLVIA3)**

Visual Effect (Indicative)	Description
High	The Project would be the dominant feature of the view in which other elements become subordinate.
Medium	The Project would be a noticeable feature of the view which is immediately apparent to the receptor.
Low	The Project would be perceptible, but would not alter the overall balance of features and elements that comprise the view.

Visual Effect (Indicative)	Description
Negligible	The Project would result in an almost imperceptible change to the view.

## Significance criteria

- 11.4.38 The significance of effects will be assessed in detail at ES stage by comparing the sensitivity of the receptor relative to the magnitude of change, and by considering the indicative criteria set out below, based on the guidance within GLVIA3.
- 11.4.39 Significance of effects for landscape and visual amenity will be clearly defined and expressed as transparently as possible. Reasoned professional judgement has been applied to determine the significance of each effect in line with GLVIA3. The effects on landscape character or visual amenity are assessed on an increasing scale of neutral, slight, moderate or substantial (large). An effect that is assessed as moderate or major (shaded dark grey in the Table 11.9) is typically considered of sufficient scale to be material to the planning consideration and therefore significant, while effects assessed as minor or moderate (shaded light grey) may or may not be considered significant according to professional judgment.
- 11.4.40 The following matrix is used to help assess the significance of effects on the landscape resource and visual amenity:

**Table 11.9: Significance of Effects Scoring Matrix (based on GLVIA3)**

Magnitude	Sensitivity of the Receptor				
	Very High	High	Medium	Low	Negligible
High	Major	Major	Moderate	Moderate	Negligible
Medium	Major	Major to Moderate	Moderate	Minor to Moderate	Negligible
Low	Moderate	Moderate	Minor to Moderate	Minor	Negligible
Negligible	Slight	Negligible	Negligible	Negligible	Negligible
No Change	None	None	None	None	None

## Assumptions and limitations

- 11.4.41 To ensure transparency within the EIA process, the following limitations and assumptions have been identified:
- This PEIR chapter is limited to preliminary judgements on sensitivity, impacts and effects assessment until full details of the AGIs are known;



- The Study Area and viewpoint locations may be subject to changes as further refinement of the route and AGI layouts is confirmed;
- The ZTV is based on maximum height parameters and is a worst-case scenario;
- Ecology surveys are ongoing and survey results referenced in this PEIR chapter may be subject to updates within the final ES;
- Arboricultural surveys will not be undertaken pre-DCO submission, therefore any specific details on conditions and species of trees are not considered;
- The proposed extension to the Lincolnshire Wolds AONB is understood to extend into the northern Wold and Ancholme Valley area although there is no available map at this time to accurately recognise the extents of this proposal. Therefore, this has not been considered within the PEIR, however further engagement on this matter with North Lincolnshire Council will be undertaken prior to completion of the ES; and
- Assessment of views from private properties is based on using representative viewpoints and professional judgement. A residential visual amenity survey is not proposed.

## 11.5 Baseline conditions

### Existing baseline

- 11.5.1 As stated within the Project Description, the Proposed Order Limits are separated into five sections (see Chapter 2: Project Description, Figure 2.1 for location of sections (Volume IV)):
- Section 1 - Drax to Keadby;
  - Section 2 - Keadby to Scunthorpe;
  - Section 3 - Scunthorpe to Killingholme;
  - Section 4 - Killingholme to Hedon (Humber Crossing); and
  - Section 5 - Hedon to Easington.
- 11.5.2 These west to east sections will be referenced in the presentation of all following baseline and assessment information.

## Landscape Character Baseline

### Landscape Designations

- 11.5.3 There are no National Parks or AONB within the Study Area. The nearest designation of this type is the Lincolnshire Wolds AONB which lies over 7 km to the south of the Proposed Order Limits. The potential future Yorkshire Wolds AONB (currently under consideration by Natural England) would be over 10 km to the north of the Proposed Order Limits near Hull.

## Landscape and Seascape Character

- 11.5.4 Published Landscape and Seascape Character Assessments supplemented by field work, will inform the identification of landscape character receptors for use in the LVIA. The existing character assessments and guidance documents that will be used in the preparation of the LVIA include NCA profiles and local landscape and seascape character assessment publications. See Figure 11.3 for the array of National and Local Landscape Character Areas (LLCA) and Types (LLCT) across the Study Area.

### National Character Areas

- 11.5.5 Natural England has divided England into 159 distinct NCAs. Each is defined by a unique combination of landscape, biodiversity, geodiversity and cultural and economic activity. As shown on Figure 11.3, the Site spans across a number of NCAs as set out in the proceeding paragraphs. The descriptions, key characteristics and sensitivity for each NCA are summarised in Table 1 in Appendix 11.1 (Volume III).

#### Section 1 - Drax to Keadby

- 11.5.6 This section falls within Humberhead Levels NCA 39.

#### Section 2 - Keadby to Scunthorpe

- 11.5.7 This section falls within Humberhead Levels NCA 39, Humber Estuary NCA 41 and Northern Lincolnshire Edge with Coversands NCA 45.

#### Section 3 - Scunthorpe to Killingholme

- 11.5.8 This section falls within Humber Estuary 41 NCA, Lincolnshire Coast and Marshes NCA 42, Lincolnshire Wolds NCA 43, Central Lincolnshire Vale NCA 44 and Northern Lincolnshire Edge with Coversands NCA 45.

#### Section 4 - Killingholme to Hedon (Humber Crossing)

- 11.5.9 This section falls within Holderness NCA 40 and Humber Estuary NCA 41.

#### Section 5 - Hedon to Easington

This section falls within Holderness NCA 40 and Humber Estuary NCA 41.

### Regional / Local Character Areas

- 11.5.10 A number of regional and local published character area studies exist for the Study Area and the LLCT/LLCAs/ Seascape Character Areas (SCA) are shown on Figure 11.3 (Volume IV). Full details of each LLCA/LLCT currently represented within the representative viewpoints (in close proximity to the AGI locations) are summarised in Table 2 in Appendix 11.1 (Volume III). Seascape Character Area is taken from the East Inshore and East Offshore marine plan areas, Marine Management Organisation (MMO) 2012 and Seascape Characterisation around the English Coast, Natural England October 2012) (Ref 11.20).
- 11.5.11 The following Landscape and Seascape Character Assessments have been referenced:
- Selby Landscape Character Assessment (2019), published by Selby District Council (Ref 11.21);
  - East Riding of Yorkshire Landscape Character Assessment (2005), published by East Riding of Yorkshire (Ref 11.22);

- North Lincolnshire Landscape Character Assessment and Guidelines 1999(Ref 11.23);
- West Lindsey Landscape Character Assessment 1999 (Ref 11.24); and
- Seascape Characterisation around the English Coast, Natural England, July 2012.

### **Selby Landscape Character Assessment (2019)**

- 11.5.12 The Selby Landscape Character Assessment (Ref 11.21) was published in 2019 by LUC and provided an updated, more detailed Local Character Assessment to that published in 1999. This was informed by the ten landscape character areas identified within the 1999 assessment, though not at the level of the previously defined Landscape Character Types (LCTs). The County-wide study (North Yorkshire and York Landscape Characterisation Project) defines 39 County (Regional) LCTs.
- 11.5.13 The following County (Regional) Landscape Character Types are within the Proposed Order Limits:
- Levels Farmland; and
  - River Floodplain

### **East Riding of Yorkshire Landscape Character Assessment (2005)**

- 11.5.14 The East Riding of Yorkshire Landscape Character Assessment was published in 2015 by AECOM (Ref 11.22). This was carried out to bring the 2005 assessment up to date to inform the preparation and review of the East Riding Local Plan. A total of 23 Landscape character types have been identified in the East Riding and these have been split further into 81 landscape character areas.
- 11.5.15 The following County (Regional) LCTs are within the Proposed Order Limits:
- Drained Farmland;
  - River Corridors;
  - Open Farmland;
  - M62 Corridor;
  - Drained Farmland;
  - Open Farmland;
  - Farmed Urban Fringe; and
  - Coastal Farmland.

### **The Historic Landscape Characterisation Project for Lincolnshire (HLC) (Ref 11.25)**

- 11.5.16 The HLC was supported by Historic England, the Lincolnshire Wolds Countryside Service and all councils across Greater Lincolnshire. Published in 2011, the project divided Lincolnshire into several defined character areas and zones. These were used to illustrate the historical development of the Lincolnshire landscapes.
- 11.5.17 The following County (Regional) Landscape Character Areas (LCAs) are within the Proposed Order Limits:
- The Confluence Character Area;

- The Northern Cliff Character Area;
- The Northern Marshes Character Area;
- The Wolds Character Area;
- The Clay Vale Character Area; and
- The Trent Valley Character Area.

### **North Lincolnshire Landscape Character Assessment and Guidelines (1999)**

- 11.5.18 The North Lincolnshire Landscape Character Assessment and Guidelines (Ref. 11.23) was published in 1999 in support of the emerging North Lincolnshire Local Plan. A landscape assessment for the whole County was commissioned by the County Council, Ryedale District Council, Scarborough Borough Council and the Countryside Commission in 1995, the outcome of which was the publication 'Our Landscape, Today for Tomorrow', prepared by Gillespies. This document classified and defined the different landscapes of Humberside, subdividing the County into regional landscape character areas and local landscape types. 25 of these Landscape Types fell within the North Lincolnshire Council boundary.
- 11.5.19 The following County (Regional) LCAs are within the Proposed Order Limits:
- Trent Levels;
  - Vale of Ancholme;
  - Lincolnshire Edge;
  - Lincolnshire Wolds;
  - Lincolnshire Drift; and
  - Humber Estuary.

### **West Lindsey Landscape Character Assessment (1999)**

- 11.5.20 The West Lindsey Landscape Character Assessment was published in 1999 by Environmental Resources Management (11.24) in support of the review of the West Lindsey Local Plan. West Lindsey is divided into four Broad LCAs: Trent Valley, the Lincolnshire Cliff, the Lincolnshire Clay Vale and The Wolds.
- 11.5.21 The following Broad County (Regional) LCAs are within the Proposed Order Limits:
- Lincolnshire Clay Vale; and
  - The Wolds.

### **Seascape Characterisation around the English Coast, Natural England (2012)**

- 11.5.22 The Seascape Characterisation around the English Coast was published in 2012 by URS/Scott Wilson (Ref 11.20) in order to undertake a Seascape Character Assessment as a strategic scale for a defined area of the English coastline. The extent of study was defined as the MMO Marine Plan Areas 3, 4 and western extent of Area 6. MMO areas 3 and 4, known formally as East Inshore and East Offshore, fall between Flamborough Head in East Riding of Yorkshire and Felixstowe in Suffolk.
- 11.5.1 The following Marine Plan Areas are within the Proposed Order Limits:
- Marine Plan Area 3 – East Inshore

11.5.2 These following lists the LCAs within each section of the Proposed Order Limits.

### **Section 1 - Drax to Keadby**

11.5.3 This section falls within the following Local Authority Districts:

- North Yorkshire County Council;
- Selby District Council;
- East Riding of Yorkshire Council; and
- North Lincolnshire Council.

11.5.4 The Study Area spans across the following LCAs, as set out in the Selby Landscape Character Assessment (2019), published by Selby District Council (see Ref. 11.26.)

- Camblesforth Farmland;
- Ouse Valley;
- East Selby Farmland;
- Derwent Valley; and
- Aire Valley.

11.5.5 The Study Area spans across the following Landscape Character Areas, as set out in the East Riding of Yorkshire Landscape Character Assessment (2005), published by East Riding of Yorkshire (see Reference 11.27).

- Goole Fields;
- River Aire Corridor, Gowdall to Snaith and River Ouse Reach;
- Twin Rivers Farmland;
- Derwent Valley, Barnby to Pocklington Canal Reach;
- Howden to Bubwith Farmland;
- M62 Corridor Hook to Pollington; and
- River Ouse Corridor, Barmby on the Marsh to M62 bridge

11.5.6 The Study Area falls within the 'Trent Levels' LCA identified in the North Lincolnshire Landscape Character Assessment (Ref 11.28). Trent Levels has been subdivided into the following Local Landscape Types:

- Flat Drained Farmland;
- Flat Drained Treed Farmland;
- Flat Wooded Farmland;
- Flat Open Remote Farmland;
- Industrial Landscape; and
- Open Island Farmland.

### **Section 2 - Keadby to Scunthorpe**

11.5.7 This section falls within the following Local Authority Districts:

- North Lincolnshire Council.

11.5.8 The following LCAs are within North Lincolnshire Landscape Character Assessment and Guidelines 1999 (Ref 11.28) 'Trent Levels' Regional LCAs.

- Flat Drained Farmland;
- Flat Wooded Farmland; and
- Wooded Springline Farmland.

11.5.9 The following LCAs are within North Lincolnshire Landscape Character Assessment and Guidelines 1999 (Ref 11.28) 'Lincolnshire Edge' Regional Landscape Character Area:

- Industrial Landscape;
- Open Undulating Farmland;
- Wooded Undulating Farmland;
- Wooded Scarp Slope;
- Healthy Woodland; and
- Farmed Urban Fringe.

### **Section 3 - Scunthorpe to Killingholme**

11.5.10 This section falls within the following Local Authority Districts:

- Lincolnshire County Council;
- North Lincolnshire Council;
- West Lindsey District Council; and
- East Riding of Yorkshire Council.

11.5.11 The following Local Character Zones are within the HLC 2011 'The Confluence' Regional LCA:

- The Isle of Axholme; and
- The Axholme Fens.

11.5.12 The following Local Character Zones are within the HLC, 'The Northern Cliff' Regional LCA:

- The Cliff Edge Airfields; and
- The Broughton Woodlands.

11.5.13 The following Local Character Zones are within the HLC 2011, 'The Wolds' Regional LCA:

- The Wolds Character Area; and
- The Caistor Spring-Line.

11.5.14 The following LCAs are within North Lincolnshire Landscape Character Assessment and Guidelines 1999 (Ref 11.28) 'Vale of Ancholme' Regional LCA:

- Flat Valley Bottom Farmland; and



- Open Undulating Farmland.

11.5.15 The following LCAs are within North Lincolnshire Landscape Character Assessment and Guidelines 1999 (Ref 11.28) 'Lincolnshire Edge' Regional LCA:

- Wooded Undulating Farmland;
- Wooded Scarp Slope;
- Elevated Open Farmland; and
- Elevated Wooded Farmland.

11.5.16 The following LCAs are within North Lincolnshire Landscape Character Assessment and Guidelines 1999 (Ref 11.27) 'Lincolnshire Wolds' Regional LCA:

- Open Farmed Scarp Slope;
- Open Rolling High Farmland

11.5.17 The following LCAs are within North Lincolnshire Landscape Character Assessment and Guidelines 1999 (Ref 11.28) 'Lincolnshire Drift' Regional LCA:

- Open Undulating Farmland; and
- Wooded Farmland

11.5.18 The following LCAs are within North Lincolnshire Landscape Character Assessment and Guidelines 1999 (Ref 11.28) 'Humber Estuary' Regional LCA:

- Flat Open Farmland; and
- Industrial Landscape

11.5.19 The following LCAs are within West Lindsey Landscape Character Assessment 1999 (Ref 11. 29):

- Lincolnshire Clay Vale;
- North West Wolds Escarpment; and
- Wolds' Estates.

11.5.20 The following LCAs are within East Riding of Yorkshire Landscape Character Assessment 2018 (Ref 11.27):

- Paull Farmland;
- South Patrington, Ottringham and Keyingham Farmland;

#### **Section 4 - Killingholme to Hedon (Humber Crossing)**

11.5.21 This section falls within the 'Humber Waters' SCA (Seascape Character Area Assessment, July 2012) Ref. 11.25

11.5.22 This section falls within the following Local Authority Districts:

- Lincolnshire County Council;
- North Lincolnshire Council; and
- East Riding of Yorkshire Council.

- 11.5.23 The following Local Character Zones are within the HLC 2011 'The Northern Marshes' Regional LCA:
- The Humber Bank; and
  - The Immingham Coastal Marsh.
- 11.5.24 The following LCAs are within North Lincolnshire Landscape Character Assessment and Guidelines 1999 (Ref 11.28) 'Humber Estuary' Regional LCA:
- Flat Open Farmland.
- 11.5.25 The following LCAs are within North Lincolnshire Landscape Character Assessment and Guidelines 1999 (Ref 11.28) 'Lincolnshire Drift' Regional LCA:
- Open Undulating Farmland.
- 11.5.26 The following LCAs are within East Riding of Yorkshire Landscape Character Assessment 2018 (Ref 11.27):
- Burstwick to Withernsea Farmland;
  - Hedon, Preston and Bilton Farmland;
  - Paull Farmland;
  - South Patrington, Ottringham and Keyingham Farmland; and
  - Sunk Island.

## **Section 5 - Hedon to Easington**

- 11.5.27 This section falls within the 'Humber Waters' SCA (Ref. 11.25)
- 11.5.28 This section falls within the following Local Authority Districts:
- East Riding of Yorkshire Council.
- 11.5.29 The following LCA are within East Riding of Yorkshire Landscape Character Assessment 2018 (Ref 11.27):
- Burstwick to Withernsea Farmland;
  - Hedon, Preston and Bilton Farmland;
  - Paull Farmland;
  - South Patrington, Ottringham and Keyingham Farmland; and
  - Withernsea to Spurn Coast.

## **Landscape Features and Elements**

- 11.5.30 The array of NCAs, LLCAs and LLCTs that the Study Area spans across are shown in Figure 11.3: Landscape Character Areas (Volume IV).
- 11.5.31 The majority of the land within the Study Area is in agricultural as well as industrial use, and as such the landscape is primarily semi-rural in character. The topography of the landscape is a primary influence in defining changes in character, and the Study Area can be broadly split into the following sections:
- Low lying, flat, open, broad-floodplain and estuarine influenced landscape of the Humberhead Levels, including the River Ouse;

- Levels, including the River Ouse;
- Expansive, low lying, open and level farmland flanking the River Trent;
- Wooded scarp slopes and areas of urbanisation around Scunthorpe;
- Exposed and gently undulating wooded landscape elevated around Kirmington;
- Parkland type landscape of the Wolds Estates including Brockelsby Estate;
- Industrial and residential areas on the outskirts of Hull and Saltend; and
- Exposed coastal landscape around Easington.

11.5.32 Although primarily semi-rural, there are a number of urbanising elements within, and immediately adjacent to, the Study Area which influence the character of the rural landscape to varying degrees, depending upon their scale and prominence within the landscape. These include:

- Large scale energy infrastructure at Drax Power Station at the north-western end of the Study Area and Easington Gas Terminal at the eastern end of the Study Area;
- Wind energy development including wind farms at various locations throughout the route (mainly to the north of Keadby and around Keadby and Easington);
- Overhead power lines and associated pylons which form linear features at a number of locations along the route (mainly to the outskirts of Drax, Keadby, Scunthorpe and Killingholme);
- A small number of medium to large scale power stations and industrial estates including Keadby Power Station, British Steel Works, Brigg Power Station, Killingholme Power Station and Saltend Power Station and Chemical Park;
- Major transport routes, including railway lines, motorways and a number of 'A' Roads;
- The edge of major towns and cities, including Scunthorpe, Hull, and a number of small settlements, including Drax, Goole, Crowle, Ealand, Messingham, Scawby, Brigg, Kirmington, Ulceby, East Halton, North Killingholme, Paull, Hedon and Easington; and
- Caravan Parks along the North Sea Coast, including at Easington.

11.5.33 A hedgerow survey and assessment is currently being undertaken for the Study Area and is summarised in Chapter 7: Ecology and Biodiversity (Volume II).

11.5.34 Tree cover is generally sparse over the route and limited to hedgerows and small woodland copses.

11.5.35 There are numerous National Trails, long distance paths and PROWs within the Study Area including:

- Peatlands Way Long Distance Path;
- Viking Way Long Distance Path;
- Trans Pennine Trail; and
- England Coast Path National Trail (Future Proposed Route).

11.5.36 There are numerous watercourses within the Study Area including:

- River Ouse;
- River Aire;
- Aire and Calder Navigation;
- Stainforth and Keadby Canal;
- River Trent; and
- The Humber

## Visual Baseline

- 11.5.37 The Study Area lies within a generally open, expansive and low-lying landscape interspersed with large and medium infrastructure elements, with varying levels of tree cover and built form which serve to limit inter-visibility in some locations and directions.
- 11.5.38 In areas of landfall such as Easington along the Spurn Heritage Coast, land-use is predominantly arable farmland with large infrastructure associated with the Natural Gas Terminal.
- 11.5.39 Based on desk-study and field-work, it has been identified that there will be opportunities for views from sensitive receptors such as PRowWs, private and public roads, places of work and recreational areas, nearby residential properties some of which are located within local landscape and heritage designations.
- 11.5.40 A list of potential visual receptors has been considered. The list is based on desktop analysis and the field survey and this will be supplemented with detailed ZTV as further refinement of the route and AGI layouts is confirmed. This covers the following representative receptors and focussing near areas of AGI options:
- Users of National Trails / long distance paths / local PRow network;
  - Users of local road network – Highways / A Roads / B Road;
  - Existing Settlements - Occupiers of nearby individual residential properties;
  - Occupiers of nearby places of work;
  - Areas of Recreation – Open Access Land / Country Parks / Registered Parks and Gardens / Others; and
  - Users of Public Transport – Railway Lines.
- 11.5.41 Views within the local area are generally across undesignated rural farmland, with built form and other human influences also sometimes visible.
- 11.5.42 The susceptibility of recreational users of the PRow network to changes arising from the Project is considered to be high as views of the surrounding countryside are likely to be an important part of users' enjoyment of the route. The overall sensitivity of PRow users is therefore high.
- 11.5.43 The susceptibility of road users is considered to be medium as views are often possible of the surrounding countryside, particularly for vehicle passengers. The overall sensitivity of road users in the vicinity of the Project is therefore medium.
- 11.5.44 The susceptibility of occupiers of residential properties with views towards the Project is considered to be high, particularly for rural and edge-of-settlement properties where views of the surrounding countryside are an important component of residents'

enjoyment of their properties. The overall sensitivity of residential occupiers is therefore high.

- 11.5.45 The susceptibility of people at their place of work is generally considered to be low as the surrounding countryside is of limited importance and/or not the focus of their activities. For such receptors in the vicinity of the Project, the overall sensitivity is therefore low.

### **Representative Viewpoints**

- 11.5.46 The list of the receptors and the representative viewpoint photographs used to assist in the PEIR impact assessment is set out in Table 11.10. The location of the viewpoint photographs is shown on Figure 11.2 (Volume IV) with the viewpoint photographs on Figure 11.6 (Volume IV).
- 11.5.47 Many of these viewpoints were chosen to represent different types of visual receptor (e.g. users of a PRow, public Highway, Open Access Land or recreation ground and within or on the edge of settlements). As far as reasonably possible the locations reflect the visual receptors at the distance and direction in which they are located and reflect the receptor type(s) that would be present at that location.
- 11.5.48 Para 6.31 of GLVIA3 confirms, however, that it is not the viewpoint itself that the assessment is based upon but the receptor (i.e. the people likely to be affected) at that viewpoint:
- “Each visual receptor, meaning the particular person or group of people likely to be affected at a specific viewpoint, should be assessed in terms of both their susceptibility to change in views and visual amenity and also the value attached to particular views.”*
- 11.5.49 In addition, the answer to question 44 of the LI’s ‘Technical Information Note 01/21-GLVIA webinar Q&As’ (Ref 12.42) affirms that the *“focus of the visual assessment should be the visual receptors, not viewpoints”*.
- 11.5.50 Table 11.10 presents the locations of the viewpoints (agreed as part of engagement with the local authorities, see Table 11.2) for this PEIR assessment as well receptors represented at them, and their sensitivity. These 21 viewpoints were chosen to be developed as Type 1 visualisations (Type 1 as described in LI Guidance – TGN 06/19 Visual Representation of development proposals). These are generally located near to AGIs and are of sensitive value due to their landscape, visual and heritage considerations and are therefore considered to be a fair representation at this PEIR stage.

**Table 11.10: Representative Viewpoints and Baseline Descriptions**

Viewpoint Reference	Receptors	Description of View	Distance from AGI / Proposed Order Limits
<b>Section 1 - Drax to Keadby</b>			
VP01-01 (Drax)  Taken from Sharphill Lane, near junction of Redhouse Lane and Main Road.	Receptors include residents (farm buildings) and local road users.	North-westerly direction of view with Camblesforth Farmland and Ouse Valley LLCAs within the view. Drax Power Station is visible in the distance above the treeline within the flat and generally open landscape.  Small areas of broadleaved woodland and shelterbelts, create a sense of enclosure to the medium-large scale rectilinear field patterns.  Sparse settlement in the area with few isolated properties and farmsteads.	822 m (Drax AGI Option A)
VP01-02 (Drax)  View taken from PRoW and in close proximity to Scheduled Monument – Buried remains of Drax Augustinian Priory.	Receptors include residents (farm buildings) and local road users.as well as users of local PRoWs.	South-easterly direction of view with Camblesforth Farmland LLCA within the view. Pylons are a dominant feature stretching across the flat landscape. Receptors include users of local PRoWs and local road users.  Small areas of broadleaved woodland and shelterbelts, create a sense of enclosure to the medium-large scale rectilinear field patterns.	103 m (Drax AGI Option B)
VP01-03 (Drax)  View taken from PRoW adjacent to the River Ouse.	Receptors include users of local PRoW and River Ouse as well as residents and local road users.	South-westerly direction of view with Ouse Valley (Selby) LLCA within the view. Drax Power Station is visible and a clearly apparent feature in the distance above the treelines within the flat and generally open landscape.	899 m (Drax AGI Option A)



Viewpoint Reference	Receptors	Description of View	Distance from AGI / Proposed Order Limits
		PRoW are present along most of the length of the river, with further footpaths cutting across the floodplains.	
VP02-02 View taken from junction of Reading Gate and Crossmoor Bank close to Listed Buildings at Moorend Farm.	Receptors include residents and local road users.	South-easterly direction of view with Flat Drained Farmland LLCA within the view. Windfarms are a dominant feature stretching across the flat landscape. Moorend Farm property is visible on the horizon of the view, partly screened by trees and hedgerows.	725 m (Block Valve KP 19.3)
VP02-03 View taken along Oldlane Gate	Receptors include residents (farm buildings) and local road users.	North-easterly direction of view with Flat Open Remote Farmland LLCA within the view. Windfarms are a dominant feature stretching across the flat landscape. Moors Farm property is visible on the horizon of the view, mostly screened by trees and hedgerows.	1144 m (Keadby AGI (Block Valve)) 333 m (nearest point to the centre of the Proposed Order Limits)
<b>Section 2 - Keadby to Scunthorpe</b>			
VP03-03 View taken from adjacent to Stainforth and Keadby Canal and along Sheffield and close to South Yorkshire Navigation Off Road Cycle Route	Receptors include users of the Stainforth and Keadby Canal and off road cycle route as well as residents (farm buildings) and local road users.	Northerly direction of view with Flat Drained Farmland LLCA within the view. Wind farms and pylons are a dominant feature stretching across the flat and open landscape. Ealand Poultry Farm property is visible on the horizon of the view, partly screened by trees and hedgerows.	795 m (Keadby AGI Option C)
VP03-05	Receptors include users of the Peatlands Way	Easterly direction of view with Flat Drained Farmland LLCA within the view. Wind farms and pylons are a dominant feature stretching	1461 m (Keadby AGI Option C)

Viewpoint Reference	Receptors	Description of View	Distance from AGI / Proposed Order Limits
View taken from Peatlands Way National Trail on the edge of Ealand	National Trail as well as residents (edge of Ealand) and local road users.	across the flat and open landscape. Keadby Power Station and Ealand Poultry Farm property is visible on the horizon of the view, partly screened by trees and hedgerows.	
VP04-01 View taken from access track to Raventhorpe Farm adjacent to lay-by off A18	Receptors include local road users.	Northerly direction of view with Wooded Scarp Slope LLCA within the view. Gently undulating landscape framed by hedgerows and trees and with the large-scale British Steel works visible in the distance.	957 m (British Steel AGI Option B)
VP04-03 View taken from PRow FP/HOLM/2112 near to Raventhorpe Farm	Receptors include users of local PRow as well as residents (farm buildings) and local road (access track) users.	Northerly direction of view with Wooded Scarp Slope LLCA within the view. Gently undulating landscape framed by large woodland copses and with the large scale British Steel works visible in the distance.	239 m (British Steel AGI Option B)
<b>Section 3 - Scunthorpe to Killingholme</b>			
VP05-01 View taken from PRow FP/SCAW/30 along River Ancholme	Receptors include users of the River Ancholme and local PRow users.	North-westerly direction of view with Flat Valley Bottom Farmland LLCA and River Ancholme within the view. Generally flat landscape framed by trees and field boundary hedgerows and with the Brigg Power Station visible in the distance.	758 m (AGI Block Valve Option A)
VP05-04 View taken from Scawby Road	Receptors include residents (scattered properties on the	South-easterly direction of view with Elevated Open Farmland and Flat Valley Bottom Farmland LLCAs within the view. Generally flat and open landscape framed by trees and field	535 m (AGI Block Valve Option B)

Viewpoint Reference	Receptors	Description of View	Distance from AGI / Proposed Order Limits
	edge of Brigg) and local road users.	boundary hedgerows and with the Brigg Power Station visible in the distance.	
VP06-01 View taken from edge of Brocklesby Park Registered Park and Garden and on PRoW FP/KIRM/106	Receptors include users of local PRoW as well as private access tracks and local road users.	North-westerly direction of view with Wooded Farmland and Wolds Estates LLCAs within the view. Generally flat and open landscape framed by woodlands, trees and field boundary hedgerows.	937 m (AGI Block Valve Option A)
VP06-05 View taken from PRoW FP/ULCE/106	Receptors include users of local PRoW as well as private access tracks and local road users.	South-easterly direction of view with Open Undulating Farmland LLCA within the view. Gently undulating and open landscape framed by small woodlands and field boundary hedgerows.	152 m (AGI Block Valve Option B)
<b>Section 4 - Killingholme to Hedon (Humber Crossing)</b>			
VP07-01 View taken from PRoW FP/EHAL/74	Receptors include users of local PRoW as well as local road users.	South-easterly direction of view with Open Undulating Farmland LLCA within the view. Gently undulating landscape framed by small woodlands and field boundary hedgerows and with the large scale Killingholme Power Station visible on the horizon.	849 m (Killingholme AGI Multi-Junction)
VP07-04 View taken from PRoW FP/NKIL/86	Receptors include users of local PRoW as well as residents (East Hatton and North Killingholme) and local road users.	North-easterly direction of view with Wooded Farmland LLCA within the view. Flat landscape on the edge of the large expanse of Killingholme Power Station as it spreads along the River Humber.	912 m (Killingholme AGI Multi-Junction)

Viewpoint Reference	Receptors	Description of View	Distance from AGI / Proposed Order Limits
<b>Section 5 - Hedon to Easington</b>			
Corridor 19 View taken from Paull Road / PRow PAULF05	Receptors include users of local PRow as well as local road users and workers within the Saltend Chemical Park and Power Station.	Southerly direction of view with Paull Farmland LLCA within the view. Flat landscape with large expanse of agricultural fields situated at the edge of Saltend Chemical Park and Power Station complex. Industrial edge of Paull is visible on the horizon above the treeline.	117 m (Saltend AGI Option D)
Corridor 20 View taken from Paull Road	Receptors include residents (edge of Paull) and local road users.	North-westerly direction of view with Paull Farmland LLCA within the view. Flat and open landscape with large expanse of agricultural fields. The large scale Saltend Power Station dominates the view as it stretches across the vast and generally open landscape.	67 m (Saltend AGI Option C)
VP08-04 View taken from edge of Heden and close to settlement and PRows	Receptors include users of local PRows as well as local road users and residents on the edge of Heden.	Westerly direction of view with Burstwick to Withernsea Farmland LLCA within the view. Flat landscape on the edge of Heden Medieval town. PRows in the view which link with Saltend and Burstwick. Saltend Chemical Works visible on the horizon above the treeline.	872 m (AGI Option A)
VP09-02 View taken from Hull Road on outskirts of Easington	Receptors include residents (edge of Easington) and local road users.	Northerly direction of view with Burstwick to Withernsea Farmland LLCA within the view. Gently undulating landscape on the edge of Easington. Large rectilinear fields with hedgerow boundaries. Windfarms visible as they stretch across the landscape and small	588 m (Easington Pump Facility Option B)

Viewpoint Reference	Receptors	Description of View	Distance from AGI / Proposed Order Limits
		section of Easington Gas Terminal partly visible on the horizon.	
VP09-07A & B View taken from Southfield Farm, Warmer Lane	Receptors include residents (Southfield Farm) and local road and private track users.	Northerly direction of view with Withernsea to Spurn Coast LLCA within the view. Gently undulating landscape to north-west of Easington. Large scale expanse of open rectilinear fields with little if any tree cover. Windfarms dominate the landscape and with Easington Gas Terminal just about visible on the horizon.	652 m (Easington Pump Facility Option A)
VP09-08 View taken from Out Newton Road near properties on outskirts of Skeffling	Receptors include residents (edge of Skeffling) and local road users.	North-easterly direction of view with Burstwick to Withernsea Farmland LLCA within the view. Gently undulating landscape on the outskirts of Skeffling. Large scale expanse of open rectilinear fields with little hedgerow or tree cover. Windfarms dominate the landscape and with Easington Gas Terminal visible on the horizon.	1121 m (Easington Pump Facility Option B)

## Future baseline

- 11.5.51 The baseline described in this assessment is that which exists on the Site and its surrounds at the present time. It is acknowledged, however, that given the length of time which would elapse before the Project is completed, the baseline conditions of these areas may change during that period, irrespective of the Project occurring.
- 11.5.52 In the event the Project does not proceed, it is however considered likely that the landscape features would remain and the current predominantly agricultural land use would not be affected unless agricultural practices changed.
- 11.5.53 Future developments within the Proposed Order Limits are likely to be limited given the rural setting and would likely be localised industrial-related developments on land close to built-up areas such as Drax, Scunthorpe and Immingham.

## 11.6 Design development, impact avoidance and embedded mitigation

- 11.6.1 Primary and tertiary mitigation measures are described below; however, secondary mitigation measures are described in Section 11.8 along with enhancement measures.
- 11.6.2 The primary mitigation measures include trenchless crossing of major infrastructure and watercourses would avoid direct physical impact to those identified as landscape features, within the Proposed Order Limits. These include:
- Section 1 – Drax to Keadby: River Aire and Aire and Calder Navigation;
  - Section 2 – Keadby to Scunthorpe: Sheffield and South Yorkshire Canal and River Trent;
  - Section 3 – Scunthorpe to Killingholme: New River Ancholme;
  - Section 4 – Killingholme to Hedon (Humber Crossing): River Humber; and
  - Section 5 – Hedon to Easington: Landfall location.
- 11.6.3 Tertiary Mitigation measures include the production of a Construction Environmental Management Plan (CEMP) which would capture good practice construction working activities. This would include dampening down of loose material to reduce dust, traffic management practices, and waste management. This would support reducing potential impacts to landscape features from construction related activity.
- 11.6.4 Mitigation measures associated with the reduction of potential adverse impacts on landscape character and visual amenity have involved two key objectives; considered design process and appropriate landscape reinstatement.
- 11.6.5 As described in detail in Chapter 3: Consideration of alternatives, the selection and refinement of the route to minimise disturbance to the landscape has been an integral part of the design process. During this process, landscape and visual constraints have been considered to minimise and, wherever possible, avoid direct impacts on designated sites and important landscape features. As a result, the route has been aligned to:
- Avoid areas of woodland where possible;



- Avoid removal of any trees covered by Tree Preservation Orders at the time of submission (Arboricultural Survey to be undertaken pre-construction);
- Minimise loss of mature trees wherever possible, particularly within areas of more sensitive landscapes;
- Reduce the number of field boundary crossings and disruption to the recreational footpath network, as far as is practical for a linear Project of this length and type;
- Avoid proximity to well settled areas and the larger urban centres within the region, and locate the route outside of settlement boundaries along its length;
- Avoid direct impacts on designated areas of historic landscape value, including the Registered Park and Garden, and its immediate setting at Brocklesby Park; and
- Avoid direct and indirect impacts on landscape features designated for their Cultural Heritage value such as Conservation Areas, Listed Buildings and Scheduled Monuments.

11.6.6 Additional avoidance measures would typically be considered during design and prior to construction, based on detailed walk-over surveys, which would aim to:

- Identify sensitive crossing points at field boundaries and features of landscape importance (e.g. watercourses) to minimise damage;
- Identify specific trees or hedgerow sections to be protected and retained;
- Minimise hedgerow, or watercourse crossings and maximise the use of existing opportunities (e.g. use of existing crossing points and gaps in hedges); and
- Minimise vegetation loss by selecting less vegetated sections of linear features.

### **Mitigation during Construction**

11.6.7 Any night-time lighting would be sympathetically planned and positioned in locations close to sensitive receptors. Directional lighting would also be used to minimise glare beyond the construction working area or compound.

11.6.8 The routing of pipelines would follow British Standards (BS) BS5837:2012 (Ref. 11.26) and arboricultural surveys in order to ensure they are aligned to avoid mature features such as individual trees and their root systems. Where it is necessary to impact on features such as field and roadside boundary hedgerows and ditches the working areas should be kept to the minimum to limit the length to be removed or disrupted.

11.6.9 On completion of a single construction activity or a sequential series of activities in a particular location, the re-instatement of affected landscape features, including re-instatement of ground contouring, would be implemented as soon as practicable during the next favourable season, so that restoration works would be carried out over a phased implementation programme. The reinstated features would as a minimum be of similar quality to the feature removed where practical to do so. Every opportunity would be considered to provide new features of enhanced quality.

11.6.10 Construction compounds are proposed to be located within areas of limited population or on previously developed sites where existing views of the landscape are influenced by existing urbanising features including large scale industrial / commercial development, thereby reducing the sensitivity of the landscape to a temporary change of the type proposed.

- 11.6.11 Land disturbed to make way for construction compounds would be reinstated and returned to existing land uses following completion of the construction phase of the Project.
- 11.6.12 Similarly to the pipelines, mitigation measures associated with the reduction of potential adverse impacts of the AGIs on landscape character and visual amenity have involved two key objectives; considered location/siting and appropriate landscape integration.
- 11.6.13 As described in Chapter 3: Consideration of Alternatives, carefully considered site selection of the AGI locations has been undertaken to minimise disturbance to the landscape and visual resource. During this process, landscape and visual constraints have been considered to minimise and, wherever possible, avoid direct impacts on designated sites and important landscape features. In relation to landscape and visual considerations, the AGIs have been located to:
- Avoid direct impacts on designated and locally valued landscape features, including woodland, hedgerows, and field drains, by siting AGIs outside of these areas, including root protection zones of existing mature trees;
  - Avoid locations which are prominent within the landscape, to minimise their influence on the landscape setting and potential visual impacts;
  - Seek opportunities to integrate the AGIs into the landscape setting through secondary landscape measures, such as tree and hedgerow planting, by locating them within vegetated landscapes and/or enclosed sites wherever possible;
  - Utilise existing visual screening, through location in close proximity to areas of woodland, and/or locally enclosed topography, such as valley bottoms, or hills; and
  - Minimise potential for visual intrusion by locating AGI sites away from larger settlements, and outside of all settlement boundaries.
- 11.6.14 Further to the considered siting of the AGIs, planting design will be included at ES Stage for each AGI to help integrate these AGIs into the landscape setting of the Study Area. These will be incorporated into the Design and Access Statement which will accompany the DCO application and will outline the nature of these measures.
- 11.6.15 Site specific measures will be developed with reference to opportunities outlined in the various landscape character assessments relevant to the landscape of the Study Area.

### **Mitigation after Completion**

- 11.6.16 Following construction, the only permanent works would comprise the buried pipelines and the AGIs. In landscape and visual terms, land within the pipelines spread would be returned to its original use with hedgerows and trees reinstated where appropriate and in consideration of future access requirements. The reinstated hedgerows would take up to ten to fifteen years to become established and develop to a comparable size and density as the hedgerows which were removed.
- 11.6.17 Landscape and visual impacts will be considered as an inherent part of the design process. The main areas for mitigation would be associated with the AGIs where screening and planting proposals pertinent to landscape character would be impactful and would be part of the design process. Along the route, loss of hedgerow and tree planting would need to be avoided where practicable and will be part of the design process. Any proposed mitigation would be part of a landscape and biodiversity strategy

and ongoing commitment to maintenance in order to allow the replacement planting to successfully establish.

### Reinstatement and Long-Term Enhancement

- 11.6.18 Where the removal of existing hedgerows is necessary, the specification for the replanting works would ensure that species are appropriate and characteristic of that particular LCA. All reinstatement planting would be carefully designed to ensure compatibility with adjacent vegetation, using native species which reflect the existing species present in the vegetation which would be lost.
- 11.6.19 Full hedgerow survey results will be available at the time of the ES. At time of writing this PEIR chapter, a large proportion of the hedgerows within the Proposed Order Limits had been surveyed. There is approximately 310 km of hedgerow in total and around 45% are currently assessed as species rich with approximately 20% of these qualifying as 'important'.
- 11.6.20 The majority of hedgerows contain a variety of species, although Hawthorn (*Crataegus monogyna*) has been consistently identified as the dominant species. Other frequently occurring species include: Blackthorn (*Prunus spinosa*), Dog rose (*Rosa canina*) and Elder (*Sambucus nigra*).
- 11.6.21 All reinstatement planting would be carefully considered and details of the exact landscape reinstatement requirements assessed. This process would be carried out in liaison with the statutory consultees and would incorporate species that are appropriate to the local area. There would also be the opportunity to augment some of the existing landscape features through the LEMP. This could, for example, include:
- The reinstatement of sections of hedgerow which are currently relatively species poor with a more varied species mix to increase species diversity;
  - Creation of species rich field margins, through seeding of species rich grassland;
  - Reinstatement of an existing field boundary through the filling of gaps with native hedgerow planting; and
  - An increase in the number of hedgerow trees, through inclusion of native species within the planting mix.
- 11.6.22 Where mature trees have to be removed, they would be replaced within the Proposed Order Limits. Replacement trees would be standards of local provenance where appropriate. Where smaller trees (saplings) are removed, they would also be replaced on an agreed replacement ratio basis.
- 11.6.23 Sections of other boundary features removed during construction, such as fences, would be replaced to match the original and/or adjacent boundary features. Boundary Marker posts and aerial marker posts would be located at some boundaries to aid aerial surveillance and ground-based monitoring, and also to alert people to the presence of the pipelines to reduce any risk of damage to it. The location and design of these markers would be selected to minimise intrusion on the landscape.
- 11.6.24 Affected road verges throughout the Proposed Order Limits would be reinstated and, where appropriate, enhanced through the addition of species rich grass mixes for the benefit of biodiversity.
- 11.6.25 Land disturbed to enable temporary drainage works would be reinstated and returned to existing land uses following completion construction. No specific landscape mitigation measures are proposed as no significant landscape impacts have been identified.

- 11.6.26 Chapter 5: Agriculture and Soils (Volume II), Chapter 7: Ecology and Biodiversity (Volume II) and Chapter 10: Cultural Heritage (Volume II) identify mitigation measures for the reinstatement works with respect to agricultural, ecological and cultural heritage requirements and these measures would equally apply to the successful reinstatement of the visual and physical integrity of the landscape and the reduction of landscape impacts.

## 11.7 Preliminary assessment of potential impacts

- 11.7.1 This Section details the preliminary assessment of potential impacts for the Project during construction, operation and decommissioning phases.
- 11.7.2 The construction of the pipelines has a limit of deviation applied, to allow flexibility of design. For the purposes of the PEIR, the limit of deviation is assumed to enable movement of the pipelines, anywhere within the Proposed Order Limits, which ensures that a precautionary approach to assessment has been taken.
- 11.7.3 The following main components of the Project have been considered in relation to potential landscape and visual amenity impacts (full details provided in Chapter 2: Project Description (Volume II)):

### Pipelines

- 11.7.4 The Proposed Order Limits defines the area within which the Pipelines could be laid and the majority of construction activity would occur. A full description of activities which could occur within the Proposed Order Limits is provided in Chapter 2: Project Description (Volume II).
- 11.7.5 The majority of landscape and visual disturbance associated with the Proposed Order Limits would be associated with the construction phase of the Project and potential impacts are likely to be limited in magnitude, due to their temporary nature and short duration. The exception to this is where the Project has potential for longer term residual impacts on landscape character, which may be apparent during the operational phase of the project, such as any loss of trees or other boundary features.
- 11.7.6 Due to the nature of a development of this type, the potential landscape and visual impacts along the route would be broadly the same across the five sections. The only exception to this is at the North Sea Coast where the landfall at Easington would have a potentially different type of impact with more impact potentially from the coastline (see Appendix 11.2 (Volume III) for detailed description of impacts). A description of impacts common to all sections is provided within construction and operation stages below.

### Above Ground Installations

- 11.7.7 The landscape and visual disturbance associated with the AGIs would be associated with both the construction and operational phases of the Project as well as the decommissioning stage (assumed 40 years after completion).

### Construction

- 11.7.8 A summary of the impacts to landscape features and visual amenity as a result of the Project construction activities is reported in Table 1 in Appendix 11.2 (Volume III).
- 11.7.9 The construction phase would be of duration of approximately 31 months.

## Landscape Character

- 11.7.10 The following main components of the Project have been considered in relation to potential landscape impacts (full details provided in Chapter 2: Project Description (Volume II)):

### Landscape Impacts common to all Pipeline Sections

- 11.7.11 During construction of the Pipelines and AGIs, the introduction of construction activity into the landscape of the Study Area would potentially have some temporary adverse impact on the character of the landscape. This is due to the adverse impact that the introduction of construction activity would have on the sense of tranquillity and remoteness, particularly where larger scale operations of longer duration would occur, such as at major river crossings or the landfall, and within the more tranquil landscape areas away from major settlements. However, the magnitude of the impact in all areas would be limited by the temporary nature and short duration of the change and also the limited prominence of the works. As a result, overall, it is considered that the construction works would have no significant residual adverse impacts on landscape character.
- 11.7.12 The pipelines could give rise to the following potential impacts on landscape character:
- Temporary adverse impacts due to the introduction of construction activity to the rural landscape, in terms of the prevailing land use, sense of scale and remoteness, and overall character, particularly where larger scale and/or longer duration activities such as Horizontal Directional Drilling (HDD) are required;
  - Direct impacts on landscape pattern through the temporary or permanent loss or fragmentation of important landscape components such as field pattern, hedgerows, mature trees and landform, which could lead to residual adverse impacts;
  - Direct impacts on the historic or cultural landscape through loss of important features, such as traditional field patterns or the drainage network, and the introduction of the Project into the wider landscape setting of a historic landscape, such as that at Brocklesby Park Registered Park and Garden; and
  - Direct impacts on the coastal and intertidal landscape through installation of the Pipelines at the landfall.
- 11.7.13 As described in Section 11.6, the majority of potential landscape impacts have been avoided through carefully considered routing of the Proposed Order Limits. The impacts on landscape character within the Proposed Order Limits therefore mostly relate to the more short-term impacts caused by the removal of existing hedgerow field boundaries (including hedgerow trees in some locations) and the temporary loss of agricultural land along the length of the Project. This fragmentation of the existing landscape pattern would, in the main, have a short term, adverse impact on each of the LCAs through which the Proposed Order Limits passes, until reinstated land is returned to existing agricultural use (immediately following construction), grass verges are reinstated (approximately 6-12 months) and hedgerows become established (approximately 10-15 years in the majority of cases). Where non-mature hedgerow trees would be removed, there would be a longer-term impact as it would take a minimum of 10-15 years for replacement planting to establish. Where mature trees would be removed, it would not be possible to fully mitigate for their loss within the timescales used in this assessment (15 years post completion), though replacement planting of larger plant stock would help to compensate for the loss to some degree.



- 11.7.14 The temporary loss of sections of hedgerow and hedgerow trees would adversely affect LLCAs to differing degrees depending upon the value of existing hedgerows removed, the completeness of the existing field patterns in the landscapes affected, and the importance of field pattern in defining the character of a particular landscape. However, these impacts are unlikely to be significant as although there would be a number of hedgerows affected along the length of the Proposed Order Limits, which in combination would have a physical impact over a long distance, the impact on the perception of landscape character in any single location would be limited to a very localised area, due to the small scale of the perceived change. As such, the impact on landscape character would be limited to impacts at a local level, and the change to the character of the wider landscape setting would not be significant.
- 11.7.15 Once replacement tree, verge and grassland planting is complete and hedgerows are re-established, the field pattern of the Study Area would be reinstated, and, in many places, provide some level of landscape enhancement where existing poor quality, gappy, or remnant hedgerows would be replaced by species rich hedgerows, with species rich margins wherever possible/appropriate. The exceptions to this would be where mature or historic hedgerows are removed, and/or where mature hedgerow trees would also be removed, as replacement, or compensatory planting and reinstatement would take longer to restore the features to replicate existing conditions.
- 11.7.16 The installation of marker posts along the pipeline route would have a permanent impact on local landscape character by the end of the construction phase.
- 11.7.17 Construction phase impacts on the NCAs, LLCAs and LLCTs would be limited to the construction phase period. The extent of the change would be small and generally experienced within the site and immediate setting only. Changes relating to the pipeline construction/installation (including those arising from the temporary works compounds) would be mostly short-term and reversible. Changes relating to the AGI construction along with any permanent impacts are described in Table 1 in Appendix 11.2 (Volume III).
- 11.7.18 Within the Proposed Order Limits, the changes to landscape character during the construction phase would be more substantial, with arable or pastoral farmland being temporarily converted to an active construction site. Certain sections of hedgerow would also be removed to allow the construction/installation of the pipeline itself, with these hedgerows being reinstated at the end of the construction phase. Such direct impacts would not extend beyond the Proposed Order Limits and would be fully reversible at the end of the pipeline construction phase.
- 11.7.19 The main construction activities and associated features located within the low lying, typically flat, open arable landscape, would result in the potential loss of local, commonplace and replaceable rural features such as hedgerows, ditches, crops, as a result of the site clearance.
- 11.7.20 Construction phase impacts on landscape character may specifically arise from:
- Short term nature of movement activity of equipment and traffic to, from and within the Proposed Order Limits;
  - Removal of vegetation and soil stripping as part of site clearance and preparation;
  - Tunnelling activities, excavations and temporary stockpiling and storage of excavated materials resulting in on site changes to landform;



- Construction working areas, storage areas and temporary structures associated with construction;
- Construction roads, fencing, temporary lighting and security features;
- Construction activities within the inter-tidal zone; and
- Construction of the Project and associated access routes and infrastructure.

## AGIs

- 11.7.21 Unlike the pipelines, the AGIs would form permanent new features in the landscape, with potential for significant residual impacts on landscape character and visual amenity. The potential impacts associated with each of the AGIs are broadly similar due to the nature of the proposals. However, as these are proposed to be sited near to built up areas, the potential impacts for the majority would be seen in the context of a semi-rural / industrial landscape setting.
- 11.7.22 Potential landscape impacts that could occur as a result of the AGIs generally, or in combination, are outlined below, with reference to specific AGIs where appropriate. The following potential landscape impacts have been identified:
- Temporary adverse impacts due to the introduction of construction activity, including AGI specific construction compounds, within the rural landscape, which has a sense of remoteness;
  - Adverse impacts associated with any potential change in the perception of scale, or urbanisation of the rural landscape through introduction of semi-industrial installations, including associated infrastructure at each of the AGI sites;
  - Direct impact on landscape pattern through the temporary or permanent loss or fragmentation of important landscape components such as field pattern, mature trees and landform, which could lead to residual adverse impacts;
  - Direct impacts on physical and perceptual elements of landscape character through a change in existing land uses;
  - Direct impacts on the historic or cultural landscape through the introduction of a semi-industrial installation in close proximity to features of importance to the historic/cultural landscape (such as Brocklesby Park Registered Park and Garden and the network of traditional field boundaries /drains);
  - Direct impacts on the coastal and intertidal landscape through installation of the AGI at the landfall; and
  - Long term beneficial impacts associated with potential landscape enhancements as part of the mitigation of the AGI sites, such as reinforcement/reinstatement of historic field boundary enclosures, or an increase in vegetation cover.

## Visual Amenity

### Visual Impacts common to all Pipeline Sections

- 11.7.23 By their nature, visual impacts experienced during construction would be temporary, and of limited duration. Although the construction site would be evident throughout the construction period, the actual construction activity would vary in its scale, intensity, location, and prominence as different stages of work take place along the length of the pipelines. That withstanding, the overall scale of construction activity would be relatively small and would not appear out of scale in the context of the wider landscape,

particularly in mid to longer distance views from receptors outside of the immediate vicinity of the Proposed Order Limits. In all but close proximity, views from the immediate setting of the works, construction activity would not be prominent, and would generally appear comparable in scale and intensity to agricultural activity, typical of the existing landscape setting.

- 11.7.24 Visual impacts associated with the construction works across the majority of the route would be seen from distance due to the generally flat and open nature of the landscape. However, due to the transient nature of construction, the apparent geographic scale and duration of the works' visual impacts would be limited. The number of receptors located within the Study Area would be limited, due to the sparsely settled character of the agricultural landscape, and the considered routeing of the Proposed Order Limits, away from settlements, which would further reduce the potential for wider scale impacts on visual amenity more generally.
- 11.7.25 In summary, although a limited number of receptors would experience some adverse visual impacts during construction, impacts would not be significant due primarily to the transient nature of construction works and short duration of impacts. Furthermore, although the construction works would be experienced over a long, linear area, the contained corridor of land required to construct the Project and localised nature of impacts would further limit the magnitude of impacts upon the visual amenity of individual receptors. Due to the limited nature of individual impacts and the localised nature of impacts, there would be no significant aggregated impact on visual amenity more generally across the Study Area.
- 11.7.26 Although no significant visual impacts are predicted as a result of the construction phase of the project, details of the receptors which could be temporarily affected by the pipelines during construction are provided for information in Table 1 in Appendix 11.2 (Volume III). In addition, as the duration of impacts is considered a determining factor in terms of the significance of visual impacts, particularly during construction, indicative construction timescales for the pipelines and AGIs are set out in Chapter 2: Project Description (Volume II).
- 11.7.27 Although not predicted to be significant, potential impacts on visual amenity, which could occur as a result of the construction of the pipelines, are identified for the benefit of completeness and information purposes. Potential receptors include day to day users of the Study Area, including local residents, recreational users of the landscape, road users and people at their places of work.
- 11.7.28 The following potential visual impacts could occur as a result of the Pipeline construction:
- Temporary loss of visual amenity due to the introduction of construction activities, particularly in more rural locations or from locations with recognised or valued views of the landscape including the coastal landscape. Typical activities with the potential to affect visual amenity include:
    - Site clearance;
    - Introduction of temporary storage facilities, site compounds and temporary parking areas;
    - Temporary installation of large-scale construction equipment at tunnelling, boring, or drilling sites either side of major crossings;

- Earth movement, temporary storage and modelling;
- Vehicular and large plant movement on and off-site; and
- Night-time lighting and working outside of normal working hours.
- Loss of visual amenity associated with the loss of existing landscape features, such as hedgerows and/or mature trees.

## **AGIs**

11.7.29 Potential visual impacts that could occur as a result of the AGIs individually, or in combination, are outlined below, with reference to specific AGIs where appropriate. The following potential visual impacts have been identified:

- Temporary adverse impacts due to the introduction of construction activity within existing views of the rural landscape;
- Adverse impacts due to a loss of visual amenity associated with the temporary or permanent loss of existing landscape features, which could lead to residual adverse impacts;
- Adverse impacts due to visual intrusion and/or an urbanising influence of the rural landscape in views, experienced by day-to-day users of the Study Area, including local residents, recreational users, and road users, through the introduction of semi-industrial, permanent above ground features; and
- Long term beneficial impacts associated with potential landscape enhancements as part of the mitigation of the AGI sites, such as an increase in visual screening, and/or restoration of the landscape in views.

## Operation

- 11.7.30 A description of the impacts to landscape features and visual amenity as a result of the Project operation (AGIs only) based on the representative viewpoints is reported in Table 2 in Appendix 11.2 (Volume III).

### Landscape Character

- 11.7.31 Operational and enduring impacts of the AGIs would be limited to short to medium term adverse landscape character impacts relating to the temporary loss of hedgerows and occasional mature trees within the working areas. However, once reinstatement planting is completed any impacts would reduce over time as the planting establishes and integrates with the existing surrounding landscape.
- 11.7.32 The majority of adverse impacts would be limited to the short term, as replacement planting would reinstate existing field boundaries and, once established, provide some level of landscape enhancement due to the restoration of historic field boundaries, the reinforcement of landscape pattern, and an increase in biodiversity through an increase in the number of native plant species. There would be some medium to longer term adverse impacts associated with the loss of mature hedgerows and hedgerow trees, as it would take longer for replacement planting to compensate for their loss. However, due to the relatively small number of these features affected, the level of planting proposed, and the limited influence of the impact on the wider character, overall it is considered that there would not be a significant residual adverse impact.
- 11.7.33 Furthermore, it should be re-stated that the impacts to existing hedgerows and mature trees identified in this Section represent a worst case, and impacts, in reality, would be reduced further due to future opportunities to avoid direct impacts through micro-siting and realignment within the Proposed Order Limits during the detailed design and construction process.
- 11.7.34 The number of mature trees directly affected by the Project would be limited by careful micro routing of the Pipelines, which would aim to minimise the number of mature trees removed within the Proposed Order Limits. Although there are a small number of locations where the loss of mature trees would be unavoidable the number of trees affected overall would be limited. In addition, where trees are removed, landscape mitigation would compensate for the loss, which would replace the amenity of existing trees removed in the medium to long term.
- 11.7.35 Although the removal of hedgerow sections and occasional mature trees would have some adverse, short-term impact prior to their reinstatement, it is considered that this change would not cause a significant impact to landscape character due to the generally open character of the landscape.
- 11.7.36 Post-construction and operational impacts on landscape character would be restricted to those arising from the differences between the appearance of existing and replanted sections of hedgerows. Such differences would be very limited in extent and would reduce over time as the replanted hedgerows grow and develop.
- 11.7.37 Once operational, the landscape features lost to the construction of the pipelines would have been replaced and reinstated. Although some of these replaced features such as hedgerows, may take ten to fifteen years to fully achieve their baseline state, their overall importance would be relatively minor in the context of the wider landscape character and views. As such at this stage, it is anticipated that there would be no significant impacts either on character or on views during operation other than

potentially to the areas affected by the AGIs. It is possible that the AGIs could potentially be discernible from views up to 1.5 km in distance from the Project, with the exception of the Pump Facility at Easington which is likely to be seen beyond 1.5 km.

11.7.38 Operational phase impacts may arise from:

- The proposed AGIs and associated infrastructure;
- Lighting within and outside the AGI compounds, and within the vehicle circulation and parking areas;
- Proposed access roads and other associated infrastructure within the AGIs site; and
- Movement of vehicles to, from and within the AGIs.

11.7.39 Further detailed assessment of impacts from AGIs are to be provided at ES stage. At PEIR stage, a description of potential impacts for the various options and based on the representative viewpoints are provided in Tables 1 and 2 in Appendix 11.2 (Volume III).

## Visual Amenity

11.7.40 Operational and enduring impacts of the AGIs would be limited to short to medium term adverse visual impacts relating to the temporary loss of hedgerows and occasional mature trees within the AGI working area. However, for the majority of visual receptors, the temporary loss of existing vegetation within the AGI working area would not cause a change of sufficient magnitude to significantly affect visual amenity during this period, particularly once reinstatement planting is completed.

11.7.41 In the case of the relatively few locations where elevated and/or longer distance views are available within the Study Area, the temporary loss of hedgerow sections would form a relatively small feature of the view and would be seen within the context of a much wider views of the landscape, which would limit the magnitude of the adverse impact.

11.7.42 In terms of understanding and assessing dynamic and kinetic movements in the landscape and how heritage assets and landscape features are viewed from more than one point in the landscape, these have been considered within the assessment as part of the viewpoint selection process. Engagements with Historic England and the Heritage team have considered the movement through the landscape rather than fixed point views. This is particularly relevant to movements along waterways and public footpaths and this has been taken into account within the assessment.

11.7.43 The potential visual impacts associated with the operational phase of the AGIs is summarised below with further detail provided in Table 2 in Appendix 11.2 (Volume III).

## Summary of Visual Impacts

### Section 1 - Drax to Keadby

11.7.44 The Drax Pipeline Inspection Gauge (PIG) Trap (Options A-D) and Block Valve Sites would slightly add to the urbanising influence that Drax Power Station has upon the local landscape. However, due to the small scale of the AGI options, the magnitude of the impact would be limited. Proposed mitigation measures include native woodland planting around all sides of AGI. This would help to integrate the AGI and would have some beneficial impact on visual amenity in the longer term through additional woodland cover.

- 11.7.45 The visual impact of Drax PIG Trap (Options A-D) would be constrained to impacts within a highly localised area, within which the Project would have no significant impact, due to the small scale of the installation, and the influence of existing infrastructure on existing views.

## Section 2 - Keadby to Scunthorpe

- 11.7.46 The Keadby PIG Trap (Options A-C) and Block Valve Sites would slightly add to the urbanising influence that Keadby Power Station, British Steel works and the numerous wind turbines and electricity pylons have in the local landscape. The small scale of the AGIs also mean that the magnitude of the impact would be limited. Proposed mitigation measures include native woodland planting around all sides of the AGI. This would help to integrate the AGI and would have some beneficial impact on character in the longer term through additional woodland cover.
- 11.7.47 The visual impact of Keadby PIG Trap (Options A-C) and Block Valve Sites would be constrained to impacts within a highly localised area, within which the Project would have no significant impact, due to the small scale of the installation, and the influence of existing infrastructure on existing views.

## Section 3 - Scunthorpe to Killingholme

- 11.7.48 The British Steel PIG Trap Sites would slightly add to the urbanising influence that British Steel works and Brigg Power Station have in the local landscape. The Block Valve Sites would form a slight addition to an otherwise rural and open landscape.
- 11.7.49 However, due to the small scale of the AGI, the magnitude of the impact would be limited. Proposed mitigation measures include native woodland planting. This would help to integrate the AGIs and would have some beneficial impact on character in the longer term through additional woodland cover, but again would have a limited impact on the wider landscape setting due to the small scale of the change.
- 11.7.50 The visual impact of British Steel PIG Trap sites and Block Valve sites would be constrained to impacts within a highly localised area, within which the Project would have no significant impact, due to the small scale of the installation, and the influence of existing infrastructure on existing views.

## Section 4 - Killingholme to Hedon (Humber Crossing)

- 11.7.51 The Killingholme Multi-Junction site would form a slight detractor in an otherwise rural and open landscape, however the context of the strong visual presence of Killingholme Power Station and the small scale of the AGI, the magnitude of the impact would be limited. Proposed mitigation measures include native woodland planting. This would help to integrate the AGI and would have some beneficial impact on character in the longer term through additional woodland cover.
- 11.7.52 The Hedon Multi-Junction site (Options A-B) would form a slight addition to an otherwise rural and open landscape, however with the context of the nearby Saltend Chemical Works and the small scale of the AGI, the magnitude of the impact would be limited. Proposed mitigation measures include native woodland planting. This would help to integrate the AGI and would have some beneficial impact on character in the longer term through additional woodland cover.
- 11.7.53 The Saltend PIG Trap (Options A-D) and Block Valve Site would form a slight detractor in an otherwise rural and open landscape, however with the context of the nearby Saltend Chemical Works and Power Station complex and the small scale of the AGI, the



magnitude of the impact would be limited. Proposed mitigation measures include native woodland

- 11.7.54 The visual impact of the multi-junction, PIG Trap and Block Valve sites would be constrained to impacts within a highly localised area, within which the Project would have no significant impact, due to the small scale of the installation, and the influence of existing infrastructure on existing views.

## Section 5 – Hedon to Easington

- 11.7.55 The Pump Facility (Options A-B) with a maximum height of 50 m chimney stack would form an addition to an otherwise rural and open landscape, however with the context of the large Easington Gas Terminal and numerous wind turbines within the local landscape, the magnitude of the impact would be reduced. Proposed mitigation measures include native woodland planting. This would help to integrate the AGI and would have some beneficial impact on character in the longer term through additional woodland cover.
- 11.7.56 The visual impact of Pump Facility (Options A-B) would be seen from a fairly wide area given the proposed maximum heights. This impact would be slightly reduced given the proximity of the installation within the context of the existing Easington Gas Terminal, and the influence of the existing infrastructure on existing views.

## Decommissioning

- 11.7.57 Specific proposals for the decommissioning of the Project would be devised at an appropriate time in the future and following decommissioning the Pipelines would be retained in situ; all infrastructure associated with the AGIs would be removed and the land would be restored (other than land used for planting and landscape mitigation/enhancement). There would be only limited potential for adverse impacts during the decommissioning works, which would be unlikely to be significant due the temporary nature and short duration of impacts. Furthermore, it would be very unlikely for there to be any significant residual impacts on landscape character or visual amenity as baseline conditions would be restored to a landscape similar to the existing situation.
- 11.7.58 The decommissioning would likely have some potentially beneficial impacts in comparison with the operational phase of the Project, due to the removal of above ground infrastructure from the landscape, whilst retaining landscape enhancement measures such as tree and hedgerow planting to reinforce existing field boundaries.

## 11.8 Mitigation and enhancement measures

- 11.8.1 Any secondary mitigation required would be developed during the ES stage and would be developed in collaboration with biodiversity measures in order to, as far as practical, adopt a sustainable approach to ensure enhancement that leaves the environment in a better condition than it was before development.

## Construction

- 11.8.2 No specific secondary landscape and visual mitigation measures are currently proposed to mitigate potential impacts.

## Operation

- 11.8.3 As discussed above, opportunities for further environmental enhancement would be explored in conjunction with the stakeholders.

## Decommissioning

- 11.8.4 Landscaping and reinstatement following decommissioning provides an opportunity to provide further environmental enhancement.

## 11.9 Summary of the preliminary assessment of potential significant effects

11.9.1 Table 11.11 below summarises the preliminary assessment of potential significant effects associated with the Project.

**Table 11.11: Summary of the preliminary assessment of potential significant effects**

Resource/receptor	Stage	Sensitivity of resource/receptor	Description of potential impact/change	Mitigation	Potential significant effects
Landscape Character.	Construction	Low to Medium. Generally rural and open landscape, but with urban detractors.	Temporary loss of agricultural land, hedgerows, trees and woodlands.	Good practice measures as set out in the CEMP.	Not significant
Visual Amenity	Construction	Low to High depending on receptors.	Temporary loss of agricultural land, hedgerows, trees and woodlands.	Good practice measures as set out in the CEMP.	Not significant
Landscape Character.	Operation	Low to Medium. Generally rural and open landscape, but with urban detractors.	AGIs potentially-adding to urbanised influence of other existing industrial infrastructure within an otherwise generally semi-rural landscape character.	Replacement hedgerow and tree planting. Requirement for any secondary mitigation to be confirmed at ES stage.	Not significant
Visual Amenity	Operation	Low to High depending on receptors.	Visual impacts from AGIs on receptors.	Replacement hedgerow and tree planting subject to landowner agreements. Requirement for any secondary mitigation to be confirmed at ES stage.	Not significant
Landscape Character.	Decommissioning	Low to Medium. Generally rural and open landscape, but with urban detractors.	Landscape restored to original condition. No	Replacement agricultural grass, hedgerow and tree	Not significant

Resource/receptor	Stage	Sensitivity of resource/receptor	Description of potential impact/change	Mitigation	Potential significant effects
			landscape impacts predicted.	planting subject to landowner agreements. Requirement for any secondary mitigation to be confirmed at ES stage.	
Visual Amenity	Decommissioning	Low to High depending on receptors.	Landscape restored to original condition. No visual impacts predicted.	Replacement agricultural grass, hedgerow and tree planting subject to landowner agreements. Requirement for any secondary mitigation to be confirmed at ES stage.	Not significant

## 11.10 Next steps

- 11.10.1 A full EIA will be undertaken to further develop the understanding of significance of impacts, in line with the methodology described in this PEIR and the technical methodology note shared with consultees.
- 11.10.2 Continuing assessment of the potential impacts on Landscape and Visual receptors during the construction, operational and decommissioning phases of the Project will be undertaken in accordance with the methodologies outlined in Section 11.4.
- 11.10.3 Any gaps in information identified at this PEIR stage will be considered and addressed along with specific mitigation measures as part of the assessments for the production of the EIA. This includes a cumulative and in-combination effects assessment.
- 11.10.4 The proposed Landscape and Visual assessment will be further developed and refined based on any relevant responses to Statutory Consultation and/or engagement.
- 11.10.5 In the ES, the detailed assessment will include further:
  - Detail on the refined AGIs and their position and scale;
  - Review of viewpoints and the ZTV model; and
  - Detailed assessment on the impacts of the AGIs and associated mitigation.

## 11.11 References

- Ref 11.1 European Landscape Convention (ELC), Council of Europe (2004). Available at <https://www.gov.uk/government/publications/european-landscape-convention-guidelines-for-managing-landscapes> (Accessed: July 22, 2022)
- Ref 11.2 National Policy Statement for Energy EN-1. Available at [https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\\_data/file/47854/1938-overarching-nps-for-energy-en1.pdf](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/47854/1938-overarching-nps-for-energy-en1.pdf) (Accessed: July 22, 2022)
- Ref 11.3 Draft National Policy Statement for Energy EN-1. Available at [https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\\_data/file/1015233/en-1-draft-for-consultation.pdf](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/1015233/en-1-draft-for-consultation.pdf) (Accessed: July 22, 2022)
- Ref 11.4 National Policy Statement for Gas Supply Infrastructure and Gas and Oil Pipelines (EN-4). Available at [https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\\_data/file/47857/1941-nps-gas-supply-oil-en4.pdf](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/47857/1941-nps-gas-supply-oil-en4.pdf) (Accessed: July 22, 2022)
- Ref 11.5 Draft National Policy Statement for Gas Supply Infrastructure and Oil Pipelines (draft EN-4). Available at [https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\\_data/file/1015237/en-4-draft-for-consultation.pdf](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/1015237/en-4-draft-for-consultation.pdf) (Accessed: July 22, 2022)
- Ref 11.6 National Planning Policy Framework. Available at [https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\\_data/file/1005759/NPPF\\_July\\_2021.pdf](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/1005759/NPPF_July_2021.pdf) (Accessed: July 22, 2022)
- Ref 11.7 East Riding Local Plan policy (2012-2029). Available at <https://www.eastriding.gov.uk/planning-permission-and-building-control/planning-policy-and-the-local-plan/east-riding-local-plan/> (Accessed: July 22, 2022)
- Ref 11.8 East Riding Local Plan Update (2020-2039). Available at <https://www.eastriding.gov.uk/planning-permission-and-building-control/planning-policy-and-the-local-plan/local-plan-update/draft-local-plan-update-consultation/> (Accessed: July 22, 2022)
- Ref 11.9 Selby District Core Strategy Local Plan (2013). Available at [https://www.selby.gov.uk/sites/default/files/Documents/CS\\_Adoption\\_Ver\\_OCT\\_2013\\_REDUCED.pdf](https://www.selby.gov.uk/sites/default/files/Documents/CS_Adoption_Ver_OCT_2013_REDUCED.pdf) (Accessed: July 22, 2022)
- Ref 11.10 Selby District Local Plan (2005). Available at <https://www.selby.gov.uk/selby-district-local-plan-sdip-2005> (Accessed: July 22, 2022)
- Ref 11.11 North Lincolnshire Local Development Framework (2011). Available at <https://www.northlincs.gov.uk/planning-and-environment/planning-policy-local-development-framework/#1591178700859-b856fc83-069c> (Accessed: July 22, 2022)
- Ref 11.12 North Lincolnshire Local Plan (2017 to 2036). Available at <https://localplan.northlincs.gov.uk/> (Accessed: July 22, 2022)
- Ref 11.13 North Yorkshire Minerals and Waste Plan (2022). Available at <https://www.northyorks.gov.uk/minerals-and-waste-joint-plan> (Accessed: July 22, 2022)
- Ref 11.14 Central Lincolnshire Local Plan (2017). Available at <https://www.n-kesteven.gov.uk/central-lincolnshire/> (Accessed: July 22, 2022)



- Ref. 11.15 National Planning Practice Guidance. Available at <https://www.gov.uk/government/collections/planning-practice-guidance> (Accessed: July 22, 2022)
- Ref. 11.16: The Guidelines for Landscape and Visual Assessment (GLVIA) Landscape Institute (LI) and the Institute of Environmental Management and Assessment (IEMA), 3rd Edition (2013).
- Ref 11.17: Landscape Institute (2019) Technical Guidance Note 06/19: Visual Representation of Development Proposals. Available at [https://landscapewpstorage01.blob.core.windows.net/www-landscapeinstitute-org/2019/09/LI\\_TGN-06-19\\_Visual\\_Representation.pdf](https://landscapewpstorage01.blob.core.windows.net/www-landscapeinstitute-org/2019/09/LI_TGN-06-19_Visual_Representation.pdf) (Accessed: July 22, 2022)
- Ref 11.18 Assessing Landscape Value Outside National Designations – Landscape Institute Technical Guidance Note 02/21 (Landscape Institute, 2021). Available at <https://landscapewpstorage01.blob.core.windows.net/www-landscapeinstitute-org/2021/05/tgn-02-21-assessing-landscape-value-outside-national-designations.pdf> (Accessed: July 22, 2022)
- Ref 11.19 An Approach to Landscape Character Assessment (Natural England, 2014). Available at [https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\\_data/file/691184/landscape-character-assessment.pdf](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/691184/landscape-character-assessment.pdf) (Accessed: July 22, 2022)
- Ref. 11.20 East Inshore and East Offshore marine plan areas, Marine Management Organisation 2012. Available at <http://publications.naturalengland.org.uk/publication/2736726?category=10006> (Accessed: July 22, 2022)
- Ref 11.21 Selby Landscape Character Assessment (2019). Available at <https://www.selby.gov.uk/landscape-character-assessments> (Accessed: July 22, 2022)
- Ref. 11.22 East Riding of Yorkshire Landscape Character Assessment (2018). Available at <https://www.eastriding.gov.uk/planning-permission-and-building-control/planning-policy-and-the-local-plan/landscape-character-assessment/> (Accessed: July 22, 2022)
- Ref 11.23 North Lincolnshire Landscape Character Assessment and Guidelines, North Lincolnshire Council (1999). Available at <https://m.northlincs.gov.uk/planningreports/localplan/spg5landscapecharacterassessment.pdf> (Accessed: July 22, 2022)
- Ref. 11.24 West Lindsey Landscape Character Assessment (1999). Available at <https://www.west-lindsey.gov.uk/planning-building-control/planning/planning-policy/evidence-base-monitoring/landscape-character-assessment> (Accessed: July 22, 2022)
- Ref. 11.25 The Historic Landscape Characterisation Project for Lincolnshire (HLC), Lincolnshire County Council 2011. Available at <https://www.lincolnshire.gov.uk/downloads/file/2206/the-historic-landscape-character-zones-pdf> (Accessed: July 22, 2022)
- Ref. 11.26 BS 5837 (2012) - Trees in Relation to Design, Demolition and Construction

National Grid plc,  
1-3 Strand,  
London.  
WC2N 5EH United Kingdom

Registered in England and Wales  
No. 4031152  
[nationalgrid.com](http://nationalgrid.com)