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Chapter 7

Landscape and Visual



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7 Landscape and Visual

7.1 Introduction

- 7.1.1 This chapter of the Preliminary Environmental Information Report (PEIR) presents an initial assessment of the likely significant effects on landscape and visual amenity as a result of the Viking CCS Pipeline (hereafter referred to as 'the Project').
- 7.1.2 Landscape and visual effects are interrelated with other environmental effects but will be assessed separately. Landscape effects associated with the Project relate to the changes to the fabric, character and quality of the landscape and how it is experienced. Visual effects relate closely to changes to the landscape, but also concern changes in people's views as a result of the introduction of the Project.
- 7.1.3 This chapter is supported by **Figure 7-1**: Landscape Designations and Representative Viewpoints, **Figure 7-2**: National and Regional Landscape Character and **Figure 7-3**: Local Landscape Character.

7.2 Legislation, Policy and Guidance

7.2.1 The Legislation, Policy and Guidance section of this chapter provides a brief overview of the relevant legislation, planning policy and technical guidance relevant to the landscape and visual assessment.

European Landscape Convention

- 7.2.2 The European Landscape Convention (ELC) (Ref 7-1) was signed by the UK Government in 2006 and came into effect in March 2007. The ELC is an international treaty concerning landscape. It focuses specifically on landscape issues and highlights the importance of integration of landscape into areas of policy, to promote protection, management and planning of all landscapes including the assessment of landscape and analysis of landscape change.
- 7.2.3 The ELC defines landscape as 'an area, as perceived by people, whose character is the result of the action and interaction of natural and / or human factors'. The ELC considers landscape as a whole (land or marine), from urban to rural areas, and whether special or degraded.

National Planning Policy

7.2.4 National Planning Policy relevant to Landscape and Visual is detailed in **Table 7-1**.

Table 7-1: National Planning Policy Relevant to Landscape and Visual

Policy Reference	Policy Context		
National Policy Statement			
Overarching Nation	onal Policy Statement for Energy (EN-1) (Ref 7-2)		
Section 5.9 Paragraph 5.9.9 – 5.9.11	"National Parks, the Broads and AONBs have been confirmed by the Government as having the highest status of protection in relation to landscape and scenic beauty. Each of these designated areas has specific statutory purposes which help ensure their continued protection and which the IPC should have regard to in its		

Policy	Policy Context		
Reference			
	decisions126. The conservation of the natural beauty of the landscape and countryside should be given substantial weight by the IPC in deciding on applications for development consent in these areas". "Nevertheless, the IPC may grant development consent in these areas in exceptional circumstances. The development should be demonstrated to be in the public interest and consideration of such applications should include an assessment of:		
the need for the development, including in terms of need to considerations, and the impact of consenting or not of it upon the local economy;			
	• the cost of, and scope for, developing elsewhere outside the designated area or meeting the need for it in some other way, taking account of the policy on alternatives set out in Section 4.4; and any detrimental effect on the environment, the landscape and recreational opportunities, and the extent to which that could be		
Draft Overarching	Mational Policy Statement for Energy (EN-1) (Ref 7-4)		
Section 5.10 Paragraph 5.10.9	"Virtually all nationally significant energy infrastructure projects will have effects on the landscape. Projects need to be designed carefully, taking account of the potential impact on the landscape. Having regard to siting, operational and other relevant constraints the aim should be to minimise harm to the landscape, providing reasonable mitigation where possible and appropriate."		
(EN-4) (Ref 7-3) a	atement for Gas Supply and Infrastructure and Gas and Oil Pipelines and Draft National Policy Statement for Gas Supply Infrastructure and ines (EN-4) (Ref 7-5)		
Section 2.21	"Sections 4.3 and 5.9 of EN-1 sets out the general principles that should		
Paragraph 2.21.1	be applied in the assessment of biodiversity and landscape and visual		
	impacts There will also be temporary visual impacts caused by the need to access the working corridor and to remove flora and soil. The working width of the pipeline will vary depending on the surrounding terrain. Temporary impacts could include large excavations where deep pits are needed for boring beneath rivers, roads and sensitive features".		
Paragraph 2.21.2	"Long term impacts upon the landscape for pipelines are likely to be limited, as once operational the main infrastructure is usually buried. They are likely to include:		
	 limitations on the ability to replant landscape features such as hedgerows or deep-rooted trees over or adjacent to the pipeline; and 		

Policy Reference	Policy Context		
	structures and indication points necessary to identify the pipeline route and provide it with service access".		
Paragraph 2.21.3	"The application 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 effect on the landscape".		
National Planning	Policy Framework (NPPF) (Ref 7-6)		
Paragraph 174	"Planning policies and decisions should contribute to and enhance the natural and local environment by [inter alia] protecting and enhancing valued landscapes, sites of biodiversity or geological value and soils (in a manner commensurate with their statutory status or identified quality in the development plan); [and] recognising the intrinsic character and beauty of the countryside, and the wider benefits from natural capital and ecosystem services; [and] minimising impacts on and providing net gains for biodiversity".		
Paragraph 176	"Great weight should be given to conserving and enhancing landscape and scenic beauty in National Parks, the Broads and Areas of Outstanding Natural Beauty, which have the highest status of protection in relation to these issues".		
National Planning	Practice Guidance (NPPG) (Ref 7-7)		
Paragraph: 036 Reference ID: 8-036- 20190721	"plans should recognise the intrinsic character and beauty of the countryside, and that strategic policies should provide for the conservation and enhancement of landscapes. This can include nationally and locally-designated landscapes but also the wider countryside." "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."		

Local Planning Policies

North Lincolnshire Council

The North Lincolnshire Core Strategy (2006 – 2026)

- 7.2.5 The Core Strategy, which was adopted in June 2011, sets out the long term vision for North Lincolnshire and provides a blueprint for managing growth and development in the area up to 2026. Policies relevant to landscape and visual amenity are set out below:
 - Policy CS5 Delivering Quality Design in North Lincolnshire notes that all new design in North Lincolnshire should be well designed and appropriate for its context. It notes that developments should incorporate appropriate landscaping and planting that enhances biodiversity and contributes to green infrastructure.
 - Policy CS12 South Humber Bank Strategic Employment Site A Broad Location notes
 that the biodiversity and landscape character of the Humber Estuary should be protected
 and enhanced by harmonising the landscape with port related development activities.
 The policy states that the South Humber Gateway Conservation Mitigation Strategy
 Delivery Plan will develop new green infrastructure directly linked to the Green
 Infrastructure Strategy for North Lincolnshire.

North Lincolnshire Local Plan Publication Draft Addendum Plan (2022)

- 7.2.6 This document is an Addendum to the Publication Draft and contained only focussed proposed changes and any modifications to boundaries on the Policies Map. The following proposed changes are relevant to landscape and visual amenity:
 - Policy DQE1 Protection of Landscape, Townscape and Views requires that development proposals do not cause unacceptable harm and protect the distinctive character and quality of the landscape. Development proposals should also take account of views in to and out of development areas and preserve local views and vistas.
 - Policy DQE11 Green Infrastructure Network sets out measures to maintain and improve the green infrastructure network and recognises the value and multifunctional benefits of the network. It states that proposals which assist in the delivery of the identified principles will be supported. Where loss or harm is unavoidable, suitable mitigation is provided for project where the need for and benefits outweigh adverse impacts.
 - Policy DQE12 Protection of Trees, Woodland and Hedgerows states that trees, woodland and hedgerows will be retained and protected, and planting schemes will be required to accompany applications for development.

North East Lincolnshire Council Local Plan (2013 to 2032)

- 7.2.7 The North East Lincolnshire Local Plan 2013 to 2032 was adopted on 22 March 2018 and policies relevant to landscape and visual amenity are set out below:
 - Policy 22 Good design in new developments requires a high standard of sustainable design informed by a thorough consideration of the particular site's context, protection and enhancement of natural assets and protection and enhancement of heritage assets including character and local distinctiveness.
 - Policy 31 Renewable and low carbon infrastructure requires proposals to consider the scale and nature of impacts on landscapes having particular regard to the Landscape Character Assessment and the impact on the setting and scenic beauty of the Lincolnshire Wolds Area of Outstanding Natural Beauty (AONB) and visual impact. Proposals should include the provision for decommissioning with the sites restored with

- minimal adverse impact on amenity and landscape and to consider opportunities for enhancement.
- Policy 40 Developing a green infrastructure network requires development to maintain and improve the network of green infrastructure where there are appropriate opportunities.
- Policy 42 Landscape requires due consideration to be given to the nature, location, design and implementation of development proposals. Developers should have regard to the landscape context (as identified in the Landscape Character Assessment) and consider the relevant landscape guidelines and management strategies. Priority will be given to the protection and enhancement of landscape character, natural beauty and the setting of the AONB.
- 7.2.8 A site specific landscape appraisal proportionate to the development should be prepared alongside a landscape scheme which responds to landscape character and appearance of the site. When incorporating landscape buffers these should enhance landscape quality and incorporate suitable landscape planting. Trees and hedgerows which offer value for amenity, biodiversity and landscape should be retained. Elements that contribute to historic landscape character should be retained and protected where appropriate.

East Lindsey District Council (up to 2031)

- 7.2.9 The East Lindsey Local Plan Core Strategy was adopted in July 2018. It sets out a number of spatial policies that are of relevance to landscape and visual amenity as listed below:
 - SP10 Design requires sustainable development which maintains and enhances the character of the District's towns, villages and countryside by reflecting the character of the surrounding area, minimises glare and light spillage and does not unacceptably harm the nearby residential amenity or landscape.
 - SP 23 Landscape requires landscapes to be protected and enhanced and guided by the District's Landscape Character Assessment with landscapes defined as highly sensitive afforded the greatest protection. The distinctive landscape character will not be compromised and the highest level of protection will be afforded to the AONB. Development will be supported where it conserves and enhances designated and historic landscapes (Lincolnshire Wolds, Coastal Country Park, Conservation Areas, Historic Park and Gardens and setting of listed buildings in the landscape).
 - SP 25 Green Infrastructure will seek to connect existing green infrastructure to improve the network of spaces for amenity and wildlife.
 - SP 27 Renewable and Low Carbon Energy will be supported where the adverse impact
 is weighed against the benefits and considered acceptable in relation to a number of
 matters including residential amenity, landscape character, significance (including the
 setting) of a historic garden, park or conservation area.

West Lindsey District Council Local Plan 2012-2036

- 7.2.10 The Central Lincolnshire Local Plan, adopted in 2017, is currently under review and was submitted to the Planning Inspectorate for review in July 2022.
- 7.2.11 The adopted Local Plan contains a number of policies relevant to landscape and visual matters which are set out below.
 - Policy LP17 Landscape, Townscape and Views aims to protect and enhance the
 intrinsic value of the landscape by maintaining and responding to natural features which
 contribute to the character of the area. Where benefits of the development outweigh the

harm then harm should be minimised and mitigated. All proposals should take account of views and key local views should be preserved or enhanced with particular consideration of views within landscapes that are more sensitive as a result of their open, exposed nature and intervisibility with various viewpoints. This policy is of particular relevance where proposals have the potential to impact upon the Lincolnshire Wolds and Areas of Great Landscape Value.

 Policy LP20 – Green Infrastructure Network aims to maintain and improve the green infrastructure network. The policy requires developments to ensure that existing and new green infrastructure are considered and to protect linear features of the green infrastructure network. Proposals which cause harm will require suitable mitigation.

Guidance

- 7.2.12 The landscape and visual assessment will be carried out in accordance with the following good practice guidance documents:
 - The Landscape Institute and Institute of Environmental Management and Assessment (2013), Guidelines for Landscape and Visual Impact Assessment (GLVIA), Third Edition (Ref 7-8); and
 - Infrastructure, Technical Guidance Note 04/2020 (Landscape Institute, 2020) (Ref 7-9).
- 7.2.13 GLVIA3 places a strong emphasis on the importance of professional judgement in identifying and defining the significance of landscape and visual effects. The LVIA will be undertaken by a Chartered Landscape Architect with experience in the assessment of similar types of projects.

7.3 Scoping Opinion and Consultation

Scoping

- 7.3.1 A scoping exercise was undertaken in early 2022 to establish the content of the landscape and visual assessment and the approach and methods to be followed.
- 7.3.2 The Scoping Report records the findings of the scoping exercise and details the technical guidance, standards, best practice and criteria to be applied in the assessment to identify and evaluate the likely significant effects of the Project on landscape and visual amenity.
- 7.3.3 Further to receipt of the Scoping Opinion issued by the Planning Inspectorate (included in *PEIR Volume IV Appendix 5.2*), the comments relating to landscape and visual assessment are presented in **Table 7-2** with a response on how this have either been considered within this PEIR chapter or will be in the full assessment.

Table 7-2: Summary of the EIA Scoping Opinion in relation to Landscape and Visual

Section Reference to Scoping Opinion	Applicant's proposed matter	Planning Inspectorate / Prescribed Consultee comments	Response
Planning Inspectorate Table 7-7	Effects on landscape character during operation as a result of the introduction of the pipeline (operation)	The Applicant proposes to scope out long term operational effects on landscape character as a result of the introduction of the pipeline. The Applicant states that the pipeline would be buried and would not affect landscape character. Therefore, operational phase effects associated with the pipeline would be scoped out of the LVIA. The Inspectorate considers that whilst in general the introduction of the pipeline is unlikely to give rise to significant long-term effects on landscape character during operation of the Proposed Development, it is unclear whether any easement required would result in permanent landscape changes and the potential for such effects should be considered. The ES should also assess the potential for significant short-term effects during the beginning of the operational phase, as proposed reinstatement measures mature along the pipeline route.	It is noted that the Planning Inspectorate has requested that short-term effects during the beginning of the operational phase is considered in the LVIA and that further consideration is given to whether the easement required has the potential for any permanent landscape changes. Short-term effects during the beginning of the operational phase have been considered in this preliminary LVIA. The easement required and its impacts on the reinstatement of landscape features will be considered in the ES once the required width has been confirmed.
Planning Inspectorate Table 7-7	Effects on visual amenity during operation as a result of the introduction of the pipeline	The Applicant intends to scope out long term operational effects on visual amenity as a result of the introduction of the pipeline. The Applicant states that the pipeline would be buried and would not impact visual amenity. Therefore, operational phase effects associated with the pipeline would be scoped out of the LVIA. The Inspectorate considers that whilst generally the introduction of the pipeline is unlikely to give rise to significant long-term effects on visual amenity during operation of the Proposed Development, it is unclear whether any easement	

Section Applicant's Planning Inspectorate / Prescribed Consultee comments proposed matter Opinion		Response	
		required would result in permanent changes to visual amenity and the potential for such effects should be considered. The ES should also assess the potential for significant short term effects during operation as proposed hedgerow and other vegetation mitigation matures along the pipeline route.	
Planning Inspectorate Table 7-7	Effects on landscape character and visual amenity during decommissioning of the Pipeline Offtake Facility, shutdown valves and offshore pipeline tie-in and outlet	The Applicant proposes to scope out effects on landscape character and visual amenity during decommissioning of the Pipeline Offtake Facility, shutdown valves and offshore pipeline tie-in and outlet. The Scoping Report states that the temporary and limited nature of the decommissioning of these features of the Proposed Development is not anticipated to give rise to any significant effects. It is noted that the specific decommissioning methodology is not known at this stage, however, the Scoping Report states that there are a number of ways the redundant pipeline could be dealt with, including being lifted and removed where appropriate. In the absence of more detailed information relating to the decommissioning phase of the Proposed Development, the Inspectorate does not agree to scope these matters from the assessment. Therefore, the ES should include an assessment of this matter or provide information to demonstrate the absence of a likely significant effect.	It is noted that the Planning Inspectorate does not agree to scope out decommissioning from the landscape and visual assessment. Decommissioning will be assessed in the full ES. For the purposes of this preliminary assessment, it has been considered that the effects during decommissioning would be similar to, or less than, those at the construction phase.
Planning Inspectorate Paragraph 7.2.17	Viewpoint locations	The Applicant should make effort to agree the number and location of the viewpoints with relevant consultation bodies.	The number and location of viewpoints will be agreed with the relevant stakeholders including the host local

Section Applicant's Planning Inspectorate / Prescribed Consultee comments proposed matter Opinion		Response	
			planning authorities and statutory consultees.
East Lindsey District Council	Compounds	Compounds: The EIA should assess the visual and residential impacts of compounds and any other structures/development/plant/machinery etc.	The temporary visual impacts of the construction compounds have been preliminarily assessed as part of the PEIR and this will be further assessed in the full ES.
	Viewpoints	All viewpoints should be based on winter months though summer months can also be included.	Winter viewpoint photography will be undertaken and presented in the full ES.
Lincolnshire County Council	Montages	It should also be considered if any viewpoint montages should be included with all landscape features removed to demonstrate the very worst potential impact on the visual character of the area.	Where photomontages are to be included within the full ES, they will demonstrate year 1 with vegetation removed during the construction phase removed from the view, newly planted mitigation (without any growth) and at year 15 of the scheme, when mitigation planting will have established.
Electricity Transmission Landscaping Scheme we request that only slow and low growing s shrubs are planted beneath and adjacent to		If a landscaping scheme is proposed as part of the proposal, we request that only slow and low growing species of trees and shrubs are planted beneath and adjacent to the existing overhead line to reduce the risk of growth to a height which compromises statutory safety clearances.	This comment will be taken into account during the full assessment when the specifics of the landscaping scheme is developed after Statutory Consultation.
Lincolnshire Council The representative views proposed will properly consider key receptors, including residents of Marsh lane and users of the on Figure 7-1. Figure 7-1.		Nineteen presentative viewpoints have been presented in Table 7-4 and shown on Figure 7-1 . Feedback during statutory consultation will be taken into	

Section Reference to Scoping Opinion	Applicant's proposed matter	Planning Inspectorate / Prescribed Consultee comments	Response
			consideration in selection of a final list of viewpoint locations for the full assessment which will be included within the ES.
West Lindsey District Council	Locations of the shutdown valves	It is agreed that the locations of the shutdown valves take account of the landscape sensitivities identified within the ES	The need for the Block Valve Stations was determined through an initial engineering assessment. This was to enhance the safety of the Project and ensure sections of the pipeline could be isolated if required. This work identified block valve locations at approximately 13 km, 24 km and 39 km along the pipeline route. The locations of the Block Valve Stations lie outside of the Lincolnshire Wolds AONB. Mitigation associated with the Block Valve Stations would be sensitively designed and included within the ES.
Natural England	Impact on Protected and Local	The proposed scheme includes a small section within the Lincolnshire Wolds Area of Outstanding Natural Beauty (AONB) and a reasonably significant section potentially or in its setting. The input of the Lincolnshire Wolds AONB Partnership would provide a valuable input into the report's assessment and recommendations for mitigation.	The Applicant is continuing to engage with the Lincolnshire Wolds AONB Partnership and Lincolnshire Wolds Countryside Management Service.
	Landscapes	The ES should include an assessment of local landscape character through the consideration of the relevant National Character Areas (NCAs) and any local landscape character	This chapter presents a preliminary assessment of local landscape character through the consideration of the relevant

Section Reference to Scoping Opinion	Applicant's proposed matter	Planning Inspectorate / Prescribed Consultee comments	Response
		 assessments. We would expect the following forms of guidance to be used, as indicated in the scoping report: 'Guidelines for Landscape and Visual Impact Assessment' (3rd Edition) (GLVIA3), Landscape Institute and Institute of Environmental Management and Assessment, 2013; 'An Approach to Landscape Character Assessment', Natural England, 2014: and 'Visual Representation of Development Proposals Technical Guidance Note' 06/19, Landscape Institute, 2019. 	National Character Area and local landscape character assessment. See section 7.7. The three forms of guidance have been used in the preliminary assessment as detailed in section 7.2 alongside the two additional guidance documents set out below and will also be used in the full assessment: • Assessing landscape value outside national designations, Technical Guidance Note 02/21 (Landscape Institute, 2021); and • Infrastructure, Technical Guidance Note 04/2020 (Landscape Institute, 2020).

Consultation

7.3.4 Consultation will be held with relevant LPAs (North Lincolnshire Council, North East Lincolnshire Council, West Lindsey District Council and East Lindsey District Council) and statutory consultees (Natural England and the Lincolnshire Wolds Countryside Management Service) as the LVIA progresses. This will help to inform detailed baseline survey and data collection; refinement of the location of representative viewpoints that will form the basis of the visual assessment; and, to agree the approach to mitigation measures and landscape reinstatement.

7.4 Assessment Method

- 7.4.1 The following section summarises the methodology for the preliminary LVIA which builds on the general assessment methodology presented in *Chapter 5: PEIR Assessment Methodology*. For clarity and in accordance with good practice, the assessment of likely significant effects on landscape character and visual amenity, although closely related, are undertaken separately.
- 7.4.2 GLVIA places a strong emphasis on the importance of professional judgement in identifying and defining the significance of landscape and visual effects. The LVIA is undertaken by Chartered Landscape Architects with experience in the assessment of similar types of projects.
- 7.4.3 The LVIA recognises that different stages of the Project may result in different levels of landscape and visual effects. In addition, it recognises the potential for landscape and visual effects to change over time, particularly where the Project incorporates mitigation planting. The LVIA therefore includes consideration of effects at construction, operation and decommissioning phases.
- 7.4.4 Effects relating to future decommissioning of the Project are expected to be no worse than those of construction, and as such are not discussed further in this assessment.
- 7.4.5 This preliminary assessment has been undertaken using desk-based investigations only.

Significance of effects

- 7.4.6 The preliminary landscape assessments have taken account of direct and indirect change on existing landscape elements, features and key characteristics, and evaluate the extent to which these would be lost or modified, in the context of their importance in determining the existing baseline character. The visual assessment considers likely changes to the visual composition, including the extent to which new features would distract or screen existing elements in the view or disrupt the scale, structure, or focus of the existing view.
- 7.4.7 The levels of landscape and visual effects are described with reference to the criteria outlined in **Table 7-3**, below. For the purposes of this assessment, effects of moderate or major are generally considered to be significant.

Table 7-3: Significance of Effect

Significance of Effect	Landscape	Visual
Major Beneficial	Alterations that result in a considerable improvement of the existing landscape resource. Valued characteristic features	Alterations that typically result in a pronounced improvement in the existing view.

Significance of Effect	Landscape	Visual
	would be restored or reintroduced.	
Moderate Beneficial	Alterations that result in a partial improvement of the existing landscape resource. Valued characteristic features would be largely restored or reintroduced.	Alterations that typically result in a noticeable improvement in the existing view.
Minor Beneficial	Alterations that result in a slight improvement of the existing landscape resource. Characteristic features would be partially restored.	Alterations that typically result in a limited improvement in the existing view.
Negligible Beneficial	Alterations that result in a very slight improvement to the existing landscape resource, not uncharacteristic within the receiving landscape.	Alterations that typically result in a barely perceptible improvement in the existing view.
Neutral	No alteration to any of the components that contribute to the existing landscape resource.	No change to the existing view.
Negligible Adverse	Alterations that result in a very slight deterioration to the existing landscape resource, not uncharacteristic within the receiving landscape.	Alterations that typically result in a barely perceptible deterioration in the existing view.
Minor Adverse	Alterations that result in a slight deterioration of the existing landscape resource. Characteristic features would be partially lost.	Alterations that typically result in a limited deterioration in the existing view.
Moderate Adverse	Alterations that result in a partial deterioration of the existing landscape resource. Valued characteristic features would be largely lost.	Alterations that typically result in a noticeable deterioration in the existing view.
Major Adverse	Alterations that result in a considerable deterioration of the existing landscape resource. Valued characteristic features would be wholly lost.	Alterations that typically result in a pronounced deterioration in the existing view.

7.5 Baseline Environment and Study Area

7.5.1 An initial study of the baseline environment has been undertaken through desk-based research to establish the existing conditions of the landscape and visual resources to inform the options appraisal process, and to inform the ongoing design development of the Project.

7.5.2 Desk-based research involves a review of mapping and aerial photography, planning and policy documents, landscape character assessments, and other sources of information relevant to the baseline environment of the Study Area.

Study Area

- 7.5.3 An initial Study Area of 1 km from the Draft Order Limits (including shutdown valves) and Block Valve Stations has been identified for the landscape and visual assessments. However, in proximity to the Immingham Facility and the Theddlethorpe Facility the Study Area was extended to 3 km from the Draft Order Limits. It is judged that significant landscape or visual effects will be unlikely beyond this Study Area. The LVIA Study Area is shown on Figure 7-1.
- 7.5.4 The extent of the Study Area has been informed by a review of the maximum parameters of the Project, desk-based research, the appraisal work undertaken to date to inform the routeing and siting work undertaken to date, knowledge of the area and professional judgement. The Study Area will be further refined at the detailed assessment stage including the production of a Zone of Theoretical Visibility (ZTV) to ensure a proportional approach, focussed on any potential significant effects. The production of photomontages, at locations to be agreed with the host local authorities, would be undertaken at the detailed assessment stage.

Landscape Designations

- 7.5.5 The landscape designation context of the Study Area is shown on **Figure 7-1**.
- 7.5.6 A small part of the Study Area is located within the Lincolnshire Wolds Area of Outstanding Natural Beauty (AONB) and an area identified as an Area of Great Landscape Value (AGLV). The AGLV is a non-statutory, local-level designation identified by West Lindsey in the adopted West Lindsey District Council Local Plan (Ref 7-10).

Landscape Character

National Character Areas (NCAs)

- 7.5.7 The national and local landscape character context of the Study Area is shown on **Figure 7-2.** At the national level, the study area falls within parts of the following Natural England National Character Areas (NCAs) (Ref 7-11):
 - NCA 41: Humber Estuary;
 - NCA 42: Lincolnshire Coast and Marshes; and
 - NCA 43: Lincolnshire Wolds

Regional Landscape Character Areas (RCAs)

- 7.5.8 At the regional level, landscape character is identified by the Lincolnshire County Council (2011) The Historic Character of The County of Lincolnshire (Ref 7-12) and the East Midlands Region Landscape Character Assessment (Ref 7-13).
- 7.5.9 The Study Area encompasses regional-level Regional Character Areas (RCA) including:

The Historic Character of The County of Lincolnshire

- RCA 3: The Northern Marshes:
- RCA 4: The Wolds: and
- RCA 8: The Grazing Marshes.

East Midlands Region Landscape Character Assessment

- RCA 1a: Coastal Saltmarsh;
- RCA 1b: Coastal Dunes;
- RCA 1c: Shallow Coastal Waters;
- RCA 2a: Settled Fens and Marshes;
- RCA 2c: Fen and Marsh Margin Farmlands; and
- RCA 7a: Chalk Wolds.

Local Landscape Character Areas (LCAs)

- 7.5.10 At the local level, landscape character is identified by:
 - North Lincoln Council (1999) North Lincolnshire Landscape Character Assessment and Guidelines (Ref 7-14);
 - North East Lincolnshire Council (2015) North East Lincolnshire Landscape Character Assessment, Sensitivity and Capacity Study (Ref 7-18);
 - The Historic Character of The County of Lincolnshire (Ref 7-12);
 - East Lindsey Council (2009) East Lindsey District Landscape Character Assessment (Ref 7-15); and
 - West Lindsey Council (1999) West Lindsey District Landscape Character Assessment (Re 7-16).
- 7.5.11 The Study Area encompasses local-level Landscape Character Areas (LCA) as shown on **Figure 7-3** and set out below:

North Lincolnshire Landscape Character Assessment and Guidelines

- LCA Lincolnshire Drift; and
- LCA Humber Estuary.
- 7.5.12 A review of the current North Lincolnshire Landscape Character Assessment (Ref 7-17) was commissioned by JBA Consulting and forms part of the evidence base for the emerging North Lincolnshire Local Plan. The assessment subdivided the Landscape Character Areas (LCAs) into Landscape Character Types (LCTs). The Study Area encompasses the following LCTs within the Humber Estuary LCA:
 - Open Undulating Farmland; and
 - Industrial Landscape.
- 7.5.13 The LCT within the Lincolnshire Drift LCA is:
 - Open Undulating Farmland.

North East Lincolnshire Landscape Character Assessment, Sensitivity and Capacity Study

- LCA Humber Estuary
- LCA Lincolnshire Coast and Marshes
- LCA Lincolnshire Wolds

East Lindsey District Council Landscape Character Assessment

• LCA G1: Binbrook to Telford Wolds Farmland;

- LCA I1: Holton le Clay to Great Steeping Middle Marsh;
- LCA J1: Tetney Lock to Skegness Coastal Outmarsh; and
- LCA K1: Donna Nook to Gibraltar Point Naturalistic Coast.

West Lindsey Council Landscape Character Assessment

• LCA Wolds' Estates.

Representative Viewpoint Locations

- 7.5.14 The visual assessment will be based on a series of representative viewpoints. These viewpoints have been chosen to provide a representative cross section of receptor types and locations within the Study Area, focused on those with the potential for significant effects.
- 7.5.15 Table 7-4 details the representative viewpoint locations proposed for views of the pipeline construction works located within the Draft Order Limits, Block Valve Stations, Immingham Facility and Theddlethorpe Facility and their reason for inclusion in the LVIA. The location of the proposed representative viewpoints is shown on Figure 7-1.

Table 7-4: Representative Viewpoint Locations

Viewpoint Number	Grid Reference (X, Y)	Location Description	Reason for Inclusion
1	518106, 418050	Station Road Proposed England Coast Path PRoW 530	Representative of recreational receptors including PRoW and long distance recreational trail with potential views towards the Immingham Facility including 25m high venting stack.
2	517044, 417160	Marsh Lane/ Rosper Road Proposed England Coast Path	Representative of recreational receptors users of the long distance recreational trail and users of the local road network with potential views towards the Immingham Facility including 25m high venting stack.
3	516966, 414709	Brocklesby Avenue, Immingham	Representative of settlement and users of the local road network with potential views towards the pipeline construction works located within the Draft Order Limits.
4	519402, 411226	Riby Road, Stalingborough	Representative of settlement and users of the local road network with potential views towards the pipeline construction works located within the Draft Order Limits.

Viewpoint	Grid Reference (X,	Location	Reason for Inclusion
Number 5	Y) 519996, 407456	Description PRoW 107 St	Representative of settlement
		Lawrence Trail, Aylesby	and recreational receptors including PRoW with potential views towards the pipeline construction works located within the Draft Order Limits and Block Valve Station No1.
6	520034, 404664	Walk Lane, Irby Upon Humber	Representative of settlement, recreational receptors including PRoW and visitors to the AONB and users of the local road network with potential views towards the pipeline construction works located within the Draft Order Limits.
7	521349, 403660	Welbeck Hill, Irby Upon Humber	Representative of recreational receptors including PRoW and visitors to the AONB with potential views towards the pipeline construction works located within the Draft Order Limits.
8	525579, 400677	Ashby cum Fenby PRoW 150	Representative of settlement and recreational receptors including PRoW with potential views potential views towards the pipeline construction works located within the Draft Order Limits and Block Valve Station No2.
9	526270, 400293	Thoroughfare, Ashby cum Fenby	Representative of recreational receptors including PRoW and users of the local road network with potential views towards the pipeline construction works located within the Draft Order Limits and Block Valve Station No2.
10	525807, 398077	Hawerby Road, East Ravensdale	Representative of users of the local road network with potential views towards the pipeline construction works located within the Draft Order Limits and Block Valve Station No2.

Viewpoint	Grid Reference (X,	Location	Reason for Inclusion
Number	Y) ` ` `	Description	
11	526480, 397691	Lane near Hawerby	Representative of settlement and recreational receptors including PRoW with potential views potential views towards the pipeline construction works located within the Draft Order Limits.
12	528624, 398335	A16/ High Street North Thoresby	Representative of settlement and users of the local road network with potential views towards the pipeline construction works located within the Draft Order Limits.
13	533649, 395071	Main Road, Covenham St Bartholomew	Representative of settlement and users of the local road network with potential views towards the pipeline construction works located within the Draft Order Limits.
14	536186, 391116	Yarburgh Road, Alvingham	Representative of settlement and users of the local road network with potential views towards the pipeline construction works located within the Draft Order Limits and Block Valve Station No3.
15	539264, 388847	Middlesykes Lane, Grimoldby	Representative of settlement, recreational receptors including PRoW and users of the local road network with potential views towards the pipeline construction works located within the Draft Order Limits.
16	541877, 388702	Main Road, Saltfleatby	Representative of settlement, recreational receptors including PRoW and users of the local road network with potential views towards the pipeline construction works located within the Draft Order Limits.
17	547254, 387169	Sea Lane, Threddlethorpe	Representative of settlement and users of the local road network with potential views towards the pipeline construction works located

Viewpoint Number	Grid Reference (X, Y)	Location Description	Reason for Inclusion
			within the Draft Order Limits and Theddlethorpe Facility including 25m high venting stack.
18	548003, 388483	PRoW 252 off Mabblethorpe Road A1031	Representative of settlement, recreational receptors including PRoW and users of the local road network with potential views towards the pipeline construction works located within the Draft Order Limits and Theddlethorpe Facility including 25m high venting stack.
19	549047, 386800	Kent Avenue, Theddlethorpe	Representative of settlement and users of the local road network with potential views towards the Theddlethorpe Facility including 25m high venting stack.

- 7.5.16 The locations of the Block Valves have been determined taking into consideration landscape and visual factors. Additional viewpoints (VP 7 and VP 10) have been identified to assess the impacts of these permanent above ground structures.
- 7.5.17 Feedback from consultees during statutory consultation will be taken into consideration in selection of a finalised list of viewpoint locations for the full assessment which will be included within the ES.

Date:



AECOM

PROJECT

Viking CCS Pipeline

LEGEND

Draft Order Limits Study Area

Route Section Break

Viewpoint Location

Block Valve Station Location Area of Great Landscape Value

Lincolnshire Wolds Area of Outstanding Natural Beauty

NOTES:

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FIGURE TITLE

Figure 7-1 Landscape Designations and Representative Viewpoints

ISSUE PURPOSE

PROJECT NUMBER / REFERENCE

60668955 / VCCS 221114 PEIR 7-1

Date:

Checked:

Drawn:



PROJECT

Viking CCS Pipeline

LEGEND

Draft Order Limits

Route Section Break

National Character Area:

NCA 41: Humber Estuary

NCA 42: Lincolnshire Coast and Marshes

NCA 43: Lincolnshire Wolds

East Midlands Region Landscape Character

1A: Coastal Saltmarshes and

1B: Coastal Dunes, Beach and Intertidal Sand Flats

1C: Shallow Coastal Waters

2A: Settled Fens and Marshes

2C: Fen and Marsh Margin Farmlands

7A: Chalk Wolds

Historic Landscape Character Area:

The Northern Marshes

The Grazing Marshes

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FIGURE TITLE

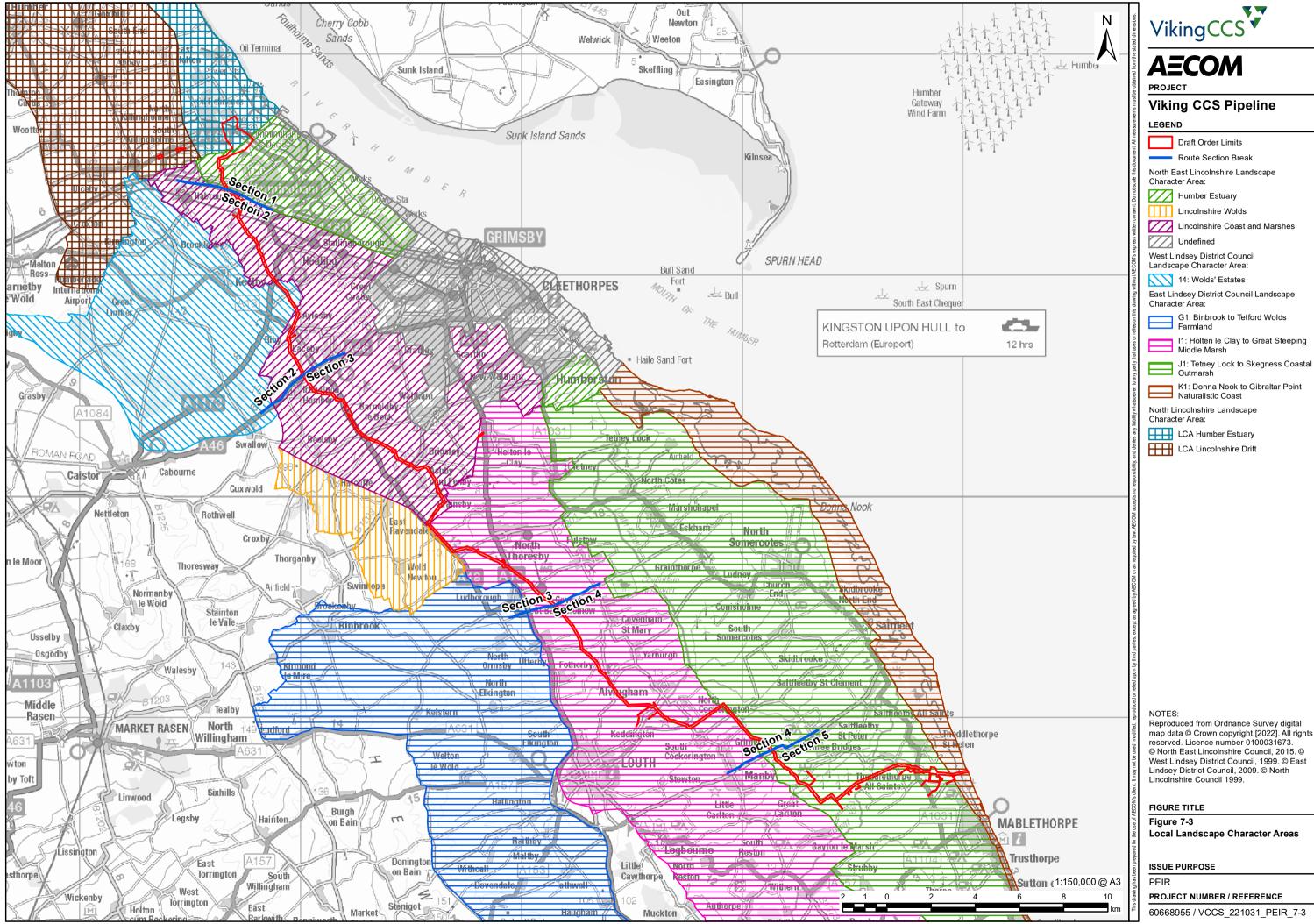
Figure 7-2 National and Regional Landscape **Character Areas**

ISSUE PURPOSE

PEIR

PROJECT NUMBER / REFERENCE

60668955 / VCCS 221031 PEIR 7-2



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Local Landscape Character Areas

7.6 Mitigation

7.6.1 This section sets out the embedded mitigation and additional mitigation and enhancement measures which are likely to be required.

Embedded Mitigation

- 7.6.2 EIA is an iterative process which informs the development of a project's design. Where the outputs of the preliminary assessment identify likely significant effects, changes to the design can be made or mitigation measures can be built-in to the proposal to reduce these effects.
- 7.6.3 This type of mitigation is defined as embedded mitigation, as mitigation measures which have been identified and adopted as part of the evolution of the Project design ("embedded" into the Project design).
- 7.6.4 The design of the Project will be further developed to reflect the findings of ongoing environmental studies, comments raised during this statutory consultation and ongoing engagement with stakeholders. As the design develops, the embedded mitigation measures will also be refined as part of an iterative process.
- 7.6.5 The siting of the Immingham Facility, the Theddlethorpe Facility and the routeing of the onshore pipeline corridor has reduced the potential for significant landscape and visual effects, through seeking to avoid the more sensitive landscape features, protected trees (e.g., Ancient Woodland) and proximity to settlement.

Additional Mitigation

- 7.6.6 As part of the PEIR, a Preliminary Mitigation Register has been developed which outlines all of the currently identified environmental commitments, mitigation measures, and measures to ensure compliance with legislation and requirements of statutory environmental bodies and monitoring programmes are identified. The Preliminary Mitigation Register is presented in section 1.7 of *PEIR Volume IV Appendix 3.1 Preliminary Draft CEMP*.
- 7.6.7 The Preliminary Mitigation Register identifies the Project-specific commitments with reference to any relevant documentation and provides a framework within which all parties are aware of their responsibilities. This Preliminary Mitigation Register will be further updated as part of the EIA process and an updated version will be included in the ES.
- 7.6.8 Those relevant to the LVIA comprise:
 - C1: Undertake a topographic and photographic survey of the site prior to construction to record current condition and to inform reinstatement:
 - C2: Prior to the commencement of works, the Contractor will prepare a Landscape and Ecology Management Plan (LEMP) based upon the Outline LEMP to ensure that habitats created/ enhanced for biodiversity net gain offsetting will meet the required habitat conditions; and that long-term management requirements are clearly defined.
 - C3: Weed control should be undertaken as appropriate;
 - C4: Signage would be kept to a minimum and only positioned at site entrances. This would allow for project information boards only;
 - C5: There would be static lighting points fixed to temporary structures such as the masts, cabins, workshops, gantry cranes and silos. These would be used to illuminate regularly used work areas, the car park and access areas. Baffles would be installed on all lighting columns and light is to be angled to face works.

- C6: Opportunities to reduce impacts of nearby highly sensitive visual receptors should be sought through sensitive design of construction compounds e.g. organising compound features and using earthworks / fencing to screen internal activities during the construction phase;
- C7: Standard temporary boundary fences for construction compounds would be used instead of Heras fencing. These reduce visual intrusion, assist in noise attenuation and ensure public safety (including uninvited intruder entrance to the site). Any damage or graffiti would be rectified as soon as reasonably practicable. The boundary fence would be maintained to an acceptable standard;
- C8: Reinstatement of any sections of hedgerow and/or other vegetation required to be removed to facilitate the Project;
- C9: Landscape maintenance will be put in place to maintain any new planting for a period of five years; and
- C10: Post construction, hedgerows will be re-planted and breaks in existing retained hedgerows within the Project boundary will be gapped up (using locally sourced plants), as appropriate and in agreement with the landowner.
- 7.6.9 The preliminary assessment is undertaken with the assumption that the embedded and additional mitigation measures are in place.

7.7 Preliminary Assessment of Effects

Construction Phase

7.7.1 During construction there will be potential temporary and permanent impacts on landscape and visual receptors as a result of the removal of landscape characteristic features, removal of agricultural land, the introduction of site compounds, material storage areas, introduction of earth moving machinery and vehicle movements. These aspects could lead to significant effects on landscape characteristics and visual receptors with views of the construction operations.

Operational Phase

- 7.7.2 It is anticipated that where vegetation has been removed to facilitate the construction stage there is the potential for long term and permanent impacts on landscape characteristics and views from visual receptors during:
 - The establishment period of reinstatement planting to restore landscape characteristics or reinstate screening vegetation (at year 15 of the operational pipeline); and
 - Locations where reinstatement planting cannot be undertaken where easements are required.
- 7.7.3 The preliminary assessment is undertaken with the assumption that the embedded and additional mitigation measures are in place and is presented in **Table 7-5** and **Table 7-6**.

Table 7-5: Preliminary Landscape and Visual Assessment for the Construction Phase

Receptor	Potential Impact	Duration	Mitigation	Likely significance of effect	Confidence in Prediction
Landscape Characte	r				
National Character Areas (NCAs) (NCA 41: Humber Estuary; NCA 42: Lincolnshire Coast and Marshes; NCA 43: Lincolnshire Wolds)	Introduction of construction activity including vehicle movements, signage and fencing, excavations, earth movements, removal of vegetation including hedgerows and trees, and the removal of land for agricultural use. Potential effects on tranquility resulting from construction operations as set out above. Change to landscape pattern following the removal of field boundary hedgerows. Loss of landscape elements resulting from the potential removal of trees and vegetation.	Impact on landscape character from the construction operations associated with the Block Valve Stations, Immingham Facility and Theddlethorpe Facility will be short term. Long term impacts will arise as a result of the removal of hedgerow and trees.	C5 - Sensitive design of construction compounds. C6 - Standard temporary boundary fences.	As a result of the large scale of the NCA compared with the scale of Project the impact on the NCA is expected to be Not Significant as a result of the short term effects associated with the construction phase.	There is moderate confidence in the prediction of level of significance of effects as a result of the baseline work undertaken, sensitive siting of the pipeline construction route and uncertainty over construction methods to be utilised.
Regional Character Areas (RCAs)	As above	As above	As above	As a result of the scale of the RCAs compared with	As above

Receptor	Potential Impact	Duration	Mitigation	Likely significance of effect	Confidence in Prediction
The Historic Character of The County of Lincolnshire (RCA 3: The Northern Marshes; RCA 4: The Wolds; and RCA 8: The Grazing Marches)				the scale of Project the impact on the RCAs may be Significant as a result of the short term effects associated with the construction phase and the long term effects resulting from vegetation removal.	
East Midlands Region Landscape Character Assessment (RCA 1a: Coastal Saltmarsh; RCA 1b: Coastal Dunes; RCA 1c: Shallow Coastal Waters; RCA 2a: Settled Fens and Marshes; RCA 2c: Fen and Marsh Margin Farmlands; and RCA 7a: Chalk Wolds)					
Local Character Areas (LCAs) North Lincolnshire Landscape Character Assessment and Guidelines (The	Introduction of construction activity including vehicle movements, signage and fencing, excavations, earth movements,	As above	C7 - Reinstatement and replacement planting of hedgerows, trees, and other vegetation.	As a result of the scale of the LCAs compared with the scale of Project the impact on the LCAs may be Significant as a result of the short term effects	As above

Receptor	Potential Impact	Duration	Mitigation	Likely significance of effect	Confidence in Prediction
Humber Estuary, Lincolnshire Coast and Marshes) West Lindsey District Council Landscape Character Assessment (Wolds' Estates) North East Lincolnshire Landscape Character Assessment (Humber Estuary, Lincolnshire Coast and Marshes) East Lindsey District Council Landscape Character Assessment (LCA G1: Binbrook to Telford Wolds Farmland; LCA I1: Holton le Clay to Great Steeping Middle Marsh;	removal of vegetation including hedgerows and trees, and the removal of land for agricultural use. Potential effects on tranquility resulting from construction operations as set out above. Change to landscape pattern following the removal of field boundary hedgerows. Loss of landscape elements resulting from the potential removal of trees and vegetation. Change to the character, extent, and nature of available views due to potential localised reduction of enclosure from the loss of vegetation.		B9 - Defunct or species poor hedgerows to be restored/replanted with species rich varieties. F10 - Reinstatement of agricultural land to existing use. C5 - Sensitive design of construction compounds. C6 - Standard temporary boundary fences. C8 - Maintenance programme to ensure that damage is rectified and the removal of graffiti.	associated with the construction phase and the long term effects resulting from vegetation removal.	

Receptor	Potential Impact	Duration	Mitigation	Likely significance of effect	Confidence in Prediction
LCA J1: Tetney Lock to Skegness Coastal Outmarsh; and LCA K1: Donna Nook to Gibraltar Point Naturalistic Coast.)					
Landscape Designation	ons				
AONB: Lincolnshire Wolds	Introduction of construction activity including vehicle movements, signage and fencing, excavations, earth movements, removal of vegetation including hedgerows and trees, and the removal of land for agricultural use. Potential effects on tranquility as a result construction activities as set out above. Change to landscape pattern following the removal of field boundary hedgerows.	Impact on landscape character from the construction activities associated with the Block Valve Stations, will be short term. Long term impacts will arise as a result of the removal of hedgerow and trees.	C7 - Reinstatement and replacement planting of hedgerows, trees and other vegetation. B9 - Defunct or species poor hedgerows to be replanted with species rich F10 - Reinstatement of agricultural land to existing use. C5 - Sensitive design of construction compounds.	Loss of landscape elements such as hedgerows, trees and vegetation which contribute to the natural beauty of the designation. Introduction of plant machinery at odds with the scenic qualities of the area. The sensitivity and landscape value of the AONB designation and the loss of the features described above, means that the impact is expected to be Significant.	There is moderate confidence in the prediction of level of significance of effects as a result of the baseline work undertaken, sensitive siting of the pipeline construction route and uncertainty over construction methods to be utilised.

Receptor	Potential Impact	Duration	Mitigation	Likely significance of effect	Confidence in Prediction
	Loss of landscape elements resulting from the potential removal of trees and vegetation		C6 - Standard temporary boundary fences. C8 - Maintenance programme to ensure damage is rectified and graffiti is removed.		
Visual Receptors					
Residents within 2 km of the Block Valve Stations, Immingham Facility and Theddlethorpe Facility.	Change in character of views as a result of the introduction of construction activities including excavation of landform, removal of landscape features including hedgerow and construction of the AGIs, Immingham Facility and Theddlethorpe Facility.	Where views are available of the construction operations associated with the AGI, Immingham Facility and Theddlethorpe Facility, impacts on receptors will be short term. Long term impacts will arise as a result of the removal of hedgerow and trees.	C5 - Siting of site compounds and material storage areas to minimise visual intrusion. C6 - To minimise views of construction works, solid boundary hoardings will be provided in proximity to receptors.	The nature of impacts and significance of effects will vary for each individual receptor based on existing views, although as a result of the existing industrial nature around Immingham the effects are expected to be Not Significant. Impacts associated with the construction of the AGIs will be limited as a result of intervening screening vegetation and the relatively long distance to residential receptors. Impacts	There is moderate confidence in the level of significance of effect as a result that no detailed field work has been undertaken to date to look at groups of potential receptors, their existing view and predicted view of construction operations.

Receptor	Potential Impact	Duration	Mitigation	Likely significance of effect	Confidence in Prediction
				associated with the Theddlethorpe Facility including 25m high vent stack may result in significant effects as a result of limited intervening vegetation and the rural characteristics at Theddlethorpe. Therefore, effects on a number of receptors are expected to be Significant .	
Residents within 1 km of the Draft Order limits.	Change in character of views as a result of the removal of landscape features including hedgerow, introduction of construction activities including excavation of landform, earth stockpiles, vehicle movements and site compounds.	Where views are available of the construction activities associated with the Draft Order Limits, impacts on receptors will be short term. Long term impacts will arise as a result of the removal of hedgerow and trees.	C4 – Construction lighting will be low level and directional to reduce light spill and glare. C5 - Siting of site compounds and material storage areas to minimise visual intrusion. C6 - To minimise views of construction works, solid boundary hoardings will be provided in proximity to receptors.	The nature of impacts and significance of effects will vary for each individual receptor based on existing views and proximity to the pipeline construction route. Therefore, effects on a number of receptors are expected to be Significant.	There is moderate confidence in the level of significance of effect as a result that no detailed field work has been undertaken to date to look at groups of potential receptors, their existing view and predicted view of construction operations.

Receptor	Potential Impact	Duration	Mitigation	Likely significance of effect	Confidence in Prediction
 Recreational users (Public Rights of Way (PRoW)) and recognised viewpoints Users of local roads Places of business Users of trunk roads 	Change in character of views as a result of the removal of landscape features including hedgerow, introduction of construction activities including excavation of landform, earth stockpiles, vehicle movements, site compounds, construction of the Block Valve Stations, Immingham Facility and Theddlethorpe Facility.	Where views are available of the construction operations associated with the pipeline route, Block Valve Stations, Immingham Facility and Theddlethorpe Facility, impacts on receptors will be short term. Long term impacts will arise as a result of the removal of hedgerow and trees.	C4 – Construction lighting will be low level and directional to reduce light spill and glare. C5 - Siting of site compounds and material storage areas to minimise visual intrusion. C6 - To minimise views of construction works, solid boundary hoardings will be provided in proximity to receptors.	The nature of impacts and significance of effects will vary for each individual receptor based on existing views. There is the potential for moderate impacts to PRoW users in proximity to the construction of the Block Valve Station near Ashby cum Fenby and users of local roads and PRoW in proximity of the construction of the pipeline route. Therefore, effects on a number of receptors are expected to be Significant .	There is moderate confidence in the level of significance of effect as a result that no detailed field work has been undertaken to date to look at groups of potential receptors, their existing view and predicted view of construction operations.

Table 7-6: Preliminary Landscape and Visual Assessment for the Operational Phase

Receptor	Potential Impact	Duration	Mitigation	Likely significance of effect	Confidence in Prediction
Landscape Character					
National Character Areas (NCAs) (NCA 41: Humber Estuary; NCA 42: Lincolnshire Coast	Introduction of Block Valve Stations, Immingham Facility and Theddlethorpe Facility into an existing industrial landscape.	Long term impacts where the Block Valve Stations, Immingham	C7 - Reinstatement and replacement planting of hedgerows, trees,	The scale of the character areas compared with the scale of Project means that the impact on the National Character Areas	There is high confidence in the prediction of level of significance of effects as a result

Receptor	Potential Impact	Duration	Mitigation	Likely significance of effect	Confidence in Prediction
and Marshes; NCA 43: Lincolnshire Wolds)	Change to landscape pattern following the removal of field boundary hedgerows. Loss of landscape elements resulting from the potential removal of trees and vegetation	Facility and Theddlethorpe Facility are to be located as these are permanent structures. The reinstatement of hedgerow and tree planting will not have a noticeable effect until established and mature.	and other vegetation. B9 - Defunct or species poor hedgerows to be restored/replanted with species rich varieties. F10 - Reinstatement of agricultural land to existing use.	is expected to be Not Significant. The location of the Block Valve Stations and Immingham Facility are congruous with adjacent landuse. The Theddlethorpe Facility will be located within a rural landscape, although it is anticipated that impacts on landscape characteristic features would be limited.	of the baseline work undertaken, sensitive siting of the Block Valve Stations and the industrial context of the Immingham Facility and Theddlethorpe Facility and uncertainty over the extent of vegetation removal during the construction stage.
Regional Character Areas (RCAs) The Historic Character of The County of Lincolnshire (RCA 3: The Northern Marshes; RCA 4: The Wolds; and RCA 8: The Grazing Marches) East Midlands Region Landscape Character	As above	As above	As above	The scale of the RCAs compared with the scale of Project means that the impact on the RCAs is expected to be Not Significant. The location of the Block Valve Stations, Immingham Facility is congruous with adjacent landuse. The Theddlethorpe Facility will be located within a rural landscape, although it is anticipated that impacts	As above

Receptor	Potential Impact	Duration	Mitigation	Likely significance of effect	Confidence in Prediction
Assessment (RCA 1a: Coastal Saltmarsh; RCA 1b: Coastal Dunes; RCA 1c: Shallow Coastal Waters; RCA 2a: Settled Fens and Marshes; RCA 2c: Fen and Marsh Margin Farmlands; and RCA 7a: Chalk Wolds)				on landscape characteristic features would be limited. The replanted landscape features will restore landscape characteristics in the long term.	
Local Character Areas (LCAs) North Lincolnshire Landscape Character Assessment and Guidelines (The Humber Estuary, Lincolnshire Coast and Marshes) West Lindsey District Council Landscape Character Assessment (Wolds' Estates) North East Lincolnshire	As above	As above	As above	The scale of the LCAs compared with the scale of Project means that the impact on the LCAs is expected to be Not Significant. The location of the Block Valve Stations and Immingham Facility are congruous with adjacent landuse. The Theddlethorpe Facility will be located within a rural landscape, although it is anticipated that impacts on landscape characteristic features would be limited. The replanted landscape	As above

Receptor	Potential Impact	Duration	Mitigation	Likely significance of effect	Confidence in Prediction	
Landscape Character Assessment (Humber Estuary, Lincolnshire Coast and Marshes)				features will restore landscape characteristics in the long term.		
East Lindsey District Council Landscape Character Assessment (LCA G1: Binbrook to Telford Wolds Farmland; LCA I1: Holton le Clay to Great Steeping Middle Marsh; LCA J1: Tetney Lock to Skegness Coastal Outmarsh; and LCA K1: Donna Nook to Gibraltar Point Naturalistic Coast.)						
Landscape Designations						
AONB: Lincolnshire Wolds	Change to landscape pattern following the removal of field boundary hedgerows. Loss of landscape elements resulting from	The reinstatement of hedgerow and tree planting will not have a noticeable effect	Reinstatement of hedgerows and vegetation removed to facilitate development and enhancement of	Loss of landscape elements such as hedgerows, trees and vegetation which contribute to the natural beauty of the designation.	There is moderate confidence in the prediction of level of significance of effects as a result	

Receptor	Potential Impact	Duration	Mitigation	Likely significance of effect	Confidence in Prediction
	the potential removal of trees and vegetation	until established and mature.	defunct and species poor hedgerows with species rich plants.	As the impacts occur in a sensitive and valued landscape designated as an AONB, the impact may be Significant in the short term. The replanted landscape features will restore landscape characteristics in the medium to long term to Not Significant levels.	of the baseline work undertaken and uncertainty over the extent of vegetation removal during the construction stage.
Visual Receptors					
Residents within 2 km of the Block Valve Stations, Immingham Facility and Theddlethorpe Facility including 25m high vent stack.	Change in character of views as a result of vegetation removal during the construction stage and the introduction of permanent structures.	Where views are available of the Block Valve Stations, Immingham Facility and Theddlethorpe Facility, impacts on receptors will be long term as a result of the permanent structures. The reinstatement of hedgerow and tree planting will not have a	C7 – reinstatement of hedgerows and vegetation	The nature of impacts and significance of effects will vary for each individual receptor based on existing views, although as a result of the existing industrial nature around Immingham the effects are expected to be Not Significant. Impacts associated with the AGIs will be limited as a result of intervening screening vegetation and the relatively long distance to residential receptors. Impacts	There is moderate confidence in the level of significance of effect as a result that no detailed field work has been undertaken to date to look at groups of potential receptors, their existing view and predicted view of operational structures.

Receptor	Potential Impact	Duration	Mitigation	Likely significance of effect	Confidence in Prediction
		noticeable effect until established and mature.		associated with the Theddlethorpe Facility including 25m high vent stack may result in significant effects as a result of limited intervening vegetation and the rural characteristics at Theddlethorpe. Therefore, effects on a number of receptors are expected to be Significant .	
Residents within 1 km of the onshore Draft Order Limits.	Change in character of views as a result of vegetation removal during the construction stage.	Where the character of views has been altered as a result of vegetation removal, long term impacts will arise until the reinstatement of hedgerow and tree planting has established and matured.	C7 – reinstatement of hedgerows and vegetation	The nature of impacts and significance of effects will vary for each individual receptor based on existing views and proximity to vegetation that has been removed. Although, as a result of sensitive design and the limiting hedgerow removal during the construction stage where possible, the effects on receptors are expected to be Not Significant.	There is moderate confidence in the level of significance of effect as a result that no detailed field work has been undertaken to date to look at groups of potential receptors, their existing view and predicted view of operational structures.

Receptor	Potential Impact	Duration	Mitigation	Likely significance of effect	Confidence in Prediction
 Recreational users (Public Rights of Way (PRoW)) and recognised viewpoints Users of local roads Places of business Users of trunk roads 	Change in character of views as a result of the removal of landscape features including hedgerow, introduction of permanent features including AGIs, Immingham Facility and Theddlethorpe Facility.	Where views are available of the AGI, Immingham Facility and Theddlethorpe Facility, impacts on receptors will be long term as a result of the permanent structures. The reinstatement of hedgerow and tree planting will not have a noticeable effect until established and mature.	C7 – reinstatement of hedgerows and vegetation	The nature of impacts and significance of effects will vary for each individual receptor based on existing views. There is the potential for effects to receptors where the nature of the view has been altered as a result of vegetation removal and the introduction of permanent structures. Therefore, effects on a number of receptors are expected to be significant. Although once mitigation planting has matured then effects are expected to reduce to Not Significant.	There is moderate confidence in the level of significance of effect as a result that no detailed field work has been undertaken to date to look at groups of potential receptors, their existing view and predicted view of operational structures.

Decommissioning

7.7.4 Landscape and visual effects during the decommissioning phase of the Project will be similar or less than effects during the construction phase. The preliminary LVIA presented for the construction phase is therefore considered representative (or an overestimate) of the decommissioning phase. As such a separate assessment for the preliminary LVIA from the decommissioning phase is not included.

7.8 Summary and Next Steps

- 7.8.1 This chapter of the PEIR has considered the potential effects on landscape and visual amenity as a result of the Project. It has set out the landscape and visual amenity preliminary assessment methodology, baseline environment and study area and discusses potential mitigation measures. The assessment has been undertaken in line with GLVIA 3.
- 7.8.2 The preliminary assessment has identified potential significant effects on landscape characteristics and visual receptors during the construction period. It is assessed that effects on landscape characteristics will reduce to not significant levels during operation. It is predicted that effects on a number of visual receptors would reduce to not significant levels during operation. Recreational receptors may experience significant effects where the nature of the view may be changed as a result of the introduction of permanent structures or vegetation removal.
- 7.8.3 A detailed LVIA of the potential impacts of the Project on landscape and visual receptors during construction, operation and decommissioning will be undertaken and included in the ES. A ZTV will be produced for the permanent structures and photomontages will be produced to support the ES. The measures in the Preliminary Draft CEMP (*Appendix 3-1*) measures are preliminary at this stage and further mitigation will be considered once the full extent of impacts are known.
- 7.8.4 Further engagement will be undertaken on the proposed methodology, viewpoints and potential mitigation.

7.9 References

Ref 7-1 The European Landscape Convention (ELC)

Ref 7-2 The Overarching 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

Ref 7-3 The National Policy Statement for Gas Supply and 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

Ref 7-4 Draft Overarching 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

Ref 7-5 Draft National Policy Statement for Gas Supply Infrastructure and Gas and Oil Pipelines (EN-4). Available :

https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/ 1015237/en-4-draft-for-consultation.pdf

Ref 7-6 National Planning Policy Framework. Available at:

https://www.gov.uk/government/publications/national-planning-policy-framework--2

Ref 7-7 The NPPG for 'Natural Environment': Available at: https://www.gov.uk/guidance/natural-environment

Ref 7-8 The Landscape Institute and Institute of Environmental Management and Assessment (2013), Guidelines for Landscape and Visual Impact Assessment (GLVIA), Third Edition

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