

Viking CCS Pipeline

7.1 Planning Design and Access Statement



Document Reference: EN070008/APP/7.1

Applicant: Chrysaor Production (U.K.) Limited,

a Harbour Energy Company PINS Reference: EN070008 Planning Act 2008 (as amended)

The Infrastructure Planning (Applications: Prescribed Forms and Procedure) Regulations 2009 - Regulation 5(2)(q)

Date: October 2023





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Executive Summary

This Planning, Design and Access Statement (PDAS) has been prepared to accompany an application for a Development Consent Order (DCO) for the Viking CCS¹ Pipeline. The Application for the DCO is submitted to the Secretary of State for Energy Security and Net Zero, pursuant to the Planning Act 2008 (PA 2008).

The Viking CCS Pipeline ('the Proposed Development') comprises a new 24" (609mm) diameter onshore pipeline of approximately 55.5 km in length, which will transport Carbon Dioxide (CO₂) from the Immingham industrial area to the Theddlethorpe area on the Lincolnshire coast, where it will connect into the existing 36" (921 mm) diameter offshore Lincolnshire Offshore Gas Gathering System (LOGGS) pipeline.

The Proposed Development is an integral part of the overall Viking CCS Project, which intends to transport compressed and conditioned CO₂ received at a facility at Immingham to store in depleted gas reservoirs under the Southern North Sea. The offshore elements of the Viking CCS Project, including the transport of CO₂ through the LOGGS pipeline to the Viking gas fields under the North Sea, are subject to a separate consenting process.

The key components of the Proposed Development comprise:

- Immingham Facility:
- Approximately 55.5 km 24 inch (") onshore steel pipeline (including cathodic protection):
- Three Block Valve Stations:
- Theddlethorpe Facility:
- Existing LOGGS pipeline and isolation valve to the extent of the Order Limits at Mean Low Water Springs (MLWS):
- Permanent access to facilities:
- Mitigation and landscaping works:
- Temporary construction compounds, laydown, parking and welfare facilities: and
- Temporary access points during construction.

Further details of each element of the Proposed Development are set out in Chapter 3: Description of the Proposed Development of the Environmental Statement [EN070008/APP/6.2.3].

The Proposed Development is an essential part of the wider Viking CCS Project that will provide the secure storage of up to 300 million tonnes of CO₂ contributing towards the UK's legally binding targets of achieving 'Net Zero' by 2050. Up to date UK Government policy, including the draft Overarching National Policy Statement for Energy (EN-1) 2023, provides significant support for CCS and the Proposed Development.

¹ Carbon Capture and Storage (CCS)

1. Introduction

1.1 Overview of the Proposed Development

- 1.1.1 This Planning Design and Access Statement (PDAS) has been prepared by AECOM on behalf of Chrysaor Production (U.K.) Limited (the Applicant), a Harbour Energy Company to support the application for a Development Consent Order (DCO) for The Viking CCS Carbon Dioxide Pipeline (the Proposed Development). The application for the Development Consent Order (DCO) is being submitted to the Secretary of State (SoS) in the Department for Energy Security and Net Zero (DESNZ) under Section 37 of the Planning Act 2008 (PA 2008) (Ref 1).
- 1.1.2 The Viking CCS Pipeline ('the Proposed Development') comprises a new 24" (609 mm) diameter onshore pipeline of approximately 55.5 km in length, which will transport Carbon Dioxide (CO₂) from the Immingham industrial area to the Theddlethorpe area on the Lincolnshire coast, where it will connect into the existing 36" (921 mm) diameter offshore LOGGS pipeline.
- 1.1.3 The Proposed Development is an integral part of the overall Viking CCS Project (Ref 2), which intends to transport compressed and conditioned CO₂ received at a facility at Immingham to store in depleted gas reservoirs under the Southern North Sea. The offshore elements of the Viking CCS Project, including the transport of CO₂ through the LOGGS pipeline to the Viking gas fields under the North Sea, are subject to a separate consenting process.
- 1.1.4 It is worthy of note that emitters will capture, condition and compress CO₂ and transfer it to the applicants Immingham Facility. As a result, the Proposed Development does not include for the capture of CO₂ at industrial facilities. Further details of each element of the Proposed Development are set out in Chapter 3: Description of the Proposed Development of the Environmental Statement [EN070008/APP/6.2.3].
- 1.1.5 The Viking CCS Pipeline was originally named the 'V Net Zero Pipeline Project'. In October 2022, the V Net Zero Pipeline Project changed its name to the Viking CCS Pipeline to better reflect the strength of the Proposed Development's carbon capture and storage capabilities. While all submission documents refer to the proposed development as the 'Viking CCS Pipeline' two rounds of consultation, including both the first non-statutory consultation and the further non-statutory consultation were conducted in 2022 prior to the name change.
- 1.1.6 The Proposed Development is linear in nature, the principal component being a buried pipeline approximately 55.5 km in length extending into the host Local Authority areas of: North Lincolnshire Council, North East Lincolnshire Council, West Lindsey District and East Lindsey District Council. Both East Lindsey and West Lindsey District Councils are located within the administrative area of Lincolnshire County Council.
- 1.1.7 The Proposed Development incorporates the following permanent infrastructure:
 - Buried 24 " (609 mm) external diameter pipeline:

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- Three Block Valve Stations:
- Immingham Facility:
- Theddlethorpe Facility:
- Electricity connections from the distribution network operator's existing network: and
- Repurposing of the existing Lincolnshire Offshore Gas Gathering System (LOGGS) pipeline and isolation valve to the extent of the Order Limits at Mean Low Water Springs (MLWS).
- 1.1.8 The Proposed Development also includes the following temporary infrastructure:
 - Three construction compounds:
 - Temporary access and laydown areas:
 - All temporary construction work locations for the pipeline, block valves, Immingham Facility and Theddlethorpe Facility: and
 - Temporary access routes including access bellmouths.
- 1.1.9 A glossary of the terms used in this PDAS is included in Appendix A of this document.

1.2 Purpose and Structure of this Planning, Design and Access Statement

- 1.2.1 The purpose of this PDAS is to assist the Examining Authority (ExA) and the SoS in their assessment of the Application for a DCO by setting out how the Proposed Development accords with relevant planning policy; notably the designated and draft National Planning Policy Statements (NPSs) for energy infrastructure and relevant policy at a local level and matters of importance. The PDAS sets out the need for the Proposed Development and how it will make a significant contribution to the UK achieving its legally binding target of being 'Net Zero' by 2050, that it will provide low carbon industry/manufacturing and support a low carbon economy, whilst helping to create employment opportunities in the Humber Region.
- 1.2.2 The PDAS is structured as follows:
 - **Section 1: Introduction** provides an overview of the Proposed Development, Applicant and consenting regime.
 - Section 2: Legislative and Planning Policy Context provides an overview of the national and local planning policy documents that are of relevance to the Proposed Development.
 - Section 3: The Site and Context describes the existing land use and characteristics of the land within the Order Limits and provides information about the land use designations and allocations.
 - Section 4: Planning History presents the methodology and findings of searches of the Local Planning Authority databases completed at the

project inception and throughout the design process and when defining the Order Limits. A list of the planning history is included in Appendix B of this document.

- Section 5: Need and benefits of the Proposed Development outlines the need and policy support for the Proposed Development.
- Section 6: Alternatives, Design and Access provides a summary of the alternatives and the design and access details for the Proposed Development. It outlines how the design responds to the setting and context of the Order Limits, provides suitable access and the right amount and scale of facilities for its intended purpose of the above ground installations.
- Section 6: Legislative and Planning Policy Context provides an overview of the national and local planning policy documents that are of relevance to the Proposed Development.
- Section 7: Planning Appraisal presents the key findings of the planning policy analysis. The national and local policy compliance tables are included in Appendix C and D of this PDAS.
- **Section 8: Conclusion** presents the reasoned planning balance for the Proposed Development and conclusion.

1.3 Key Terms used in this PDAS

- 1.3.1 The following terms are used throughout this PDAS which are of key importance:
 - The Viking CCS Project: is the name of the wider Project. The aim of the Viking CCS Project is to transport and store up to 10 million tonnes of CO₂ annually by 2030, rising to 15 million tonnes by 2035. The Viking CCS Project comprises; the Viking CCS Pipeline; the transportation of CO₂ via the existing and repurposed LOGGS pipeline to approximately 120 km offshore; the development of new subsea pipeline and the storage of CO₂ in depleted gas reservoirs in the North Sea.
 - The Viking CCS Pipeline: consists of the Immingham Facility, an onshore buried pipeline extending from Immingham to Theddlethorpe with three Block Valve Stations, the Theddlethorpe Facility, and an offshore pipeline tie-in and outlet up to Mean Low Water Springs (MLWS). The Viking CCS Pipeline forms the basis of this DCO application.
 - The Proposed Development: comprises the onshore elements of the
 wider Viking CCS Project, from the point of receipt of CO₂ at the
 Immingham Facility, through its onshore transportation in the new
 pipeline to the new Theddlethorpe Facility, and onward transportation
 through the existing LOGGS offshore pipeline to MLWS tide mark.
 Onward transmission from this point through the existing LOGGS pipeline
 to offshore storage will be subject to a separate consent application;
 - Order Limits: The Order Limits illustrate the outer limits of the Proposed Development as shown on the Location Plan [EN070008/APP/4.1]. It comprises both the temporary and permanent land take required for

- construction and operation of the Proposed Development for which powers are sought through the DCO. For the majority of the pipeline route the Order Limits are 100 m wide in total;
- Working Width: The working width is the construction corridor within
 which all construction activities would occur. For the majority of the
 pipeline route this will be 30 m, except at trenchless crossings or
 temporary access/laydown areas, where the width may be increased up
 to a maximum 50 m.

1.4 The Applicant

- 1.4.1 The Applicant is Chrysaor Production (U.K.) Limited, which is a subsidiary of Harbour Energy plc. Harbour Energy plc was formed in 2021 through a merger between Chrysaor Holdings Limited and Premier Oil plc, and is the largest UK listed independent oil and gas company with its legacy companies having almost 40 years of operating experience.
- 1.4.2 The Applicant is committed to playing their role in the transition to a lower-carbon economy, whilst minimising the environmental impact of their operations around the world. Their overall strategy also includes leveraging their existing skills and infrastructure to pursue CO₂ transport and storage.
- 1.4.3 In line with this strategy, the Applicant has been awarded carbon storage licences by the North Sea Transition Authority (NSTA) and have applied for a seabed lease with The Crown Estate (TCE) in relation to the wider Viking CCS Project. TCE has subsequently indicated its support to the required lease option (subject to final lease agreement).
- 1.4.4 The Applicant has a long history of operating in the Humber and Lincolnshire area, providing safe and environmentally sound operations. In particular, they have more than 40 years of operational experience relating to the Viking field area, helping to support their geological understanding of the field and its ability to act as a regionally extensive 'superseal', securing the storage of CO₂. Additionally, they also operated the former Theddlethorpe Gas Terminal (TGT) site over the same time period. The TGT began operating in 1972 to process natural gas from the Viking gas fields. The received gas was conditioned to a suitable specification before being exported into the National Grid Transmission System. The site operated until August 2018 at which time it was decommissioned and demolished with areas of hardstanding and perimeter landscaping remaining.
- 1.4.5 Harbour Energy entered into an agreement with BP Exploration Operating Company Limited in March 2023, whose ultimate parent company is BP plc ("BP"). BP have acquired a 40% share (non-operating) of the Viking CCS Project. BP strives to be a balanced energy company that offers solutions across the entire energy spectrum. The company is a strong investor in low carbon energies including biofuels, onshore and offshore wind, solar energy, hydrogen and carbon capture, utilisation and storage to strengthen its position as an energy provider through the energy transition.

1.5 Definition of the Proposed Development as a Nationally Significant Infrastructure Project

- 1.5.1 The Proposed Development is defined as a Nationally Significant Infrastructure Project (NSIP) under section 14(1)(g) and 21 of the PA 2008 which states:
 - (1) In this Act "nationally significant infrastructure project" means a project which consists of any of the following –
 - (g) the construction of a pipe-line other than by a gas transporter
- 1.5.2 Section 21 'Other Pipe-lines' of the PA 2008 provides that:
 - (1) The construction of a pipe-line other than by a gas transporter is within section 14(1)(g) only if (when constructed) the pipe-line is expected to be:
 - (a) a cross-country pipeline,
 - (b) a pipeline the construction of which would (but for section 33(1) of this Act) require authorisation under section 1(1) of the Pipelines Act 1962 (c. 58) (cross-country pipelines not to be constructed without authorisation), and
 - (c) within subsection (2).
 - (2) A pipeline is within this subsection if one end of it is in England or Wales and
 - (a) the other end of it is in England or Wales
- 1.5.3 Further to Section 21(1)(a) of the PA 2008, a cross-country pipeline is defined in Section 235 of the PA 2008 as having: "the same meaning as in the Pipelines Act 1962". Section 66(1) of the PLA provides that a 'Cross-country pipeline' means a 'pipe-line' whose length exceeds, or is intended to exceed, 16.093 km".
- 1.5.4 The length of the buried pipeline being proposed as part of the Proposed Development is approximately 55.5 km, and as such is defined as a 'cross country pipeline'. As such, the Proposed Development is a NSIP.
- 1.5.5 As the Proposed Development constitutes a NSIP the Applicant must make an application under the PA 2008 for a DCO to construct and operate it. Therefore, an application for a DCO is being submitted to the SoS for DESNZ via the Planning Inspectorate. The DCO application is accompanied by an Environmental Statement (ES), prepared in accordance with the Infrastructure Planning (Environmental Impact Assessment) Regulations 2017 (EIA Regulations) (Ref 3).
- 1.5.6 The DCO, if granted would be known as The Viking CCS Carbon Dioxide Pipeline 202[X] Order.

1.6 Associated Development

1.6.1 Section 115 of the PA 2008 states that a DCO can include consent for "associated development". This is development that is not an NSIP in its own right but is functionally related to the NSIP. This may be development that

- supports the construction, operation or decommissioning of the NSIP; or which helps to address the impacts of the NSIP; or is of a type normally brought forward with the NSIP.
- 1.6.2 Associated Development necessary for the Proposed Development includes a reception area at Immingham to receive CO₂ from facilities in the Immingham industrial area, three Block Valve Stations located along the pipeline route and a facility at Theddlethorpe. Associated Development also includes the permanent and temporary access roads, construction compounds and welfare and laydown areas to be used during the construction period, and electricity connections from the distribution network operator's existing network.
- 1.6.3 Schedule 1 of the Draft DCO [EN070008/APP/2.1] provides the formal description of the works for which the DCO is sought including a description of the associated development.

1.7 Other Consents

- 1.7.1 Section 150 of the PA 2008 provides that the requirement to obtain certain consents for a NSIP can be removed and powers can be included in the DCO. Regulation 5 of the Infrastructure Planning (Interested Parties and Miscellaneous Prescribed Provisions) Regulations 2015 and Schedule 2 part 1 lists the consents that can be disapplied with powers being included in the DCO.
- 1.7.2 Powers to construct and operate the Proposed Development have been included in the Draft DCO [EN070008/APP/2.1], however it will still be necessary to apply for some permits, consents and licences that cannot be included in the DCO. Details of the powers included in the DCO and the consents that will be applied for separately are listed in the Consents and Agreements Position Statement [EN070008/APP/7.2].

1.8 Prescribed Matters

- 1.8.1 Prescribed Matters relevant to applications for development consent that are being determined under Section 105 of the PA 2008 are set out in The Infrastructure Planning (Decisions) Regulations 2010 (referred to herein as the IPDR 2010) (Ref 4). Regulations 3 and 7 are relevant to the Proposed Development. The IPDR 2010 outlines in regulation 3(1) that,
 - 'When deciding an application which affects a listed building or its setting, the decision maker must have regard to the desirability of preserving the listed building or its setting or any features of special architectural or historic interest which it possesses'.
- 1.8.2 Similarly, regulation 3(2) and 3(3) of the IPDR 2010 state that,
 - 'When deciding an application relating to a conservation area, the decision maker must have regard to the desirability of preserving or enhancing the character or appearance of that area'
 - 'When deciding an application for development consent which affects or is likely to affect a scheduled monument or its setting, the decision maker must

have regard to the desirability of preserving the scheduled monument or its setting'.

1.8.3 Regulation 7 of the IDPR 2010 relates to biological diversity.

'When deciding an application for development consent the Panel or Council must have regard to the United Nations Environmental Programme Convention on Biological Diversity of 1992'.

Prescribed Forms and Procedures for Pipelines

1.8.4 Regulations 5 and 6 of the Infrastructure Planning (Applications: Prescribed Forms and Procedure) Regulations 2009 (the APFP Regulations) (Ref 5) prescribes that certain information should be provided in applications for development consent. Regulation 6(4) sets out prescribed matters for the construction of a pipeline project. The relevant information is set out in Table 1-1

Table 1-1: Information required in respect of Regulation 6 of the APFP Regulations

Prescribed Matter	Information Required
(a) The name of the proposed pipeline	The Viking CCS Pipeline
(b) The owner of the proposed pipeline	Chrysaor Production (U.K.) Limited, 23 Lower Belgrave Street, London, SW1 0NR Company number: 00524868
(c) The start and end point of the proposed pipeline	Start Point: Land west of Rosper Road, Immingham, North Lincolnshire. End Point: Land at the former TGT, Theddlethorpe, East Lindsey.
(d) The length of the proposed pipeline in km	Approximately 55.5 km
(e) The external diameter in millimetres of the proposed pipeline	609 mm (24 ")
(f) What will be conveyed by the proposed pipeline	Carbon Dioxide – CO ₂
(g) Whether the grant of any rights in land or consents to road or river crossing works are required and if so, whether they can be obtained by agreement	It is necessary to acquire land and rights both temporarily and permanently. Discussions with landowners and land interests are ongoing and will continue during the examination period

1.9 Environmental Impact Assessment

1.9.1 The EIA Regulations provide the procedures for Environmental Impact Assessment ('EIA') in the context of NSIPs in England and Wales. Schedule 1 of the EIA Regulations list the types of developments where an EIA is mandatory and Schedule 2 sets out the types of development that require an EIA if significant environmental effects are likely to occur. The Proposed

Development falls within paragraph 3(j) of Schedule 2: "installations for the capture of CO₂ streams for the purposes of geological storage pursuant to Directive 2009/31/EC from installations not included in Schedule 1 to these Regulations." It was considered that the Proposed Development was likely to have significant effects on the environment and therefore an EIA has been carried out and an Environmental Statement (ES) has been prepared and submitted with the Application.

- 1.9.2 In accordance with Regulation 10 of the EIA Regulations, an EIA Scoping Report was submitted to the Planning Inspectorate on 29th March 2022, outlining the intended methodology and scope for the assessment of each environmental topic. The EIA Scoping Report was based on the early design for the Proposed Development.
- 1.9.3 A Scoping Opinion was received from the Planning Inspectorate on 5th May 2022 which examined the proposed scope of the EIA. The Planning Inspectorate engaged with a range of prescribed consultees (including statutory and non-statutory bodies, agencies and groups) seeking their views on the content of the proposed EIA. In the Scoping Opinion, the Inspectorate confirmed that the Applicant notified the SoS under Regulation 8(1)(b) of the EIA Regulations that they propose to provide an ES in respect of the Proposed Development and, by virtue of Regulation 6(2)(a), the Proposed Development is 'EIA development'.
- 1.9.4 The matters raised in the Scoping Opinion have been reviewed and have been taken into consideration in the relevant technical assessments within the ES. Appendix 5-3 of the ES [EN070008/APP/6.4.5.3] includes a summary of how issues raised in the Scoping Opinion have been addressed in the ES.

1.10 Habitats Regulation Assessment

1.10.1 As part of the decision-making process the SoS must undertake an Appropriate Assessment of whether the Proposed Development is likely to have a significant impact on areas that have been internationally designated for nature conservation purposes (i.e. European sites). This requirement is set out in the Conservation of Habitats and Species Regulations 2017 (Habitats Regulations) (Ref 6). A Report to Inform the Habitat Regulations Assessment (HRA) [EN070008/APP/6.5] has been prepared to support this Application and to inform the Appropriate Assessment. The HRA report includes at stage 1 of the assessment screening of sites to be included in the assessment. Stage 2 of the assessment provides an Appropriate Assessment which concludes that with the application of appropriate mitigation measures, no likely significant adverse effects are anticipated as a result of the Proposed Development.

1.11 Water Framework Directive

1.11.1 The Proposed Development interacts with 13 Water Framework Directive (WFD) surface water bodies and two groundwater bodies. A Water Framework Directive Assessment (WFDa) has been produced as part of the EIA and is reported in Appendix 11-4 of the ES [EN070008/APP/6.4.11.4] to determine compliance with WFD objectives. This includes assessing the

impact of the Proposed Development on the biological, physico-chemical and hydromorphological quality to ensure no deterioration and no prevention of future improvement in water body status. Both surface and groundwater bodies are considered. The WFD Assessment confirms that the construction of the Proposed Development will be carried out in accordance with the Draft Construction Environment Management Plan (CEMP) which will describe the principles for the protection of the water environment during construction. The Draft CEMP is to be supported by a Water Management Plan (WMP) in Appendix 11-6 of the ES [EN070008/APP/6.4.11.6] that will provide greater detail regarding the mitigation to be implemented to protect the water environment from adverse effects during construction. As such, it is anticipated that all WFD construction risks could be mitigated with appropriate planning and management. The assessment demonstrates that the Proposed Development is compliant with the objectives of the WFD: it would not cause deterioration in status of the water bodies and would not prevent the water bodies achieving Good Ecological Status and Good Ecological Potential.

1.12 Compulsory Acquisition

- 1.12.1 It will be necessary to acquire land and rights to land both temporarily and permanently to be able to construct, operate and maintain the Proposed Development. The Draft DCO [EN070008/APP/2.1] submitted with this application includes powers that would authorise the compulsory acquisition of land and rights in land (including the creation of new rights and the imposition of restrictive covenants). Information on the interests and rights that exist in relation to the land within the Order Limits is contained in the Book of Reference [EN070008/APP/3.3], and the justification for the proposed compulsory acquisition of interests and rights in land is set out in the Statement of Reasons [EN070008/APP/3.2]. The Applicant has submitted a Funding Statement [EN070008/APP/3.1] in accordance with regulation (5)(2)(h) of the APFP Regulations demonstrating its ability to fund compulsory acquisition.
- 1.12.2 Land referencing has been carried out during the pre-application stage to determine persons with interests in land inside the Order Limits. Persons with an interest in land have been identified and contacted during the consultation and to start negotiations regarding the acquisition of land. Negotiations are ongoing and are detailed in the Schedule of Negotiations and Powers Sought [EN070008/APP/3.4].

1.13 Consultation

Pre-Application Consultation

1.13.1 Requirements for pre-application consultation are set out in the PA 2008. Section 42(1)(d) and 44 of the Act sets out how the Applicant should consult persons with an interest in land. Section 47(6)(a) of the Act sets out an applicant's duty to consult the local community about a proposed application, as well as the requirement for applicants to publicise a statutory notice, required under Section 48 and the requirement to have regards to consultation responses under Section 49

- 1.13.2 In line with these requirements, non-statutory, statutory and an additional consultation has taken place, further details of which are outlined below and within the Consultation Report [EN070008/APP/5.1] submitted in support of this application. The Applicant commenced introductory project meetings with technical stakeholders between July 2021 and April 2022. These included meeting with the following:
 - Planning Inspectorate
 - Environment Agency
 - Natural England
 - Historic England
- 1.13.3 A series of introductory project meetings were also held separately with host Local Planning Authorities between November 2021 and March 2022. These included:
 - Lincolnshire County Council, including the Lincolnshire Wolds Countryside Service:
 - North Lincolnshire Council:
 - North East Lincolnshire Council:
 - East Lindsey District Council: and
 - West Lindsey District Council.
- 1.13.4 Feedback from stakeholder engagement has been reviewed on an ongoing basis by the Project team and where appropriate, considered for further investigation to inform the ongoing design. Following this, the relevant authorities were offered update meetings as the Proposed Development progressed from design to submission.

Non-Statutory Consultation

- 1.13.5 Two separate phases of non-statutory consultation were undertaken. The first was held for six weeks, from 26th April 2022 to 7th June 2022, whilst a second phase was held from 8th September 2022 to 6th October 2022.
- 1.13.6 The first phase of consultation introduced the Proposed Development, and sought feedback from members of the public, impacted landowners and key project stakeholders on the initial pipeline corridor. The Applicant informally consulted the host local authorities; North Lincolnshire Council, North East Lincolnshire Council, East Lindsey District Council, West Lindsey District Council and Lincolnshire County Council, as well as the Planning Inspectorate, prior to the submission of the EIA Scoping Report. Further consultation has also occurred with all of the local authorities and other statutory bodies following receipt of the Scoping Opinion. Feedback from the first consultation was reviewed and a number of key changes were made to the route of the pipeline corridor. This included moving the corridor further away from a number of settlements and a school. The extent of the changes was such that a second phase of consultation was held to provide an opportunity to comment on the changes to the corridor. The feedback received during the second non statutory consultation helped to validate the

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updated pipeline corridor which was then refined. The Non-statutory Consultation Report was published at the launch of the statutory consultation and summarised the material published, feedback received, and changes made to the pipeline route corridor.

Statutory Consultation

- 1.13.7 Statutory Consultation was undertaken over a nine-week period, commencing 22nd November 2022 and ending on 24th January 2023. Methods of engagement that were undertaken as part of the Statutory Consultation included the following:
 - In-person events, at which members of the community could interact directly with members of the Project team:
 - Virtual Consultation Room (VCR), an interactive web-based tool setting out details of the consultation and the consultation documents:
 - An online webinar, where members of the community could ask the Project Team questions:
 - Publication of the following documents online and made available in the local area; a consultation brochure, FAQ document, response form, maps, the Non-Statutory Consultation Report, and the Preliminary Environmental Information Report (PEIR):
 - Notices in a local newspapers and posters in community locations: and
 - Engagement with local authorities and elected members.
- 1.13.8 Consultation was also undertaken with prescribed stakeholder bodies and affected landowners, in accordance with Sections 42 and 48 of the PA 2008 and Regulation 13 of the EIA Regulations.
- 1.13.9 The Applicant took account of all responses received during Statutory Consultation during design evolution for the Proposed Development, in accordance with Section 49 of the PA 2008. Details of any responses received during consultation and the account taken of those responses are included in the Consultation Report [EN070008/APP/5.1] submitted in support of this DCO application. The Consultation Report demonstrates how the Applicant has complied with the consultation requirements of the PA 2008 and EIA Regulations.

Additional consultation on revisions to the project design

- 1.13.10 Following Statutory Consultation, it was determined through consultation feedback, landowner discussions and additional engineering work that further revisions to the Proposed Development's design were required. The additional consultation on revisions to the project design took place from 14th April 2023 to 14th May 2023 and was aimed at those who were likely to be affected by the revisions.
- 1.13.11 During this consultation a booklet outlining the changes was distributed and updated interactive maps of the pipeline route corridor were displayed on the project website, showing both the updated corridor and the superseded corridor presented during statutory consultation. Feedback received during

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the targeted consultation was reviewed as part of the further development of the proposals. Further information is provided in the Consultation Report [EN070008/APP/5.1].

2. Legislative and Planning Policy Context

2.1 Introduction

- 2.1.1 This section of the PDAS outlines the legislative framework and planning policy context for the Proposed Development and the relationship of the Proposed Development within the PA 2008.
- 2.1.2 Sections 104 and 105 of PA 2008 provide for the approach to be taken to decisions where a National Policy Statement (NPS) has effect (Section 104) and where no NPS has effect (Section 105). Currently there is no NPS in place directly for CO₂ pipelines and as such Section 105 will apply to the determination of the Application.
- 2.1.3 Section 105(2) of the PA 2008 requires that the SoS determines applications having regard to (a) any local impact report prepared by the relevant local planning authority; and (b) any matters prescribed in relation to the Proposed Development and (c) any other matters which the SoS thinks are both 'important and relevant.'
- 2.1.4 The applicant considers that the matters of importance and relevance which should be given greater weight during the determination of the application include:
 - Compliance of the Proposed Development with the relevant policies in the adopted and draft NPS documents for Energy. As a NSIP it is considered that NPS EN-1 and NPS EN-4 are the primary planning policy documents that are relevant to the determination of the application and should be given significant weight. An assessment of compliance with the NPSs is included in chapter 7 and Appendix C of this PDAS.
 - Compliance with the National Planning Policy Framework (NPPF) and Local Panning Policy (which incorporates the requirements of the NPPF) are also of relevance to the determination of this Application. Consideration is given to the Proposed Developments compliance with Local policy matters is included in Chapter 7 and Appendix D of this PDAS.
 - The benefits of the Proposed Development which will contribute towards the governments legally binding target and help meet the urgent need to achieve Net Zero by 2050 which should also be given significant weight. A separate Needs Case [EN070008/APP/7.3] is submitted alongside this application.
 - The benefit of decarbonising industry in the Immingham Industrial Area while maintaining existing employment is also considered to be of importance.
- 2.1.5 The Proposed Development is a key component of the Viking CCS Project. The Proposed Development is essential to transport CO₂ from emitters in the Immingham Industrial Area to the TGT to join the existing LOGGS pipeline and an important part of helping to achieve Net Zero by 2050.

- 2.1.6 The Proposed Development will help to decarbonise industry in the Immingham Industrial area and helping to achieve Net Zero while maintaining existing productivity and employment in the area. Furthermore, the Proposed Development will generate new employment and investment in the area during the construction and operation phase.
- 2.1.7 Whilst NPSs may not have effect in relation to schemes determined under Section 105, matters incorporated within NPSs will constitute important and relevant considerations in determining the Application. As such, the Overarching NPS for Energy EN-1, 2011 and the draft NPS EN-1, 2023 and NPS for Gas Supply Infrastructure and Gas and Oil Pipelines EN-4, 2011 and the draft NPS EN-4, 2023 have been considered within this PDAS.
- 2.1.8 A detailed planning policy compliance assessment is contained in Appendix C for national policy and Appendix D for important and relevant local planning policy. Chapter 7 of this document presents an appraisal of the Proposed Development against the main policy themes.

2.2 Overview of the Legislative and Consenting Framework

2.2.1 The Proposed Development is defined as an NSIP under Section 14(1)(g) and Section 21(1) of the PA 2008 as a cross-country pipeline. Sections 103 to 107 of the PA 2008 provide the framework for decision-making, setting out what must be considered when the SoS is determining a DCO application.

2.3 The Relevant National Policy Statements

- 2.3.1 A number of NPSs have been published for energy infrastructure and comprise NPS EN-1 to EN-6, those relevant to the Proposed Development are considered below. The Overarching NPS for Energy EN-1 (Ref 7) and the NPS for Gas Supply Infrastructure and Gas and Oil Pipelines EN-4 (Ref 8) are considered important and relevant considerations. NPS EN-1 sets out the need to decarbonise the energy system and NPS EN-4 although not specifically referencing pipelines for Carbon Capture and Storage, sets out generic pipeline consenting requirements.
- 2.3.2 The NPSs for energy infrastructure are currently under review. Draft NPSs were published in September 2021 with Revised Draft NPSs published for consultation in March 2023. The emerging NPSs are not yet adopted and therefore the existing 2011 adopted NPSs remain relevant to the SoS decision making. The consultation documents titled: 'Consultation. Planning for New Energy Infrastructure' published by the Department for Energy Security and Net Zero (DESNZ) in March 2023 outlined the transitional arrangements during the review of the Energy NPSs. The document outlines that the adopted NPS document remain relevant but that:

'The Secretary of State has decided that for any application accepted for examination before designation of the updated energy NPSs, the original suite of energy NPS should have effect. ... However, any emerging draft energy NPSs (or those designated but not having effect) are potentially capable of being important and relevant considerations in the decision-making process. The extent to which they are relevant is a matter for the

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- relevant Secretary of State to consider within the framework of the Planning Act and with regard to the specific circumstances of each development consent order application.'
- 2.3.3 The following revised draft NPSs are considered to be important and of relevance to the SoS's decision on whether to grant a DCO for this Proposed Development:
 - Revised Draft Overarching National Policy Statement for Energy (Draft NPS EN-1) (March 2023) (Ref 9).
 - Revised Draft National Policy Statement for Natural Gas Supply Infrastructure and Gas and Oil Pipelines (Draft NPS EN-4) (March 2023) (Ref 10).

2.4 The Designated National Policy Statements for Energy

National Policy Statement NPS for Energy EN-1, 2011

2.4.1 NPS EN-1 includes over-arching principles that support decarbonisation. Whilst NPS EN-1, 2011 has a primary focus on energy generation, it includes details regarding the requirement for infrastructure to deliver this overarching goal. NPS EN-1, 2011 states that the Government would like industry to bring forward many new low carbon developments (renewables, nuclear and fossil fuel generation with CCS) within the next 10 to 15 years to meet the twin challenge of energy security and climate change by 2050 (paragraph 3.3.5).

Revised Draft EN-1 Overarching National Policy Statement for Energy, 2023

- 2.4.2 The revised draft NPS EN-1 Overarching National Policy Statement for Energy was published in March 2023 following a period of consultation which commenced in September 2021. The revised draft NPS EN-1 (2023) has been updated to reflect the policies and strategic approach for the energy system and to ensure that the planning policy framework enables the delivery of the infrastructure required for the country's transition to net zero carbon emissions.
- 2.4.3 Draft NPS EN-1 (2023) provides an update from the NPS EN-1 (2011) with the key shift being from the target for a reduction of at least 80% of Greenhouse Gas (GHG) emissions by 2050, to net zero by 2050 and an interim target of 78% by 2035, compared to 1990 levels (paragraph 2.2.1).
- 2.4.4 Both the adopted and draft NPS EN-1 documents are of relevance and considered further in the planning appraisal in section 7 of this PDAS.

National Policy Statement for Gas Supply Infrastructure and Gas and Oil Pipelines (EN-4), 2011

2.4.5 NPS EN-4 does not apply to the Proposed Development, as it only applies directly to pipelines carrying oil and gas but is relevant for reference as CO2 will be transported via a buried cross-country pipeline.

Revised Draft National Policy Statement for Natural Gas Supply Infrastructure and Gas and Oil Pipelines (EN-4), March 2023

- 2.4.6 The revised draft NPS EN-4, National Policy Statement for Natural Gas Supply Infrastructure and Gas and Oil Pipelines was published for consultation in March 2023. The revised draft NPS EN-4, 2023 does not contain specific guidance for CCS infrastructure but does contain information that is important and relevant to the Secretary of States (SOS) decision on applications for CCS infrastructure as explained below.
- 2.4.7 The revised draft NPS EN-4 should be read alongside the Overarching NPS EN-1, where NPS EN-1 provides the primary policy for decisions by the SoS on applications it receives for gas supply infrastructure and gas and oil pipelines. Paragraph 1.6.2 of revised draft NPS EN-4 recognises that pipelines could be carrying different types of gas but states that the NPS only has effect for those nationally significant infrastructure pipelines which transport natural gas or oil. Revised draft NPS EN-4 states that the need for CCS infrastructure is established in Section 3.5 of overarching NPS EN-1 and the general guidance on the assessment of CCS infrastructure is at Section 4.8 of NPS EN-1.

2.5 Other National Policy

National Planning Policy Framework

- 2.5.1 In determination of the Application, the Secretary of State must have regard to any other matters of importance and relevance, which includes relevant policies in the National Planning Policy Framework (NPPF) (Ref 11).
- 2.5.2 The NPPF was originally published in March 2012 and most recently updated in September 2023. It sets out the Government's planning policies for England and forms the basis for applications to be considered under the Town and Country Planning Act 1990. Whilst the NPPF does not contain specific policies for NSIP's, paragraph 5 confirms that matters that can be considered to be both important and relevant to NSIP's may include the NPPF and the policies within it. The Proposed Development therefore has regard to the relevant policies of the NPPF as part of the overall framework of national policy.
- 2.5.3 At the heart of the NPPF is the commitment to achieve sustainable development, through ensuring three interdependent objectives: economic, social and environmental. The environmental objective focuses on protecting and enhancing our natural, built and historic environment, which includes moving towards a low carbon economy (paragraph 8), this is reiterated in chapter 14 of the NPPF which offers support for renewable and low carbon energy and associated development. The Proposed Development is a key component of the Viking CCS Project that will facilitate the delivery of sustainable development by supporting the UK's ambition to achieve net zero carbon.

National Planning Practice Guidance

2.5.4 The policies contained within the NPPF are expanded upon and supported by the online National Planning Practice Guidance (PPG) (Ref 12), originally

published in March 2014. The PPG states the importance of increasing the amount of energy produced from renewable and low carbon technologies which reiterates the policies in the NPPF and NPSs.

2.6 Local Planning Policy

- 2.6.1 Policies in Local Plans are considered important and relevant to decision making. Consideration of local planning policy will be set out in Local Impact Reports (which will be produced by the relevant local authorities pursuant to Section 56A of the PA 2008, following submission of the Application). The Local Impact Reports submitted must be given due regard by the SoS in accordance with Section 105(2a) of the PA 2008.
- 2.6.2 Since local planning policy is considered important and relevant to the decision making of the application, the following Development Plan Documents have been reviewed:
 - North Lincolnshire Core Strategy (NLCS) 2006-2026, adopted June 2011 (Ref 13a) and the saved policies in the North Lincolnshire Local Plan (2003) (Ref 13b):
 - Saved policies in the North Lincolnshire Local Plan (2003) (Ref 14):
 - North East Lincolnshire Local Plan (NELLP) 2013 2032, adopted 22 March 2018 (Ref 15):
 - Central Lincolnshire Local Plan (CLLP) (April, 2023) (covering West Lindsey) (Ref 16):
 - East Lindsey Local Plan (ELLP) adopted 18 July 2018 (Ref 17): and
 - Lincolnshire Minerals and Waste Local Plan including the Core Strategy and Development Management Policies Plan adopted June 2016 (Ref 18) and the Site Locations Plan adopted December 2017 (Ref 19).
- 2.6.3 The Lincolnshire Minerals and Waste Local Plan has undergone an indepth review assessing whether the policies remain relevant and effective. The review concludes that while many of the policies are performing well, the whole plan would benefit from being updated. Lincolnshire County Council resolved to update the plan on 19 February 2021. The new plan will replace both parts of the adopted plan which covers the period to the end of 2031. The plan is currently at an early stage of preparation. A consultation on the issues and options for updating the plan took place from 28 June 2022 to 12 August 2022. The plan is not anticipated to be adopted before Winter 2024/2025. Given the focus of the policies on minerals and waste and the early stage of development, initial documents are considered to carry no weight at this stage.
- 2.6.4 The Central Lincolnshire Local Plan (CLLP) was adopted by the Central Lincolnshire Joint Strategic Planning Committee (CLJSPC) in April 2023, replacing the previous Local Plan, 2017.
- 2.6.5 An initial review of the North East Lincolnshire Local Plan (NELLP) commenced in October 2021 and seeks to simplify the Local Plan, focus on local priorities, not repeat national guidance, and provide a framework for

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- development in North East Lincolnshire. Following Cabinet approval on 24 August 2022 a Scoping and Issues Paper was published for public engagement between Monday 26th September to Friday 4th November. It is anticipated that the full review of the NELLP will take around three years to complete.
- 2.6.6 East Lindsey District Council is undertaking a partial review of the ELLP. An Issues and Options Paper sets out the issues which are being considered in the partial review and suggests potential options in relation to these, the Council also undertook a call for sites.
- 2.6.7 A detailed appraisal of local policy compliance is provided in Appendix D of this PDAS which assesses the Proposed Development against the local Development Plans.

3. The Site and Context

3.1 Site Description

- 3.1.1 This section of the PDAS describes the location and setting of the Proposed Development. It provides a description of the context within which the Proposed Development will be constructed and operated and is to assist in identifying key land use planning issues. The 'Site' refers to the land within the Order Limits as shown on the Works Plans [EN070008/APP/4.2]. The Order Limits are the maximum extent of the land required to construct and operate the Proposed Development. The Order Limits include the necessary access points, storage and welfare facilities, and space to accommodate the movement of construction plant and machinery to undertake the installation of the pipeline. The Order Limits also includes space for above ground installation such as the Immingham Facilities, Theddlethorpe Facilities and Block Valve Stations.
- 3.1.2 The Order Limits are located in the east of England between Immingham on the south bank of the Humber Estuary and Theddlethorpe on the east coast of Lincolnshire. The majority of the pipeline route passes through open countryside interspersed with small settlements, woodlands and coppices and minor roads.
- 3.1.3 The northern end of the Order Limits are located in the industrial area between Immingham and South Killingholme where a number of large oil refinery and heavy industrial facilities are located. Grimsby and Cleethorpes are located east of the Order Limits and are the two main settlements in proximity to the Order Limits. The proposed route of the pipeline leads south east through Lincolnshire and passes around the north east side of the town of Louth.
- 3.1.4 Existing highway infrastructure in the area includes the A180 which runs roughly west to east close to the southern side of Immingham and the A160 that provides highway access to the industrial area between Immingham and South Killingholme. The A18 runs in a roughly north/ south direction through the rural area around Grimsby.
- 3.1.5 The Lincolnshire Wolds Area of Outstanding Natural Beauty (AONB) is located southwest of Laceby and Louth and is designated to protect land and conserve and enhance its natural beauty.
- 3.1.6 The Location Plan **[EN070008/APP/4.1]** identifies the location of the Order Limits in the context of the local area.
- 3.1.7 The Proposed Development is linear in nature. The approximate length of the pipeline within each local authority area is as follows:
 - North Lincolnshire Council 999 m
 - North East Lincolnshire Council 22,127 m
 - West Lindsey District Council 2,025 m
 - East Lindsey District Council 30,267 m

3.1.8 For the purposes of describing the Order Limits and to assist in describing the baseline conditions within the ES the pipeline route has been split into five sections which run from north to south as shown in Figure 2-1 below. The following text provides a description of the Order Limits in each section, the main land uses and proximity to settlements running from north to south.

Sunk Island Sands SPURN HEAD CLEETHORPES South East Chegu KINGSTON UPON HULL to Rotterdam (Europort) Humberston Barnoldby Marshchape North Wold St Mary Binbrook Yarburoh North Teath Willingham LOUTH

Figure 2-1 The Order Limits and extent of five Sections

Section 1 – Immingham Facility (Rosper Road) to the A180

- 3.1.9 This is the most northerly section of the Order Limits and includes the Immingham Facility that will receive CO₂ from industry located in the Immingham area. The Immingham Facility will be located on brownfield land within the industrial setting of Immingham and Killingholme. The Facility is located between VPI Immingham, Rosper Road and the A160 in the administrative area of North Lincolnshire Council.
- 3.1.10 Option 1: The pipeline leaves the tie-in at the Immingham Facility, crosses Humber Road (twice) and the railway line, and then runs parallel to Manby Road before crossing it south of the Immingham Calor Cylinder Distribution

site, heading in a south westerly direction north of Immingham towards the former Immingham Golf Club (closed in 2018), which would be crossed in a more westerly direction using a trenchless technique. The pipeline then continues to travel westwards before changing direction southwards towards Mill Lane which it then crosses, before crossing Harborough Road between the Old School House and Luxmore Farm. Finally, the route then continues southwards and crosses the A180.

- 3.1.11 Option 2: If, via discussions with Philips 66, it is viable to route the pipeline through the Humber Refinery site, the pipe would exit between Houlton's Covert and Children's Avenue (which would be crossed using a trenchless technique) towards the south east. The route would then continue until it reached the alignment of the route as detailed in Option 1 above.
- 3.1.12 Only one of these routes within the Order Limits will be selected and used during the construction process. The land use in this area is dominated by industry and the processing and storage facilities of the Humber refineries.
- 3.1.13 Both of the route options merge into a single route on the southern edge of the Immingham industrial area where the Order Limits enter the administrative area of North East Lincolnshire Council. From this point the Order Limits take a linear form being generally 100m wide while the construction corridor within will be set at 30 metres expanding up to 50 metres at certain points. The Order Limits lead in a south westerly direction north of Immingham through the former Immingham Golf Club before turning south passing through agricultural fields to the A180.
- 3.1.14 The northern construction compound is located on agricultural land on the south side of the A160 near South Killingholme. This site has been used as a construction compound previously during highway improvements in the area. Access to the northern construction compound would be taken from an existing junction along Habrough Road.

Section 2 - A180 to A46

3.1.15 After crossing the A180 the Order Limits are 100m wide to provide sufficient space to construct the pipeline, the working width will be reduced to 30 m on the final routeing of the pipeline expanding up to 50 metres at certain points. The Order Limits lead south east crossing Roxton Road and a Network Rail line and passes through agricultural land west of Little London and Stallingborough and east of Keelby before crossing Keelby Road and North Beck Drain then crossing Riby Road (A1173). From here, the Order Limits continues to extend in a southerly direction passing through agricultural land in West Lindsey District Council, then continues south to re-enter North East Lincolnshire Council and cross the A18 west of Aylesby and Laceby. The Washingdales Lane Block Valve Station will be constructed on agricultural land southwest of the A18 with access being gained via a single lane road from the A18. From here the Order Limits continue south across agricultural land to the A46.

Section 3 - A46 to Pear Tree Lane near Covenham Reservoir

3.1.16 As the pipeline route crosses the A46, the Order Limits remain in North East Lincolnshire Council and pass into the Lincolnshire Wolds Area of

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Outstanding Natural Beauty (AONB) located to the east of Irby upon Humber. The land use in Section 3 is predominantly agricultural use with small settlements in the surrounding area. After routeing through the AONB for approximately 2.34 km the Site leaves this designated area turning in an easterly direction to cross the A18 for a second time. From here the Order Limits continue in a south-easterly direction running parallel with the A18 and Lincolnshire Wolds AONB boundary to the west of Barnoldby le Beck, crossing Waltham Road.

- 3.1.17 The central construction compound will be located on agricultural land along the east side of the A18 and will provide welfare, parking and storage facilities during the construction phase. Access to the central construction compound will be taken from the A18.
- 3.1.18 The Order Limits then extend in an easterly direction through agricultural land comprising fields with tree and hedgerow boundaries. The Order Limits cross Waithe Beck continuing southeast where it crosses the B1203 to the south of Brigsley. The Order Limits continue in a roughly south east direction around Ashby cum Fenby.
- 3.1.19 The Thoroughfare Block Valve Station will be constructed in this Section on agricultural land south of the lane known as Thoroughfare to the South East of Ashby cum Fenby. Access to the Block Valve Station will be taken from Thoroughfare.
- 3.1.20 The Order Limits continue in a southerly direction turning southwest and running parallel with the A18 and Lincolnshire Wolds AONB boundary for approximately 1.7 km before entering East Lindsey District Council. The Order Limits then turn south east to cross the A16 south of North Thoresby and Station Road east of Ludborough. The Order Limits continue in a south easterly direction and continues to Pear Tree Lane where Section 3 ends.

Section 4 - Pear Tree Lane near Ludborough to Manby Middlegate (B1200) near Grimoldby

- 3.1.21 The Order Limits continue in a southerly direction through East Lindsey District Council between Utterby and Covenham St Mary. The Order Limits pass through open countryside comprising arable agricultural land and crosses several water courses, drains and minor roads such as Ings Lane. The Order Limits continue in a south easterly direction, parallel and west of Yarburgh Road and the settlements of Yarburgh, North End and Alvingham, crossing Westfield Road, Alvingham Road. The Louth Road Block Valve Station will be constructed on agricultural land north of Louth Road with access being taken from Louth Road.
- 3.1.22 The Order Limits follow a southeast route crossing the Louth Canal and River Ludd to the south of Alvingham. The Order Limits continue in an easterly direction to the north of Grimoldby before turning south east to cross the Grayfleet Drain before reaching the B1200 east of Grimoldby and the Louth Canal and River Ludd (main rivers). Here, the Order Limits cross Mill Hill Way immediately north of South Cockerington, and then crosses Gray Fleet Drain and in a more easterly direction towards the B1200.

Section 5 - Manby Middlegate (B1200) Near Manby to Theddlethorpe down the MLWS

- 3.1.23 The Order Limits cross Manby Middlegate (B1200) to the east of Manby then travels in a south-easterly direction crossing the River Long Eau and Two Mile Bank Drain before turning and leading in an easterly direction and crossing the River Great Eau and passing to the south of Theddlethorpe All Saints. From here, the Order Limits continue in an easterly direction, crossing Mill Road and the A1031 before arriving at the proposed Theddlethorpe Facility. Two Option locations are under consideration which are summarised below:
- 3.1.24 Option 1: A new Facility on brownfield land at the former TGT site covering an area of approximately 1.35 ha. The onshore pipeline would enter the site from the west and terminate at the new Facility, where a connection would be made to the existing LOGGS Pipeline, which then exits the site to the east.
- 3.1.25 Option 2: A new Facility west of the former TGT site located on arable land covering an area of approximately 1.76 ha. A new section of buried 36" pipeline would connect the Theddlethorpe Facility to the existing LOGGS Pipeline.
- 3.1.26 The Theddlethorpe Facility near the Lincolnshire coast is required to connect the new 24 " pipeline to the existing 36" LOGGS pipeline. The southern construction compound will be located on brownfield land at the former TGT site.

3.2 Planning and Environmental Designations

Planning Constraints

- 3.2.1 The land use planning designations in the host authority areas have been reviewed and are summarised in this section. The North Lincolnshire Council Local Plan (2013) Proposals and Inset maps do not provide any land use planning designations for the land within or adjacent to the Order Limits.
- 3.2.2 The North East Lincolnshire Local Plan (2018) proposal map shows the Lincolnshire Wolds Area of Outstanding Natural Beauty (AONB) along the western side of the District. The pipeline corridor is routed through the AONB for approximately 2.34 km. The Order Limits also pass through a number of small, narrow and isolated areas designated as Mineral Safeguarding Areas which cover the western part of the authority area. The Proposal Map also identifies broad areas which are potentially suitable for wind energy development one such area is indicated between the urban development and the AONB This allocation has no specific boundary and the Proposed Development passes through some of this identified area.
- 3.2.3 The Order Limits pass through a small part of West Lindsey District Council on the north east edge of this authority area. The Order Limits do not pass through any land use planning designations included in the Central Lincolnshire Local Plan (2023) in this area.
- 3.2.4 In East Lindsey the Order Limits pass through the flood hazard area located along the east coast of Lincolnshire. The Order Limits do not pass through

- any other designated areas shown on the local plan policy maps or key diagram in the East Lindsey Local Plan (2018).
- 3.2.5 The Proposed Development does not pass through any safeguarded minerals or waste sites allocated in the Lincolnshire Minerals and Waste Local Plan which comprises the Core Strategy and Development Management Policies Plan (2016) and the Site Locations Plan (2017).

Environmental Designations and Constraints

- 3.2.6 There are a range of environmental designations and constraints within the Order Limits and surrounding area that have been identified. These designations fall within the following categories:
 - Ecology and Biodiversity
 - Heritage and Historic Environment
 - Landscape and Visual
 - Flood Risk and Water Environment
 - Materials and Waste
 - Air Quality
 - Noise
 - Agricultural Land
 - Geology and hydrogeology
 - Public Rights of Way

Ecology and Biodiversity

- 3.2.7 Chapter 6: Ecology and Biodiversity of the ES [EN070008/APP/6.2.6] considers the potential impact of the Proposed Development on ecology and biodiversity. A 10 km search area from the Order Limits has been used to consider the proximity to European and International designated sites. There are four European designated sites within the Order Limits, these are all located within Section 5 of the Route and include:
 - Humber Estuary Special Protection Area (SPA)
 - Humber Estuary Ramsar
 - Saltfleetby-Theddlethorpe Dunes & Gibraltar Point Special Area of Conservation (SAC)
 - Great Wash SPA with marine component
- 3.2.8 There is one further European designated site within 10 km of the Order Limits which is the Humber Estuary SAC which is 1.27 km to the northeast of Section 2.
- 3.2.9 There are a further 15 nationally designated sites (i.e. SSSI and National Nature Reserves (NNR)) within 10 km of the Order Limits. The Saltfleetby Theddlethorpe Dunes SSSI is located within the boundary of the Order

Limits. The table below provides a full list of Statutory Designated Sites for Nature Conservation within 10 km of the Order Limits.

Table 3-1: Statutory Designated Site within 10 km of Order Limits

Statutory Site	Proximity to DCO Order Limits
Humber Estuary SPA	Within Section 5 of the Order Limits
Humber Estuary Ramsar	Within Section 5 of the Order Limits
Saltfleetby-Theddlethorpe Dunes & Gibraltar Point SAC	Within Section 5 of the Order Limits
Greater Wash SPA with marine components	Within Section 5 of the Order Limits
Humber Estuary SAC	1.27 km north-east of Section 1 at the closest point
Saltfleetby - Theddlethorpe Dunes SSSI	Within Section 5 of the Order Limits
Humber Estuary SSSI	1.28 km north-east of Section 1 at the closest point
North Killingholme Haven Pits SSSI	2.35 km north of Section 1
Swallow Wold SSSI	2.90 km south-west of Section 2
Tetney Blow Wells SSSI	4.25 km south-east of Section 3
Muckton Wood SSSI	7.02 km south-west of Section 5
Sea Bank Clay Pits SSSI	7.69 km south-east of Section 5
Swaby Valley SSSI	9.42 km south of Section 5
Calceby Marsh SSSI	9.43 km south of Section 5
Saltfleetby – Theddlethorpe Dunes NNR	Within Section 5 of the DCO Order Limits
Donna Nook NNR	6.69 km north of Section 5
Bradley & Dixon Woods LNR	2.27 km north-east of Section 3
Weelsby Woods Park LNR	5.97 km north-east of Section 3
Cleethorpes Country Park LNR	6.52 km north-east of Section 3
Cleethorpes LNR	8.62 km north-east of Section 3

3.2.10 There are 33 non-statutory sites designated for their nature conservation value within 2 km of the Order Limits; these designations include Local Wildlife Sites (LWS), Sites of Nature Conservation Interest (SNCI) Local Wildlife Trust (LWT) sites or Roadside Nature Reserve (RNR) sites.

Summary of Statutory Designated Sites for biodiversity by Section Section 1 - Rosper Road to A1380

- 3.2.11 Section 1 does not directly intersect any designated ecological sites, however there are three designated sites located within a 10km radius of this section, these are as follows:
 - Humber Estuary SAC (1.27 km to the northeast)
 - Humber Estuary Site of Special Scientific Interest (SSSI) (1.27 km to the northeast)

North Killingholme Haven Pits SSSI (2.35 km north)

Section 2 - A180 to A46

3.2.12 Section 2 does not directly intersect any designated ecological sites, however the Swallow Wold SSSI is located 2.90 km to the southwest of the Order Limits.

Section 3 – A46 to Pear Tree Lane

- 3.2.13 Section 3 does not directly intersect any designated ecological sites, however the following designated sites are located within 10 km of this section:
 - Tetney Blow Wells (4.08 km to the southeast)
 - Bradley & Dixon Woods LNR (2.29 km to the northeast)
 - Weelsby Woods Park LNR (3.84 km to the northeast)
 - Cleethorpes Country Park LNR (3.88 km to the northeast)
 - Cleethorpes LNR (5.80 km to the northeast)

Section 4 – Pear Tree Lane to Manby Middlegate (B1200)

3.2.14 Section 4 does not directly intersect any designated ecological sites, and there are no designated sites within a 10 km radius of the Order Limits.

Section 5 – Manby Middlegate (B1200) to Theddlethorpe and MLWS

- 3.2.15 There are several designated sites within section 5. These are as follows:
 - Humber Estuary SPA
 - Humber Estuary Ramsar
 - Saltfleetby-Theddlethorpe Dunes & Gibraltar Point SAC
 - Great Wash SPA with marine component
 - Saltfleetby Theddlethorpe Dunes SSSI
- 3.2.16 In addition, the following designated sites are within a 10 km radius of the Order Limits in Section 5, these are as follows:
 - Muckton Wood SSSI (6.52 km to the southwest)
 - Sea Bank Clay Pits SSSI (7.73 km to the southeast)
 - Swaby Valley SSSI (9.33 km to the south)
 - Calceby Marsh SSSI (9.42 km to the south)
 - Donna Nook NNR (6.69 km to the north)

Heritage and Historic Environment

3.2.17 Chapter 8: Historic Environment of the ES [EN070008/APP/6.2.8] considers the likely effect of the Proposed Development on the Historic Environment. The Study Area adopted for designated assets search is a 2 km wide area either side of the Order Limits. The Study Area for non-designated heritage

assets comprises a 500 m wide corridor either side of the Order Limits. A review of Historic Environment Records (HERs) identified a number of heritage assets in the study area, and three conservation areas. These are outlined below in Table 2-2.

Table 3-2 Heritage Assets within 2 km of the Order Limits

Section	Grade I	Grade II*	Grade II	Scheduled Monument	Total	Conservation Area
Section 1- Rosper Road to A180	2	1	14	1	18	N/A
Section 2 - A180 - A46	5	19	3	5	32	Laceby Conservation Area
Section 3 - A46 to pear Tree Lane near Covenham reservoir	4	10	31	6	51	Irby upon Humber, Waltham and North Thoresby Conservation Areas
Section 4 - Pear Tree Lane near Ludborough to Manby Middlegate (B1200) near Grimoldby	7	8	43	6	64	N/A
Section 5 - Manby Middlegate (B1200) Near Manby to Theddlethorpe down the MLWS	1	1	16	0	18	N/A

Landscape

- 3.2.18 Chapter 7: Landscape and Visual in the ES [EN070008/APP/6.2.7] considers the potential impact of the Proposed Development on the landscape and visual receptors. A study area with a radius of 1 km from the Order Limits has been applied to consider landscape designations. However, in proximity to the Immingham Facility and the Theddlethorpe Facility the area was extended to 3 km from the Order Limits as they will include components that are above ground installations.
- 3.2.19 Part of the pipeline route, approximately 2.34 km in Section 3, is located within the Lincolnshire Wolds AONB, which is a statutory designation within North East Lincolnshire Council the purpose of which is to protect land in order to conserve and enhance its natural beauty. Part of the study area comprises an Area of Great Landscape Value (AGLV). The Order Limits do

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not pass through the AGLV. The AGLV, a non-statutory, local-level designation, has been identified by West Lindsey in recognition of the AONB designation.

Materials and Waste

3.2.20 The Order Limits do not pass through any Mineral Safeguarding Sites (MSS). The Order Limits do however pass through a number of Minerals Safeguarding Areas (MSA) for Sand and Gravel in North East Lincolnshire Council that are located in Sections 2 and 3 of the Order Limits. An assessment of the impact of the Proposed Development on Material and Waste is contained within ES Chapter 18: Materials and Waste [EN070008/APP/6.2.18].

Flood Risk

- 3.2.21 The Order Limits cross a number of watercourses including ditches, drains, rivers and canals. The Environment Agency classifies areas at risk of fluvial, surface and reservoir flooding. There are three zones of Flood Risk, as set out below:
 - Zone 1, Low Probability: land assessed as having a less than 1 in 1,000 annual probability of flooding
 - Zone 2, Medium Probability: land assessed as having flooding between 1 in 100 and 1 in 30 annual probability of flooding.
 - Zone 3, High Probability: land assessed as having greater than 1 in 30 annual probability of flooding.
- 3.2.22 The Proposed Development crosses Flood Zones 1, 2 and 3 as shown within the Flood Risk Assessment (FRA) presented in Appendix 11-5 [EN070008/APP/6.4.11.5] of the ES. Summary of Flood Risk by Section

Flood risk zone Section 1 – Immingham, Rosper Road to A180

3.2.23 Section 1 predominately lies within Flood Zone 1. There are some areas of Flood Zone 2 extending from Humber Road (A160) to the Humber Estuary and one area of Flood Zone 3 associated with a pond in Homestead Park, to the immediate north of Immingham. There are also areas of surface water flood risk within this section, with the main risk being associated with the urban area of Immingham and around Mayflower Woods, to the north of Immingham, which varies from Flood Zone 1 to 3. Within the wider corridor there are small areas of Flood Zone 3 throughout that are generally associated with watercourses, ponds and topographic depressions. There are no identified flood defences located within this section.

Flood risk zone Section 2 – A180 to A46

3.2.24 Parts of this section are located within Flood Zone 1, 2 and 3 which are associated with the risk of flooding from rivers and the sea. The risk of surface water flooding is generally very low within this section, with isolated areas of Flood Zone 3 associated with narrow areas along field drains. Bordering either side of North Beck Drain, to the north of Stallingborough lies high ground formed for the principal purpose of flood risk management. Although it is outside of the Order Limits, there are flood defences bordering

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Old Fleet Drain, to the east of North Thoresby, consisting of embankments and high ground.

Flood risk zone Section 3 - A46 to Pear Tree Lane

3.2.25 In Section 3 the flood risk is very low and associated with rivers and the sea. There are two isolated areas of Flood Zone 2 and 3 that the section intersects, associated with Waithe Beck and drains that lie directly north and south of North Thoresby. Section 3 intersects several surface water flood risk areas that range from Zones 1 to 3. The most significant of these areas correspond to the waterbodies and drains that cross the section, specifically Waithe Beck lower catchment (to Tetney Lock) which flows parallel to the section and the channels associated with this waterbody, Old Fleet Drain and Black Leg Drain. Within the wider corridor there are areas of Flood Zone 2 and 3 throughout that are generally associated with watercourses, ponds and topographic depressions. Bordering either side of both Laceby Beck, south of Laceby, Waithe Beck, north of Ashby cum Fenby and Black Dike lies high ground with the principal purpose of flood risk management.

Flood risk zone Section 4 - Pear Tree Lane to Manby Middlegate (B1200)

3.2.26 Within Section 4 fluvial flood risk is low with isolated patches of Flood Zone 2 and 3 associated with Poulton Drain and Yarburgh Beck, near Barnoldby le Beck. There is a small area within this section that is at risk from flooding from the Covenham Reservoir around Covenham St Mary. Section 4 intersects several areas of surface water flood risk predominately associated with drains crossing the Order Limits. Bordering either side of Poulton Drain, Louth Canal, River Lud, South Dike and Grayfleet Drain, to the north of Saltfleetby lies high ground with the principal purpose of flood risk management.

Flood risk zone Section 5 Manby Middlegate (B1200) to Theddlethorpe down the MLWS

3.2.27 Within Section 5 there is high risk of flooding from river and sea sources, as well as surface water due to the high number of river and drain crossings through the Section and its proximity to the coast. The areas that carry the highest risk are Long Eau crossing and the Great Eau crossing, located in Flood Zones 2-3. Bordering either side of Long Eau, and the Great Eau, to the south of Saltfleetby St Peter, are embankments with the principal purpose of flood risk management. Along the Lincolnshire east coast there is a flood defence known as the Saltfleet to Gibraltar Point Beach Management scheme which sits within Section 5.

Air Quality

3.2.28 There are no Air Quality Management Areas (AQMA) within 5km of the Order Limits. The closest AQMA is the Grimsby AQMA located approximately 7.8km east of the Order Limits. The only other AQMA within vicinity of the Order Limits is the Scunthorpe AQMA located 21.5km to the west. Chapter 14: Air Quality of the ES [EN070008/APP/6.2.14] presents the findings of an assessment of the Proposed Development on Air Quality.

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Noise

3.2.29 There are no Noise Important Areas or Noise Action Plan Priority Areas within 500m of the Order Limits. Chapter 13: Noise and Vibration of the ES [EN070008/APP/6.2.13] presents the findings of an assessment of the Proposed Development in relation to Noise and Vibration.

Agricultural Land

- 3.2.30 The Order Limits extend across areas of agricultural land present in all five Sections. Chapter 10: Agriculture and Soils [EN070008/APP/6.2.10], of the ES presents the findings of an assessment of the Proposed Development on agriculture and soils. Chapter 10: Agriculture and Soils of the ES [EN070008/APP/6.2.10] details the method used for determining the agricultural land grade. The most detailed published agricultural land classification (ALC) data covering the whole of the Study Area are the 1:250,000 scale Provisional ALC mapping. The scale of the mapping is not accurate at the field level as it generally does not pick up variations in ALC grade for areas less than approximately 80 ha. Additionally, as the mapping was published in the period 1967 to 1974 it is based on survey data collected prior to the issue of the revised guidelines in 1988. It therefore does not provide a subdivision of Grade 3 land into Subgrade 3a (good quality, Best and most versatile (BMV) and Subgrade 3b (moderate quality, non-BMV), Grade 3 land must therefore be considered as having the potential to be of BMV quality. To better define the ALC grading of the land within the Study Area, and provide a more robust baseline for the assessment, the subdivision of Subgrade 3a and 3b land has been calculated. As no Post-1988 data containing ALC Grades 1, 2, 4 or 5 is present within the Study Area, Provisional ALC Mapping has been used to directly determine the proportions of ALC Grades 1, 2, 4 and 5. Where there are post-1988 data available for areas provisionally mapped as Grade 3, these detailed data have been used in preference. For other areas of provisionally mapped Grade 3, the relative proportions of Subgrade 3a and 3b have been calculated using Natural England's Likelihood of BMV Agricultural Land mapping.
- 3.2.31 The majority of the land within the Order Limits is within ALC Grade 3. A significant area of the Order Limits is located in Grade 2 and non-agricultural /urban land, primarily associated with the Immingham and TGT sites. None of the land within the Order Limits is classified as Grade 1,4 or 5. A full breakdown of the agricultural land take of the Proposed Development is outlined below in Table 2-2 which is extracted from Chapter 10: Agriculture and Soils, of the ES [EN070008/APP/6.2.10].

Table 2-2 Agricultural Land Classification for land within the Order Limits

Agricultural Land Classification Grade	Section 1 Area (ha)	Section 2 Area (ha)	Section 3 Area (ha)	Section 4 Area (ha)	Section 5 Area (ha)	Total
Grade 1 (Excellent quality)	0.0	0.0	0.0	0.0	0.0	0.0
Grade 2 (Good quality)	0.0	31.34	45.20	0.0	0.0	76.54
Grade 3 (Good to Moderate quality)	36.14	68.62	128.72	145.74	90.35	469.57
Subgrade 3b (Moderate quality)	1.42	0.0	13.87	2.36	1.25	18.90
Grade 4 (Poor quality)	0.0	0.0	0.0	0.0	0.0	0.0
Grade 5 (Very Poor quality)	0.0	0.0	0.0	0.0	0.0	0.0
Non-agricultural / Urban	32.09	0.0	0.0	0.0	16.89	48.98
TOTAL	69.65	99.96	187.79	148.10	108.49	613.99

Geology and Hydrogeology

- 3.2.32 Sites of potentially contaminative current and/or historical land uses have been identified within the study area including railways and nearby industrial development associated with Immingham Docks and the former TGT site. However, the majority of land within the Order Limits is used for agriculture which is likely to have low potential for contamination.
- 3.2.33 The Geological composition within the Order Limits comprises predominantly of Glacial Till between Section 1 and Section 4 and Tidal Flat Deposits in Section 5, with localised pockets of Alluvium, Beach Deposits, Lacustrine Deposits, Glaciofluvial Deposits, Glaciofluvial Sheet Deposits. Storm Beach Deposits and Blown Sand. Bedrock underlying the superficial deposits consists of predominantly Burnham Chalk Formation for Sections 1 and 5, Welton Chalk Formation for Sections 2, 3 and 5, with a small section of Ferriby Chalk Formation in the centre of Section 3.
- 3.2.34 In relation to Hydrology, two Water Framework Directive (WFD) groundwater bodies have been identified within the Order Limits, these are as follows:
 - North Lincolnshire Chalk Unit (Poor Quality); and
 - South Lincolnshire Chalk Unit (Poor Quality).
- 3.2.35 Chapter 9: Geology and Hydrogeology of the ES **[EN01042/APP/6.2.9]** presents the full assessment of the likely significant effects of the Proposed Development on geology and hydrogeology.

Public Rights of Way

- 3.2.36 There is a network of recreational routes and Public Rights of Way (PRoW) that intersect the Order Limits, including National Cycle Network (NCN) routes. As the Order Limits extend south east from the Immingham Facility, it is intersected by NCN Route 110, located approximately 2 km to the west of the village of Waltham. There are also a number of PRoWs which intersect the Order Limits which connect the towns of Immingham, Grimsby, Louth, and Mablethorpe with the surrounding villages.
- 3.2.37 Chapter 16: Socioeconomics of the **ES [EN070008/APP/6.2.16]** presents the findings of an assessment of the Proposed Development on socio-economic during the construction and decommissioning phases. Within that assessment, impacts on the following are considered:
 - Employment:
 - users of recreational routes and PROW:
 - · Community severance: and
 - Private assets.

4. Planning History

4.1 Introduction

4.1.1 A planning history search of the land in the Order Limits and the surrounding area has been carried out to consider the potential for land use conflicts. The review includes applications for planning permission, development consent and Local Plan land use allocations. The Applicant will continue to monitor for new planning and development consent applications within the vicinity during the examination and decision period for the Viking CCS Pipeline. A full list of planning applications within the Order Limits and a 250 m area surrounding the Order Limits is included at Appendix B.

4.2 The Immingham Area

- 4.2.1 The Immingham Facility, that will receive CO₂ from emitters, is located in amongst a number of large industrial facilities in North Lincolnshire. The land in and around the Immingham Facility is a long-established industrial area and is retained for this use in the submission version of the North Lincolnshire Local Plan (November 2022). The Local Plan Proposals map and inset maps show that the land at the Immingham Facility, along with land to the north and east, is allocated for Strategic Employment which shows support for the long-term development of the area for industrial and employment uses. Polices SS8 and EC1 in the submission version of the North Lincolnshire Local Plan (November 2022) support the provision of employment land in this area, and at paragraph 4.79 the South Humber Bank is recognised as the areas main strategic employment site, being of national and regional significance due to its close proximity to the deepwater Humber estuary.
- 4.2.2 Employment land allocations are located on the South Humber Bank in both the North Lincolnshire Council administrative area and North East Lincolnshire Council administrative area. This demonstrates the extent of industrial development along the south bank of the estuary.
- 4.2.3 Planning applications have been submitted to North Lincolnshire Council by VPI and Phillips 66 for facilities to capture and compress CO₂ from their facilities to be transported to geological storage using the Viking CCS Pipeline.
- 4.2.4 Planning application reference: PA/2023/421 was submitted to North Lincolnshire Council in March 2023 for the construction and operation of a post-combustion carbon capture plant, (including carbon dioxide compressor and metering, cooling equipment, stacks, substations and other associated infrastructure) at the VPI Power Station, Rosper Road. This application is for the equipment necessary to capture and compress CO₂ from the industrial activities at the VPI Power Station located north of the Order Limits. The CO₂ would be transferred by pipe to the Immingham Facility of the Viking CCS Pipeline or a similar facility. Planning application PA/2023/421 was validated in March 2023 and is yet be determined.

- 4.2.5 Planning application reference: PA/2023/422 was submitted to North Lincolnshire Council for the construction and operation of a post-combustion carbon capture plant, (including carbon dioxide compression and metering cooling equipment, stacks, substations and other associated infrastructure) at Phillips 66 Ltd, South Killingholme. This application is for the equipment necessary to capture and compress CO₂ from the industrial activities at the Phillips 66 facility located west of the Order Limits. The CO₂ would be transferred by pipe to the Immingham Facility of the Viking CCS Pipeline or a similar facility. Planning application PA/2023/422 was validated in March 2023 and is yet be determined.
- 4.2.6 There are no planning applications for development at this time that would conflict with the development of the Immingham Facility.

4.3 The Theddlethorpe Area

- 4.3.1 At Theddlethorpe the Viking CCS Pipeline will connect with the existing LOGGS Pipeline. The Applicant is proposing two options for the location of the Theddlethorpe Facility. Option 1 makes use of land at the TGT whilst Option 2 would make use of agricultural land west of TGT.
- 4.3.2 The TGT previously provided gas terminal facilities for LOGGS Pipeline and other gas pipelines bringing gas from North Sea gas fields. The TGT has ceased to operate and a planning application (reference: PL/0180/19) was submitted to Lincolnshire County Council in 2019 for prior notification of its proposed demolition. This application was granted consent in January 2020. The TGT has been fully decommissioned. Surfacing, hardstanding and an access road remain at the TGT along with mature perimeter vegetation which screen the site from view.
- 4.3.3 There are no planning applications for other development within the TGT at this time and as such there are no development proposals that would conflict with the use of TGT for Option 1 of the Theddlethorpe Facility.
- 4.3.4 Planning application reference PL/0060/20 was submitted to Lincolnshire County Council in 2020 and subsequently approved for the installation and operation of an underground gas pipeline up to 750 m, connecting the existing Saltfleetby/Theddlethorpe underground gas pipeline to the National Grid National Transmission System. The site of the planning application is located approximately 40 m south of the Order Limits and so will not affect the Proposed Development.
- 4.3.5 The existing LOGGS Pipeline is buried and extends from the TGT in an easterly direction to the east coast. The pipeline passes underneath an area of nature conservation and has an above ground valve located close to the dunes on the coast. The Order Limits include an access road from Meers Bank to this valve. There are no planning applications for development along the route of the LOGGS Pipeline, valve or access road and so no interactions or conflicts between the Proposed Development and other schemes are anticipated.

4.4 The Pipeline Route

- 4.4.1 Outline planning application reference: DM/0508/23/OUT was submitted to North East Lincolnshire Council in 2023 for the erection of 7 dwellings (with access and landscaping). The planning application site was located between Luxmore Farm and Mill Lane on land within the Order Limits. The use of land within the Order Limits for new residential dwellings would conflict with the Proposed Development and as such the Applicant submitted an objection to the planning application.
- 4.4.2 The planning application was refused (11th August 2023) on grounds that the proposal represented development outside usual development limits.

4.5 Nationally Significant Infrastructure Projects in the South Humber Area

- 4.5.1 A number of NSIP's are proposed along the South Humber Bank and Immingham area due to the presence of the established industrial area and access to the deep water estuary.
- 4.5.2 Seven other NSIP schemes have been submitted to the Planning Inspectorate within 15 km of the Viking CCS Pipeline Order Limits. An overview of these schemes is provided below and demonstrates the interest in the area and ability to accommodate large infrastructure projects in this established industrial area.

ABLE Marine Energy Park

4.5.3 ABLE Marine Energy Park (MEP) (Reference TR030001) comprises a manufacturing base for the offshore marine energy sector. The MEP covers 1,297 acres of land on the south bank of the Humber Estuary and will provide a facility for the manufacture, storage, assembly and deployment of the next generation of offshore wind turbines. The Able Marine Energy Park Development Consent Order was granted in 2014. Construction of the project began in June 2022 and is programmed to be completed by March 2025. The southern extent of the ABLE Marine Energy Park Order Limits includes Rosper Way where it crosses the Order Limits of the Proposed Development in Section 1, Immingham.

VPI Immingham OCGT

4.5.4 VPI Immingham Open Cycle Gas Turbine (OCGT) (Reference EN010097) comprises the construction and operation of a gas-fired OCGT power station with a gross electrical output of up to 299 mega-watts (MW) and associated development including gas and electrical connections. The Order Limits of the VPI Immingham OCGT are directly adjacent to Section 1 of the Viking CCS Pipeline Order Limits at Immingham. The Immingham Open Cycle Gas Turbine Order was granted on 7th August 2020.

South Humber Bank Energy Centre

4.5.5 South Humber Bank Energy Centre (Reference EN010107) comprises the construction and operation of an energy from waste plant of up to 95 MW gross capacity and associated development including an electrical

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connection, landscaping and access. The development is located approximately 5 km east of the Viking CCS Pipeline Order Limits. South Humber Bank Energy Centre Order was granted on 10th November 2021.

Hornsea Project Four Offshore Wind Farm (Generation Stations)

4.5.6 The Hornsea Project Four Offshore Wind Farm (Reference EN010098) will comprise up to 180 wind turbines in an area of seabed located approximately 69 km to the east of Flamborough Head. The project includes offshore and onshore infrastructure. The onshore cable corridor extends from the point of landfall to connect the generated electricity to the Hornsea Four onshore electrical substation, near Cottingham. The onshore location of the Hornsea Project Four Offshore Wind Farm crosses the Order Limits within section 2 to the south of the A180. The Hornsea Four Offshore Wind Farm Order was granted on 12th July 2023.

Immingham Eastern Ro-Ro Terminal

4.5.7 Immingham Eastern Ro-Ro Terminal (IERRT) (Reference TR030007) is a proposed roll-on/roll-off facility comprising a new jetty with three berths, improved hardstanding, terminal buildings and an internal side bridge to cross over existing port infrastructure. An application for a DCO was submitted to the Planning Inspectorate in February 2023 and is currently at examination stage. IERRT is located approximately 2.5 km south east of the Proposed Development.

Immingham Green Energy Terminal

4.5.8 Immingham Green Energy Terminal (IGET) (Reference TR030008) comprises a new liquid bulk import terminal and associated processing facility, the purpose of which is to deliver a green hydrogen production facility. Imported ammonia will be stored and processed at the Site to create green hydrogen, for onward transport to filling stations throughout the UK. Key project infrastructure comprises; a new approach trestle; jetty superstructure and topside infrastructure; and land side processing infrastructure. IGET is located approximately 2.5 km east of the Proposed Development. An application for the IGET project was accepted by the Planning Inspectorate for examination on 19th October 2023.

Humber Low Carbon Pipelines

4.5.9 The Humber Low Carbon Pipelines (HLCP) (Reference EN070006) is a proposed scheme of carbon dioxide (to facilitate carbon capture, usage and storage) and hydrogen transportation pipelines between Drax in North Yorkshire and Easington in the East Riding of Yorkshire, connecting various emitters and generators in the Humber Region. The HLCP project will be located between Drax Power Station and Easington on the East Coast north of the Humber Estuary. Notice of the proposed application was submitted in November 2022, with the application expected to be submitted to the Planning Inspectorate in Q3 of 2023.

5. The Need and Benefits of the Proposed Development

5.1 Introduction

- 5.1.1 There is an urgent need to decarbonise industry within the UK. Legally binding legislation along with international, national and local policies, ambitions and statements support the transition to a low carbon economy and to act on climate change. New energy infrastructure will contribute towards decarbonising industry through flexible and green energy generation and through the development and use of Carbon Capture and Storage (CCS) facilities fitted to fossil fuel generating stations and industry.
- 5.1.2 CO₂ is naturally present in the earth's atmosphere as a trace gas and is produced from the burning of fossil fuels or other chemical or biological processes from large point sources such as power generation and industrial facilities. CO₂ is a heat trapping gas, increasing levels building up in the atmosphere is having a warming effect, known as the greenhouse effect. CO₂ is one of the most common greenhouse gases, and is a gas that contributes to climate change by trapping heat in the atmosphere and causes global temperature to rise. The technologies for reducing greenhouse gas emissions include replacing fossil fuels with renewable sources, boosting energy efficiency, and capturing CO₂ from industry.
- 5.1.3 CCS comprises the capture and storage of carbon dioxide from large point sources. The CO₂ is captured and compressed at source, from there the CO₂ is transported through buried pipelines and placed in geological stores in a way that the CO₂ is no longer able to affect the atmosphere. CCS will support the transition to a low carbon economy, through helping to decarbonise industrial clusters in the UK.
- 5.1.4 A separate Statement of Need [EN070008/APP/7.3] has been prepared which outlines the need for the capacity of the Proposed Development, investment and employment roles that will be supported should the DCO be granted. This section of the PDAS provides an overview of the current position with regards to the need for CCS in the UK outlined in government policy documents.

5.2 UK Climate Emergency: The Commitment to Net Zero

5.2.1 The UK is legally bound through the Climate Change Act 2008 (Ref 20) to reduce carbon emissions. When passed in 2008, the Act committed the UK to reducing greenhouse gas emissions by at least 80% by 2050 when compared to 1990 levels. This target was amended by the Climate Change Act 2008 (2050 Target Amendment) Order 2019 to a reduction of net emissions 100% by 2050 relative to 1990 levels to make the UK a 'net-zero' emitter. This will be achieved by reducing or capturing the greenhouse gasses before they are released into the atmosphere. The Climate Change Act 2008 requires the UK government to set carbon budgets outlining the

maximum level of net UK carbon account covering a five-year period. The budgets are released 11 years prior to coming into force. The UK's sixth (and latest) carbon budget published 2021, covers the period 2033-2037 and seeks to bring the UK more than three-quarters of the way to the net zero target by 2050, by reducing emissions by 78% by 2035 when compared to 1990 levels.

- 5.2.2 The Climate Change Act 2008 established the Independent Committee on Climate Change, now the Climate Change Committee (CCC) which advises the UK Government on setting and meeting carbon budgets. In May 2019, the CCC published its report titled, "Net Zero: The UK's Contribution to Stopping Global Warming", which recommended that the UK should legislate to reach net-zero greenhouse gas emissions by 2050. As noted above, that recommendation was implemented through the Climate Change Act 2008 (2050 Target Amendment) Order 2019. The report also states that CCS is a necessity to meet these targets, not an option and also encouraged the creation of clusters. In 2022, the Committee for Climate Change stated that there is no route to net zero by 2050, nor decarbonising industry while safeguarding jobs, without deploying CCS at scale.
- 5.2.3 In October 2018, following the adoption by the UN Framework Convention on Climate Change of the Paris Agreement, the Intergovernmental Panel on Climate Change (IPCC) published a Special Report2 on the impacts of global warming. This report concluded that human-induced warming had already reached approximately 1°C above preindustrial levels and that without significant and rapid decline in emissions across all sectors, global warming would not be likely to be contained and more urgent international action was therefore required.
- 5.2.4 To meet Net Zero by 2050, the government recognises that a step change is required in terms of the decarbonisation of the energy system (Draft Overarching National Policy Statement for Energy EN-1, March 2023; Paragraph 2.3.3). In order to meet both short and medium term decarbonisation targets a significant roll-out of renewable energy technologies with CCS being recognised by the SoS and the UK government as a vital step in supporting the road to achieving Net Zero carbon emissions. The sixth Carbon Budget seeks to ensure the UK capture and store between 20 and 30 million tonnes of carbon dioxide a year by 2030.

National Infrastructure Strategy (November 2020)

5.2.5 The National Infrastructure Strategy (HMSO, 2020) (Ref 21) describes the goals for decarbonisation of the UK's energy network, stating that to attain net zero by 2050 the power system will need to be mostly carbon free and significantly larger to cope with the additional demand from electrification in transport, heating and industrial processes. The Strategy aims to make the UK a world leader in new technologies including CCS, it states, CCS will also be essential to decarbonising large parts of industry producing low emissions and in delivering greenhouse gas removal technologies, permanently locking away carbon dioxide.

² IPCC Special Report: Global Warming of 1.5oC. Available Here:

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The Governments Ten Point Plan for a Green Industrial Revolution (November 2020)

- 5.2.6 To meet both short and medium term decarbonisation targets the Government published; The Ten Point Plan for a Green Industrial Revolution (Ref 22) and The Energy White Paper – Powering our Net Zero Future (EWP) (Ref 23) in 2020, which set out how the UK would achieve these ambitious targets. The Plan is described as laying the foundations for a 'Green Industrial Revolution' which will reduce UK emissions by 180 million tonnes of carbon dioxide equivalent (Mt CO2e) between 2023 - 2032 and help meet the target of net zero by 2050. The Ten Point Plan identified that by investing in clean technologies, wind, carbon capture, hydrogen and many others. Britain will lead the world into a new Green Industrial Revolution. The Ten Point Plan outlines that energy will be generated using clean power from offshore windfarms, nuclear power plants and hydrogen technologies but where carbon is still emitted to provide energy then the UK will pioneer a new British industry dedicated to its capture and return to under the North Sea.
- 5.2.7 The Ten Point Plan for the Green Industrial Revolution includes 'Investing in Carbon Capture, Usage and Storage' as point 8 alongside other points such as advancing offshore wind, growth in low carbon hydrogen and greener buildings. The Plan considers Low Carbon Hydrogen in Point 2 and acknowledges that producing low carbon hydrogen at scale will be made possible by Carbon Capture and Storage, and that the UK has unparalleled carbon capture and storage sites that can be used.
- 5.2.8 Point 8 in the Ten Point Plan specifically considers 'Investing in Carbon Capture, Usage and Storage' and outlines that this will be an exciting new industry to capture the carbon that we continue to emit as we revitalise industry. The Plan pledges financial support to establish four industrial clusters including the Humber region where the Viking CCS Pipeline will be located as well as the northeast, north west, Scotland and Wales to create Superplaces.

British Energy Security Strategy (2022)

5.2.9 The British Energy Security Strategy (Ref 24) outlines proposed actions and ambitions of the UK Government to increase energy security. The Strategy reiterates the ambition for investing in CCS including a 2025 ambition to see up to 1GW of CCUS – enabled operational or in construction by 2025. The strategy also highlights the need to reuse existing infrastructure and use the great North Sea reserve and use empty caverns for CO₂ storage.

The Energy White Paper: Powering Our Net Zero Future (December 2020)

5.2.10 The Energy White Paper – Powering our Net Zero Future (EWP) (BEIS, 2020) was presented to Parliament in December 2020 and builds on the Ten Point Plan. At the core of the EWP is the commitment to achieve net zero and tackle climate change. The EWP seeks to put in place a strategy for the wider energy system that transforms energy, supports a green recovery, and creates a fair deal for consumers. The EWP echoes the aims of the Ten Point Plan and states that: to the extent that we still emit carbon, we will

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- pioneer a new British industry dedicated to its capture and return to under the North Sea.
- 5.2.11 Chapter 2 of the EWP deals with 'power' with the stated goal being to use electricity to enable the transition away from fossil fuels and decarbonise the economy cost-effectively by 2050. Figure 3.2 of the plan, 'Electricity demand, Net Zero scenarios' highlights how electricity demand could double by 2050 as electricity replaces the use of petrol and diesel in transport and to some extent, gas, for heating. This would require a four-fold increase in clean electricity generation with the decarbonisation of electricity being required to underpin the delivery of the net zero target.
- 5.2.12 The EWP explains that the government is not targeting a particular generation mix but outlines that a net zero system is likely to be composed predominantly of wind and solar supplemented by less intermittent technologies such as gas generation fitted with CCS. The EWP sets out that the UK will continue to rely on natural gas for some years but that emissions will be reduced by developing networks to accommodate technologies such as CCS.
- 5.2.13 The industrial energy chapter of the EWP recognises the role of manufacturing industry in the UK economy almost all of which is located outside London and the South East and provides high value jobs. The EWP goes on to outline that manufacturing and refineries form the bulk of industrial emissions within the UK's major industrial clusters including the Humber region. While improved efficiency in energy performance go some way to reduce emissions, the EWP states that manufacturing industry will need to capture carbon for onward storage and acknowledges that it will be necessary to build additional infrastructure such as pipelines and storage to transport carbon dioxide from industrial processes. The EWP outlines that the UK government will work with industry to overcome the challenges associated with delivering this infrastructure. The EWP outlines that the UK Government will support the delivery of four low carbon clusters where related industries have congregated and can benefit from utilising shared clean energy infrastructure such as CCS.
- 5.2.14 The EWP describes in the Industrial Energy chapter that the deployment of Carbon Capture Utilisation and Storage (CCUS) is fundamental to the decarbonisation of energy intensive industries and can help secure their long-term future. The UK government will invest £1 billion up to 2023 to facilitate the deployment of CCUS in two industrial clusters by the mid-2020s and a further two clusters by 2030 supporting the ambition to capture 10Mt CO₂ per year by the end of the decade. The government recognises that the UK is in a strong position a global leader in CCUS technology.

Net Zero Strategy: Build Back Greener (October 2021)

5.2.15 In October 2021 the Net Zero Strategy: Build Back Greener (NZS) (Ref 25) was published setting out how the UK will meet its sixth carbon budget; the document presents a plan for reducing reliance on fossil fuels and making the transition to low carbon energy consistent with the net zero commitments. The strategy reiterates and expands upon commitments presented within the Ten Point Plan and the EWP and shows the progress

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- made towards each of the Ten Points in the Plan to put the UK on course to achieve Net Zero by 2050.
- 5.2.16 The NZS highlights the importance of CCUS and states in chapter 3 that:
 - To help deliver emission reductions to keep us on track for Carbon Budget 6, we will need significant expansion of power CCUS beyond the Energy White Paper commitment of one power plant by 2030.
- 5.2.17 The NZS states that, it will deliver four CCUS clusters capturing 20-30Mt CO₂ across the economy, including 6 Mt CO₂ of industrial emissions per year by 2030.
 - **CCUS Supply Chains:** A Road Map to Maximise the UKs Potential (2021)
- 5.2.18 Published by the UK government in May 2021, the CCUS Supply Chains Road Map (Ref 26) sets out how the government and industry can work together to harness a strong industrialised UK CCUS supply chain. The document reiterates that CCUS is integral to the UKs Green Industrial Revolution and the UK Governments financial support to assist in establishing four industrial clusters including the Humber region, North East, North West, Scotland and Wales to assist in capturing and storing up to 10Mt of CO₂ per year by 2030.
- 5.2.19 The UK Government recognises the economic benefits of delivering large scale CCUS infrastructure and the aspirations to create innovative and efficient UK CCUS supply chains, to have UK CCUS supply chains that will enhance productivity, skills and employment across the UK and for thriving entrepreneurial UK CCUS supply chains to put the UK at the forefront of new global markets.
- 5.2.20 The Road Map demonstrates the UK Government support for CCUS and that it is putting in place the finance, support and steps to works with industry to deliver a world class industrialised CCUS sector. The Viking CCS Pipeline is a developer lead project. The Applicant has a proven track record in the energy sector and is working with industry to develop the infrastructure necessary to realise one of the UKs earliest CCS projects in line with the UK Governments aspirations.

5.3 National Policy Statements for Energy

- 5.3.1 The adopted Overarching National Policy Statement for Energy NPS EN-1 reflects policy at the time of writing in 2011 which anticipated the use of CCS primarily for the production of low carbon electricity. In the decade since this was written, policy now reflects a cluster approach to the use of CCS technology, with it being used for industry, power generation and low carbon hydrogen production.
- 5.3.2 A review of the energy NPSs was announced in the 2020 Energy White Paper: Powering our Net Zero Future. This review aimed to bring the NPSs up to date and to reflect the current energy policies as set out in the White Paper and to enable a planning policy framework which can deliver investment in the infrastructure needed for the transition to net zero. A series

- of draft NPSs were published in 2021 and a further revised draft published for consultation in March 2023.
- 5.3.3 NPS EN-1, 2011 states that the Government would like industry to bring forward many new low carbon developments (renewables, nuclear and fossil fuel generation with CCS) within the next 10 to 15 years to meet the twin challenge of energy security and climate change by 2050 (paragraph 3.3.5).
- 5.3.4 Part 2 of NPS EN-1, 2011 outlines Government policy on energy and energy infrastructure development and outlines the overall policy context for nationally significant energy infrastructure and confirms that:
 - 'We are committed to meeting our legally binding target to cut greenhouse gas emissions by at least 80% by 2050, compared to 1990 levels. Analysis done on possible 2050 pathways shows that moving to a secure, low carbon energy system is challenging, but achievable. It requires major investment in new technologies to renovate our buildings, the electrification of much of our heating, industry and transport, prioritisation of sustainable bioenergy and cleaner power generation.'
- 5.3.5 Within Part 3 of NPS EN-1, 2011 paragraphs 3.6.4-3.6.7 CCS is recognised as providing a key role in energy security related to fossil fuel generating stations. They explain the role CCS can have in meeting emissions targets while also maintaining security of supply and that CCS has the potential to reduce carbon emissions by up to 90%.
- 5.3.6 The revised draft EN-1 Overarching National Policy Statement for Energy was published in March 2023 following a period of consultation which commenced in September 2021. The revised draft NPS EN-1 (2023) has been updated to reflect the policies and strategic approach for the energy system and to ensure that the planning policy framework enables the delivery of the infrastructure required for the country's transition to net zero carbon emissions.
- 5.3.7 The revised draft NPS EN-1, 2023, provides further evidence that the UK Government recognises that new CCS infrastructure will be essential to ensuring the transition to a net zero economy. On the need for new CCS infrastructure, the revised draft NPS EN-1 2023, states:
 - 'there is an urgent need for new CCS infrastructure to support the transition to a net zero economy. The Committee on Climate Change Committee states CCS is a necessity not an option. As well as its role in reducing emissions associated with generating electricity from natural gas, CCS infrastructure will also be needed to capture and store carbon dioxide from hydrogen production from natural gas, industrial processes, the use of BECCS and from the air.'
- 5.3.8 Draft NPS EN-1 (2023) provides an update from the NPS EN-1 (2011) with the key shift being from the target for a reduction of at least 80% of Greenhouse Gas (GHG) emissions by 2050, to net zero by 2050 and an interim target of 78% by 2035, compared to 1990 levels (paragraph 2.2.1). It states that, to meet this more ambitious target:
 - 'We need to transform the energy system, tackling emissions while continuing to ensure secure and reliable supply and affordable bills for

- households and businesses. This includes increasing our supply of clean energy from renewables, nuclear and hydrogen manufactured using low carbon processes and where we still emit carbon, developing the industry and infrastructure to capture, transport and store it' (Draft NPS EN-1, 2023, paragraph 2.3.6).
- 5.3.9 Paragraphs 3.5.4 and 3.5.5 specifically reference CCS setting out an aim is to use CCUS technology to capture and store 20-30MtCO₂ per year by 2030, which will require the timely development and deployment of CCS infrastructure. Paragraph 3.5.6 also states that,

"The deployment of new onshore CO₂ pipelines over 16.093 kilometres in length can expand CCS networks and are within scope of this NPS."

5.4 Industrial Clusters and Viking CCS

- 5.4.1 To meet the UK's sixth Carbon Budget, the Government outlined its ambition to capture 20-30MtCO₂ per year by 2033. In support of this the UK Government has identified industrial Carbon Capture Use and Storage (CCUS) clusters. Industrial CCUS clusters are the starting point for new carbon capture industry and 7 clusters have been identified. A cluster is a regional group where several CCUS facilities will share infrastructure. The UK government has committed to supporting the development of two CCUS clusters with Track 1 clusters sequenced for deployment in the UK in the mid-2020's. These include Hynet and the East Coast Cluster.
- 5.4.2 Those sequenced for deployment by 2030 are track-2 clusters. Cluster Sequencing for Carbon Capture and Storage – Track 2 Guidance (Ref 27), published March 2023, identified that the Viking Project met the eligibility criteria for Track-2 of the governments Cluster Sequencing programme. The outcome of the Track 2 process was announced on the 31st July 2023 when the UK Government confirmed that the Viking CCS Pipeline (along with the Acorn project) remained best placed to deliver the governments objectives for Track 2. The announcement marked an important milestone for the Project, allowing it to move into front end engineering and design (FEED) and discussions with the government over the terms of the economic licence. The sequencing of these CCUS clusters through the Track 1 and Track 2 processes demonstrates the UK government's continued support for the development of CCS in the UK. The award of Track 2 status also sets out a clear route to market for the Proposed Development and provides greater certainty that it will be delivered in the proposed timescale, and to contribute towards the Net Zero by 2050 targets set by the government.
- 5.4.3 The objectives of the track-2 clusters are to: select two new CO₂ clusters that together have the potential to store at least 10 million tonnes per annum (Mtpa) of CO₂ by 2030 through a range of carbon capture projects; to ensure track-2 is affordable and represents the best possible value for money, consistent with the lowest cost pathway to meeting Carbon Budget 5 and 6 and net zero objectives; and to set a foundation to grow CCUS beyond Track-2 and maintain and increase the economic value of key industries associated with CCUS (for example job creation in industries that interact with CCUS and foreign direct investment as a result of the establishment of CCUS clusters).

- 5.4.4 Over 70% of the total carbon dioxide emissions from the Humber industrial area are located on the Lincolnshire side of the River Humber, where the Proposed Development is located. Decarbonising these industries is needed not only to meet the UK's Net Zero goals, but also to preserve industry and the associated skilled jobs in the region. Planning applications have been submitted for the development of carbon capture at VPI Immingham and Phillips 66. Together they comprise the first phase of the Humber Zero project. The Humber Zero project is a large-scale decarbonisation project that is aligned with the wider Humber Industrial Decarbonisation Deployment Project (Humber DP). Humber Zero will decarbonise 8 Mt per annum of CO₂ emissions with the potential to target 30 Mt of CO₂ from the wider Humber Cluster to the west of Immingham. Both of the VPI Immingham and Phillips 66 projects have commercial agreements in place, to allow these projects to connect to the Viking CCS Pipeline.
- 5.4.5 An overview of the local policy support for reaching net zero targets and new CCS development is presented within the local policy support table 5-1 below:

Table 5-1: Local Planning Policy Support for CCS and Net Zero

Local Authority	Document/Policy	Policy Summary
Lincolnshire County Council	Minerals and Waste Local Plan (June 2016). Policy M10: Underground Gas Storage	Policy supports developments of underground gas storage facilities, provided that the proposal accords with all other relevant development management policies set out in the plan.
	Minerals and Waste Local Plan (June 2016). Policy DM2: Climate Change	Supports proposals which would encourage carbon dioxide reduction/carbon measures to be implemented.
	Carbon Management Plan (2019) (Ref 28)	The Carbon Management Plan (CMP) sets out the strategy and action plan for continuing to reduce carbon emissions over the next 5 years.
North East Lincolnshire Council	Local Plan (2018) Policy 32: Energy and Low Carbon Living	Supports development that would achieve energy efficient and low carbon development.
	Net Zero Carbon Roadmap (2021) (Ref 29)	 The Net Zero Roadmap seeks to: Make the council a net zero organisation by 2040; Help the community adapt to climate change and a zero carbon future; Support and work with all other relevant agencies and stakeholders to make the borough net zero for carbon emissions by 2050.
East Lindsey Council	Local Plan Core Strategy (July 2018). Policy 27: Renewable	Supports large-scale renewable and low carbon energy development, development for the transmission and interconnection of

Local Authority	Document/Policy	Policy Summary
	and Low Carbon Energy,	electricity and infrastructure required to support such development.
	Carbon Reduction Action Plan, (August 2020) (Ref 30)	The Carbon Reduction Plan sets out a commitment to an ambitious target of reducing carbon emissions to net zero by 2040, with a minimum emissions reduction of 45% by 2027.
West Lindsey District Council	Central Lincolnshire Local Plan, (April 2023). Policy S11: Embodied Carbon	Supports development proposals which seek to reduce the embodied carbon content through design, use and source of materials.
	Central Lincolnshire Local Plan (April 2023). Policy S14: Renewable Energy	Supports proposals for renewable energy schemes as a means to support the transition to a net zero carbon future
	Central Lincolnshire Local Plan (April 2023). Policy S16: Wider Energy Infrastructure	Supports proposals which are necessary for the transition to a net zero carbon sub-region
	Sustainability, Climate Change and Environment Strategy (June 2021) (Ref 31)	The Strategy sets out how WLDC will reduce its carbon footprint to net-zero by 2050 at the latest whilst playing a leadership role to ensure the whole district can achieve the same position within the same timescale
	Carbon Management Plan 2021-2026 (2021) (Ref 32)	This Plan sets out a number of recommendations that WLDC should initially work towards in order to accelerate carbon reduction across the Council. WLDC has set a carbon reduction target of achieving net zero emissions across their own operations by 2050.
North Lincolnshire Council	Local Plan submission document, (November 2022). Policy DQE7: Climate Change and Low Carbon Living	Sets out how the Council expects development proposals to contribute to tackling climate change through mitigation and resilience measures, in addition to other policies contained within the local plan.
	Humber Vision 2030 (2022) (Ref 33)	This strategy centres around eight aims including that by 2030 the council will achieve net zero and will end the council's contribution to global warming.

5.5 The Benefits of the Proposed Development

5.5.1 The Viking CCS Pipeline is necessary to transport CO₂ from the Immingham industrial area to the Lincolnshire coast for onward transport through the LOGGS Pipeline to secure storage under the south North Sea. There is no

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- viable alternative method of transporting the CO₂ from Immingham to Theddlethorpe.
- 5.5.2 The wider Viking CCS Project has been developed in response to the need to decarbonise industry in the UK, to support a reduction in greenhouse gas emissions and assist the UK to achieve Net Zero by 2050. The Proposed Development will assist the government in meeting the legally binding targets to achieve Net Zero by 2050. A key benefit of the Proposed Development is the decarbonisation of industry and reduction of Green House Gas emissions in the region which will provide wider environmental benefits.
- 5.5.3 The Proposed Development will support industrial and energy decarbonisation, helping to meet this goal of a low carbon energy system and the subsequent greater commitment to achieve net zero by 2050. This is further evidenced within the Needs Case Document [EN070008/APP/7.3]

Decarbonisation of the Humber

- 5.5.4 The south bank of the Humber estuary is a long-established industrial area and this industry makes the Humber region the largest emitter of CO₂ in the UK, emitting approximately 20 Mt of CO₂ per year. Humber Zero is a regional industry-led project by Phillips 66 Limited and VPI Immingham which aims to decarbonise industry in and around the Immingham industrial area using carbon capture and storage. Planning applications for post-combustion carbon dioxide capture plants were submitted to North Lincolnshire Council in March 2023 by Phillips 66 Limited and VPI Immingham.
- 5.5.5 The wider Viking CCS Project has been designed with the capacity and capability of connecting to the Phillips 66 Limited and VPI Immingham post-combustion carbon dioxide capture plants, as well as multiple additional feeds. The Viking CCS Project has the capacity to capture and permanently store up to 10 million tonnes of CO₂ annually by 2030 increasing to 15 million tonnes per annum by 2035. The depleted Viking gas fields in the south North Sea have been verified as having storage capacity for up to 300 million tonnes of CO₂. The first volumes of CO₂ are expected to be captured by Phillips 66 Limited and VPI Immingham. The Immingham Facility will be constructed with the infrastructure necessary for other projects to connect to the Viking Project in the future. This will allow emitters to transport CO₂ to the Immingham Facility.

Economic

- 5.5.6 The direct economic beneficial effects associated with the Proposed Development include, an average 222 net jobs per annum during construction and specialist permanent employment during operation. Indirect beneficial effects will include the demand for construction materials, fuel and services such as food and accommodation during the construction stage.
- 5.5.7 The CCS industry presents an opportunity to develop new low-carbon jobs and expertise in the Humber and Lincolnshire areas with the Proposed Development providing training and upskilling opportunities including apprenticeships during the construction phase.

- 5.5.8 The successful completion of the Proposed Development will enable emitters in the Humber and beyond to decarbonise their current and future product lines, shaping the Humber into a low-carbon hub. By providing reliable low-carbon infrastructure it is anticipated that the Proposed Development will promote inward investment and attract new industries and associated employment while also supporting tens of thousands of jobs in the region.
- 5.5.9 The Governments Ten Point Plan for a Green Industrial Revolution (2020) outlines key industries and technologies that will be promoted and supported by the Government to achieve Net Zero. Point 8: in the Plan is 'Investing in Carbon Capture, Usage and Storage' which outlines that CCUS in the UK is expected to support around 50,000 jobs nationally by 2030.

Environmental

5.5.10 As outlined above, the Proposed Development forms part of the wider CCS project that will assist in reducing Green House Gas emissions to the atmosphere that result in global warming. The Proposed Development will provide for a reduction in CO₂ emissions to the atmosphere by providing a pipeline between emitters and storage for CO₂.

5.6 Summary

- 5.6.1 Recent UK energy and climate change policy has established a clear urgency in the decarbonisation of the energy and industry sector to meet the Governments legally binding commitment to achieving net zero greenhouse gas emissions by 2050. Government policy makes clear that CCS is essential to achieving these ambitions. The importance of CCS in helping to achieve Net Zero is recognised in a number of government strategy documents including the 'Ten Point Plan for a Green Industrial Revolution' (2020) and 'Energy White Paper Powering our Net Zero Future (2020).
- 5.6.2 More recently in 2022, the Climate Change Committee stated that there is no route to net zero by 2050, nor decarbonising industry while safeguarding jobs, without deploying CCS at scale.
- 5.6.3 Increasing importance has been placed on the development of CCS technologies and the role they play in supporting the commitment to Net Zero through planning policy backing including the NPS EN-1 adopted in 2011 and more so in the revised draft published in March 2023.
- 5.6.4 The urgent need to deploy CCS at scale should be given significant weight in the determination of this application. The Proposed Development would make a significant contribution to achieving national policy aims.
- 5.6.5 In addition, once operational, the Proposed Development will assist in securing additional employment in the Immingham industrial area and is expected to draw new industry and inward investment to the region.

6. Alternatives, Design and Access

6.1 Overview

6.1.1 This section describes the design evolution of the Proposed Development and how it responds to the site setting and context. Section 6.2 presents a summary of the National Policy Statement section relating to good Design. Section 6.3 below describes the use, amount and scale of the Proposed Development that has contributed to and influenced the design for the Proposed Development. Details are also provided in Section 6.3 below in respect of the access arrangements for each part of the Proposed Development. This section also provides in section 6.4 below details of the alternatives considered.

6.2 Design Policy

6.2.1 Section 4.5 of NPS EN-1, 2011 and 4.6 of the draft NPS EN-1, 2023 require that energy projects apply "good design" to produce sustainable infrastructure that is sensitive to its place, efficient in the use of natural resources and energy used in their construction and operation. Paragraph 4.5.1 of NPS EN-1, 2011 acknowledges that whilst;

'the visual appearance of a building is sometimes considered to be the most important factor in good design... high quality and inclusive design goes far beyond aesthetic considerations. The functionality of an object — be it a building or other type of infrastructure — including fitness for purpose and sustainability, is equally important. It is acknowledged, however that the nature of much energy infrastructure development will often limit the extent to which it can contribute to the enhancement of the quality of the area."

- 6.2.2 NPS EN-1, 2011 at paragraph 4.5.3 notes that, the SoS needs to be satisfied that energy infrastructure developments are sustainable and, having regard to regulatory and other constraints, are as attractive, durable and adaptable (including taking account of natural hazards such as flooding) as they can be. In so doing, the IPC should satisfy itself that the applicant has taken into account both functionality (including fitness for purpose and sustainability) and aesthetics (including its contribution to the quality of the area in which it would be located) as far as possible.
- 6.2.3 In the Paragraph 4.5.3 NPS EN-1, 2011 also states that: whilst the applicant may not have any or very limited choice in the physical appearance of some energy infrastructure, there may be opportunities for the applicant to demonstrate good design in terms of siting relative to existing landscape character, landform and vegetation. Furthermore, the design and sensitive use of materials in any associated development such as electricity substations will assist in ensuring that such development contributes to the quality of the area.
- 6.2.4 Paragraph 4.6.2 of NPS EN-1, 2023 which outlines that,

'Applying "good design" to energy projects should produce sustainable infrastructure sensitive to place, including impacts on heritage, efficient in the use of natural resources, including land-use, and energy used in their

- construction and operation, matched by an appearance that demonstrates good aesthetic as far as possible. It is acknowledged, however that the nature of energy infrastructure development will often *limit the extent to which it can contribute to the enhancement of the quality of the area.*'
- 6.2.5 Paragraph 4.6.7 of draft NPS EN-1, 2023 requires applicants to demonstrate within their application documents how the design process has been conducted and how the proposed design evolved, setting out why one design was favoured over the other.
- 6.2.6 When considering the Secretary of States decision making, paragraph 4.6.10 in NPS EN-1, 2023 provides that the Secretary of State should be satisfied that energy infrastructure developments are sustainable and as attractive, durable, and adaptable as they can be while also taking into account natural hazards such as flooding.
- 6.2.7 At paragraph 4.6.11 of the draft NPS EN-1, 2023 the SoS is guided to be satisfied that the Applicant has considered functionality (including fitness for purpose and sustainability) and aesthetics (including contribution to the quality of the area in which it would be located, any amenity benefits, visual impacts).

6.3 Design and Access Considerations included in the Proposed Development

- 6.3.1 The design for the proposed development has evolved during the iterative EIA process. Chapter 2: Design Evolution and Alternatives of the ES [EN070008/APP/2.6.2] describes the process of selecting the route for the pipeline and locations for the above ground installations. In keeping with Paragraph 4.6.7 of draft NPS EN-1, 2023 the design process is described in ES chapter which sets out how the design has evolved and the reasons for selecting the pipeline route.
- 6.3.2 This section sets out how the design for the Proposed Development responds to the site, its setting and constraints in accordance with the policy requirements for good design set out in NPS EN-1, 2011 and draft NPS EN-1, 2023. The majority of the Viking CCS pipeline will be buried which will allow the continuation of the surface land uses e.g. agricultural land use, and to reduce the potential for impact on the environment such as impacts on the landscape. It will not be necessary to access the pipeline once it has been installed unless maintenance is necessary and as a result the buried pipeline is not considered further in this section of the PDAS.
- 6.3.3 The Proposed Development includes above ground installations (AGIs) including the Immingham and Theddlethorpe Facilities and three Block Valve Stations which are necessary for the function of the Viking CCS pipeline. The Proposed Development also includes temporary infrastructure such as compounds which are required during the construction stage.

Temporary Infrastructure

6.3.4 During the construction of the Viking CCS Pipeline three temporary construction compounds will be established to provide for the storage of construction materials, office and welfare facilities. The sites for construction

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- compounds have been selected to be in close proximity to the construction works at the northern end, centrally and at the southern end of the proposed pipeline route to provide materials and facilities for use across the Proposed Development. All of the construction compounds have been located to benefit from access from the existing highway network that is suitable for heavy and light goods vehicles. The locations are remote from residential areas and provide sufficient space for the storage of materials and facilities.
- 6.3.5 The northern construction compound will be located on agricultural land south of the A160 near south Killingholme. This site has been selected as it is close to the Immingham Facility and the route of the pipeline. The site has also been used as a construction compound previously during highway improvements in the area, so is considered suitable for this use. The site is intended to be the main construction compound including management/administration offices, workshops, stores and welfare facilities. Access to the northern construction compound would be taken from an existing junction along Habrough Road which will provide suitable access for heavy goods vehicles, vans and cars accessing the site to deliver materials and access for construction staff.
- 6.3.6 The central construction compound will be located on agricultural land along the eastern side of the A18 and will provide welfare, parking and storage facilities during the construction phase. Access to the central construction compound will be taken from the A18 with suitable means of access for heavy goods vehicles, vans and cars accessing the compound.
- 6.3.7 The southern construction compound will be located on brownfield land at the former TGT site and will provide adequate space on previously developed land. This will provide welfare, parking and storage facilities during the construction phase.
- 6.3.8 The construction compounds will not be accessible to members of the public. It will be necessary to temporarily divert Public Rights of Way during the construction stage of the pipeline corridor. These PRoW on pipeline corridor will be temporarily diverted in agreement with local authorities as shown on the Access and Rights of Way plans [EN070008/APP/4.20] to maintain access to public footpaths and bridleways in the area. Diversion routes have been kept as short and direct as possible while providing a safe route for the diversion.
- 6.3.9 As acknowledged by paragraph 4.5.3 of NPS EN-1, 2011 there are limited opportunities to improve the appearance of the construction compounds, however good design has been demonstrated by siting the construction pounds outside of sensitive landscape areas such as the Lincolnshire Wolds AONB. Furthermore, where possible vegetation around the edges of construction compounds, such as hedgerows, would be retained to provide screening. The location of the compounds have been selected to be outside of sensitive areas including flood risk areas, away from residential areas and listed buildings to limit the potential for adverse effects. Due to the temporary nature of the construction compounds it is not possible to implement additional landscape planting.

The Immingham Facility

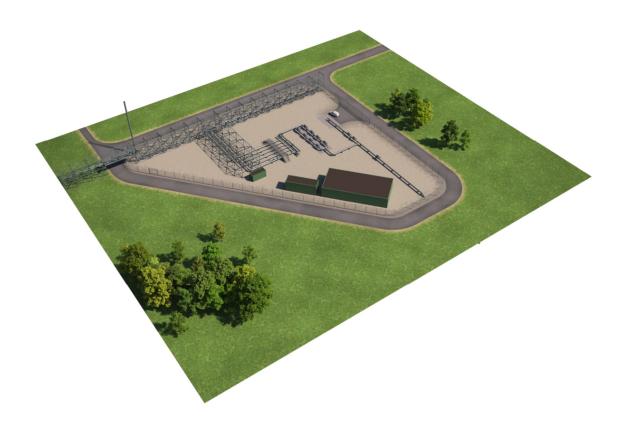
- 6.3.10 The purpose of the Immingham Facility is to provide the facilities necessary to receive CO₂ that have been captured and conditioned by emitters located in the Immingham industrial area. The Immingham Facility will not be publicly accessible but will be attended by technicians during operation and for maintenance purposes. The Facility will be securely enclosed by a perimeter fence. Access to the above ground installations will be by motorised vehicle and on foot with suitable access for technicians to move around the Site to undertake inspections, maintenance and repairs.
- 6.3.11 The Site for the Immingham Facility will cover approximately 1.0 ha and will be located on vacant brownfield land formerly used as a construction laydown area for the Immingham power station. The Immingham Facility will be located within a heavily industrialised setting with the Phillips 66 Humber Refinery to the west and VPI Immingham to the north. Heavy industry is also prevalent in the wider area. VPI Immingham which comprises large power generation turbines, steam generation facilities, cooling towers associated valves and pipework and large ducting into very large chimney stacks surrounded by car parking, and process equipment comprising pipework, flues, cooling facilities and industrial units. To the west is a railway line and beyond that the area is dominated by the Phillips 66 Humber Refinery with large scale processing facilities for crude oil distillation, fluid catalytic cracking and coking amongst other industrial processes. There are multiple industrial buildings and many tall exhaust gas chimneys. Further south are the large storage tanks of Philips 66.
- 6.3.12 The Site has been selected to be in close proximity to the industrial area of Immingham and emitters of CO₂ as this is considered to be most efficient. The Order Limits provide adequate space for the Immingham Facility including pipe connections to receive CO₂ from Phillips 66 and VPI Immingham and additional emitters if required. The Site has been selected and facilities designed to provide suitable access for technicians involved in the maintenance and operation of the Immingham Facility. Pedestrian access is provided for the movement of technicians around the Facility. It is proposed that access to the Immingham Facility will be provided from Rosper Road by a plant access road on site. A pedestrian access path between the Immingham Facility and the VPI plant is also proposed, to provide a non-vehicular link between sites. The Facility will be securely enclosed by a perimeter fence. As an industrial facility access has not been provided for the public. A brief description of each of the key components at the Immingham Facility is included in Table 6-1 below:

Table 6-1 Immingham Facility components

Component Name	Description
Inlet Manifold with valve access platform	The incoming pipelines from each emitter are combined into common piping prior to entry to the Viking CCS pipeline. A valve access platform (circa 14 m x 2 m) is provided to allow maintenance.
Pig Launcher/ Receiver	Pig launchers and receivers are used for inserting, Pipeline Inline Inspection (ILI) tools, referred to as 'Pigs', for activities

	such as inspection of the inside of the pipeline without flow interruption.
Emergency Shutdown Valves (ESDV)	ESDV are valves designed to automatically stop flow in the pipeline upon the detection of a potentially dangerous event or non-standard operating condition.
Isolation Valves	Isolation valves are required to allow discrete pieces of equipment to be maintained and for the safe loading and pressurisation of the pig launcher.
High-integrity Pressure Protection System (HIPPS)	HIPPS consist of a series of ESDVs and manual isolation valves which will close in response to a high pressure being detected
Venting System	A stand-alone vent stack is required to be used to de-pressure facilities for maintenance and pigging operations. The height of the required vent stack is elevated at up to 25 m above ground level, with a maximum diameter of 24".
Local Equipment Room (LER)	will be a 12 m x 5 m containerised steel structure to provide an instrument equipment room and house electrical batteries to supply back-up power if required.
Analyser House	The analyser house is proposed to be a 6 m by 2.5 m containerised steel structure where analyser equipment is located.

Figure 6-1 Illustration of an indicative configuration for the Immingham Facility



- 6.3.13 The Immingham Facility has been designed to safely receive and transfer CO₂ from emitters into the Viking CCS Pipeline. The design for the Facility is functional in nature, providing the equipment necessary to transfer CO₂ and access for monitoring and maintenance of the equipment.
- 6.3.14 The infrastructure and equipment outlined above have been designed and arranged to maximise efficiency of use, and ease of access for maintenance, as this is functional development which requires access by staff only. Due to the industrial nature of the area where the Immingham Facility and its associated development is located, it is considered that the design responds to the existing built environment. To prevent unauthorised access and safety of the public in general, the Immingham Facility will include a perimeter security fence with suitable gated access.
- 6.3.15 The Immingham Facility comprises a series of pipe work, valves and process equipment as described above. As required by Section 4.5 of NPS EN-1, 2011 and 4.6 of the draft NPS EN-1, 2023 "good design" has been applied by selecting a location for the Immingham Facility that is sustainable by using brownfield land that is located close to emitters of CO₂. The appearance of the Immingham Facility is in keeping with the surrounding industrial facilities.
- 6.3.16 In keeping with Paragraph 4.6.1 of NPS EN-1, 2023 the Immingham Facility has been designed to be functional by providing the necessary equipment to receive CO₂ while also allowing access for operations and maintenance.
- 6.3.17 Paragraph 4.6.10 of NPS EN-1, 2023 provides that the Secretary of State should be satisfied that energy infrastructure developments are sustainable and as attractive, durable, and adaptable as they can be while also taking into account natural hazards such as flooding. The Immingham Facility has been designed to blend in with the surrounding industrial facilities and will generally be discrete compared with the scale of the facilities in the surrounding area. Natural hazards have been taken into account and while the Immingham Facility will be located in an area of flood risk, it is considered necessary to locate the facility close to emitters of CO₂. The Facility has been designed to cease operations temporarily (in keeping with the surrounding existing industrial facilities) should flooding of the site occur.

Block Valve Stations

- 6.3.18 Three Block Valve Stations are proposed along the pipeline route to enable pipeline sections to be isolated for operational and maintenance reasons.
- 6.3.19 An engineering design assessment has been undertaken to find the most suitable locations for the block valves along the pipeline route. It was identified that block valve locations at approximately 13 km, 24 km and 39 km along the pipeline route would be necessary. The locations of the Block Valve Stations are as follows:
 - Block Valve Station 1: Washingdales Lane Block Valve Station, located off Washingdales Lane, accessed from the A18 Barton Street:
 - Block Valve Station 2: Thoroughfare Block Valve Station, located approximately 750 m southeast of the village of Ashby cum Fenby: and

- Block Valve Station 3: Louth Road Block Valve Station, located south east of Alvingham and is accessed off Louth Road.
- 6.3.20 At each station, the block valve is buried whilst above ground equipment will include the actuator to operate the block valve, a short section of pipework and upright vent (up to 4 m high) and a rectangular operating kiosk constructed from flat metal panels to provide a secure enclosure and protection from weather for operating controls. The appearance of the station will be minimalist and include only the essential equipment necessary to operate the block valve.
- Block Valve Stations will not be publicly accessible. The Block Valve Stations 6.3.21 will be remotely monitored from the main control centre, with local control monitoring/control capable when maintenance personnel are physically on site. Each Block Valve Station includes an access road, vehicle turning space and a car parking area for use by technicians when attending Site during operation, or for maintenance or inspection purposes. The Block Valve Stations include security fencing at a height of 2.4 m with double-leaf gates for vehicles with access from the adjacent road network, access tracks or similar. Provision will be provided for maintenance operatives to safely park vehicles off the highway and open the gates. In response to the rural locations of the Block Valve Stations, they have been designed to include perimeter landscape planting, to provide screening with an outer post and rail fence. To minimise further visual impact, the Block Valve Stations will be unlit except during maintenance or during potential breakdowns or emergencies, when permanent task lighting columns would be used.
- 6.3.22 In accordance with Section 4.5 of NPS EN-1, 2011 and 4.6 of the draft NPS EN-1, 2023 the Block Valve Stations have been designed to be sensitive to their rural locations and efficient in the use of space they require for operation and maintenance.
- 6.3.23 Paragraph 4.5.3 of NPS EN-1, 2011 acknowledges that there may be limited choice for the appearance of some energy infrastructure. The Block Valve Stations are functional in nature, required to allow the isolation of a section of the Viking CCS Pipeline. The Block Valve Stations are comprised of pipework and a block valve, positioned within a secure compound. The location for the Block Valve Stations is dictated by best practice and the need to provide these facilities at suitable points along the Viking CCS pipeline. In accordance with the NPS, the applicant has taken the opportunity to implement good design by selecting locations for the Block Valve Stations that are remote from residential properties and sensitive receptors and are in locations that make use of existing vegetation, where possible, to provide screening. The height of the Block Valve Station has been kept to a minimum where possible and landscape screening is provided around all of the Block Valve Stations to screen them from view. In accordance with paragraph 4.6.12 of NPS EN-1 security fencing and gates will be provided around the perimeter of the Block Valve Stations in order to secure the compound.
- 6.3.24 An illustrative layout of a Block Valve Station is provided below in Figure 6-2

6-2 Illustrative typical Block Valve Station layout



Theddlethorpe Facility

- 6.3.25 There are currently two options for the Theddlethorpe Facility. Land for the favoured option is not owned by the Applicant, and whilst there is ongoing discussion over a lease agreement with National Grid it is deemed necessary to consider an alternative site.
- 6.3.26 Option 1 for the Theddlethorpe Facility has been selected due its close proximity to the LOGGS pipeline. The location for Option 2 has been selected as it provides land along the route of the Viking CCS Pipeline that can connect to the existing LOGGS Pipeline. A crossover section of pipeline will directly connect the onshore and offshore pipelines and will include an appropriate section that will increase the diameter of the pipe from 24 to 36 inches. Both sites would provide equipment for the safe and efficient transfer of CO₂ from the Viking CCS Pipeline to the LOGGS pipeline. The Theddlethorpe Facility, regardless of location, would comprise the key components listed in table 6-2 below:

Table 6-2 Theddlethorpe Components

Component Name	Description
LOGGS pipeline tie- in	A pipeline configuration that will directly connect the two pipelines and will include an appropriate section that will increase the diameter of the pipe from 24" Viking CCS Pipeline to the 36" LOGGS pipeline.
Emergency Shut down Valves (ESDV)	Isolation of the Theddlethorpe Facility from the onshore pipeline is provided by an above-ground Emergency Shutdown Valve (ESDV). Isolation of Theddlethorpe from the offshore pipeline is provided by an ESDV which will replace the existing LOGGS ESDV.
Pig launcher / receiver	Pig Launchers and receivers are used for inserting Pipeline Inline Inspection Tools, referred to as Pigs for activities such as inspection of the inside of the pipeline without flow interruption. A pig receiver will be provided for the onshore 24" pipeline and a pig launcher for the 36" offshore pipeline. Pig handling area with associated projectile blast wall. Each blast wall is designed as a 20m long and 5m high structure made of steel or concrete.
High- integrity Pressure Protection System	A High-integrity Pressure Protection System (HIPPS) is provided to protect the offshore pipeline from overpressure. The HIPPS at Theddlethorpe Facility will consist of a series of ESDVs and manual isolation valves.
Venting System	A 25m vent stack is proposed in order to depressurise the Theddlethorpe facilities if required. The vent stack also allows depressurising of the onshore or offshore pipeline if required.
Local Equipment Room	The local equipment room (LER) is proposed to be a 12 by 5m containerised steel structure. The LER would consist of a battery room and an instrument equipment room.

- 6.3.27 Option 1 is the preferred location for the Theddlethorpe Facility as this site is a former gas terminal and as a result the setting is more appropriate for industrial development. It comprises brownfield land with a mixture of hard standing and stone surfaced areas with established perimeter landscaping to visually screen the site. Access to the Option 1 site would utilise an existing access road, off the A1031 Mablethorpe Road.
- 6.3.28 The design and layout for the Theddlethorpe Facility is minimalist and industrial in nature due to the function of the Facility to provide controls and valves for the safe operation of the Viking CCS Pipeline. The design for Option 1 is in keeping with the former industrial use of the site and benefits from mature landscaping which screens the site from view and separate the Facility from the surrounding arable agricultural land. No additional landscaping is proposed for Option 1. Access to this site for technicians would be provided by existing access roads.
- 6.3.29 Option 2 is located on a parcel of arable agricultural land, approximately 275 m, west of the TGT site and the existing LOGGS pipeline. As the site is currently arable it is proposed that to minimise impact on the landscape, a 10m wide strip for planting and landscaping will be implemented around the edge of the Facility to blend the Facility in with the surrounding agricultural

- land. Visually, this planting would form a continuation of the existing trees and hedgerow alongside the water course known as The Cut. It is proposed that Option 2 would be accessed using a new route from the A1031 Mablethorpe Road. This route is proposed as it provides a suitable entrance point with visibility along the A1031. The access road follows the edge of a field to retain as much agricultural land as possible.
- 6.3.30 The Theddlethorpe Facility needs to provide a connection between the new Viking CCS Pipeline and existing LOGGS pipeline. Two options have been put forward for the Theddlethorpe Facility based on the availability of land.
- 6.3.31 Paragraph 4.5.3 of NPS EN-1, 2011 acknowledges that applicants may have limited choices in the physical appearance of some energy infrastructure, and this is the case for the Theddlethorpe Facility which will provide the infrastructure necessary to connect the new Viking CCS Pipeline and existing LOGGS Pipeline. Both options 1 and 2 of the Theddlethorpe Facility have been designed to be functional in nature and appearance using the minimum amount of land necessary.
- 6.3.32 Paragraph 4.6.10 of NPS EN-1, 2023 requires energy infrastructure to be sustainable and as attractive, durable and adaptable as they can be. Option 1 for the Theddlethorpe Facility would make use of brownfield land at the former TGT having the benefit of existing access roads, surfacing and mature perimeter landscaping to provide screening. Option 1 is therefore considered to be sustainable and while the facilities would be functional they would be screened from views due to the existing mature landscaping around the site.
- 6.3.33 Option 2 would use of agricultural land located along the route of the pipeline to minimise the area required for the facility. The location has been selected to make use of existing mature vegetation which would provide screening along one side of the facility. This screening would be supplemented by a new landscape strip around the rest of the facility in keeping with the field boundaries in the surrounding area. This is considered to comply with paragraph 4.6.2 of NPS EN-1, 2023 by providing good aesthetic as far as possible given the nature of the development in this location.
- 6.3.34 At either Option, the proposed facility would be constructed from materials that are suitable for a pipeline and facility located outdoors. Both options have been designed to take into account flood risk and any structures would be removed during the decommissioning phase to return the land to agricultural use.
- 6.3.35 Paragraph 4.6.11 of the draft NPS EN-1, 2023 outlines that the Secretary of State should consider whether they are satisfied that the applicant has considered functionality (including fitness for purpose and sustainability) and aesthetics (including contribution to the quality of the area in which it would be located, any amenity benefits, visual impacts). Both options 1 and 2 include only the equipment and facilities necessary to operate and maintain the Viking CCS Pipeline and connect with the LOGGS pipeline. The design for the facility includes access for maintenance and inspections, suitable pipe connections and safety systems and control equipment. The layout and appearance of the facility is driven by the need to provide a functional

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pipeline connection. The applicant has applied good design by placing the facilities as close to the pipeline as possible and maximising the use of existing landscape planting. Where landscaping is not present, new planting will be provided to screen the facilities from view and assimilate with the surrounding landscape.

6.3.36 The design of the Theddlethorpe Facility is considered to be in general accordance with parts 4.5 and 4.6 of the NPS EN-1, 2011 and draft NPS EN-1, 2023.

6.4 Alternatives

6.4.1 This section outlines how alternatives have been considered during the design evolution process.

Requirement to Consider Alternatives

6.4.2 Paragraph 2 of Schedule 4 of the EIA Regulations requires,

'A description of the reasonable alternatives (for example in terms of development design, technology, location, size and scale) studied by the developer, which are relevant to the proposed project and its specific characteristics, and an indication of the main reasons for selecting the chosen option, including a comparison of the environmental effects'.

6.4.3 NPS EN-1, 2011 paragraph 4.4.1 states that,

'As in any planning case, the relevance or otherwise to the decision-making process of the existence (or alleged existence) of alternatives to a Proposed Development is in the first instance a matter of law, detailed guidance on which falls outside the scope of this NPS. From a policy perspective this NPS does not contain any general requirement to consider alternatives or to establish whether the proposed project represents the best option.'

- 6.4.4 This paragraph is retained without amendment at paragraph 4.2.11 of the revised draft NPS EN-1, 2023.
- 6.4.5 Chapter 2: Design Evolution and Alternatives of the ES
 [EN070008/APP/6.2.2] provides a description of the design development and alternatives considered during the evolution of Viking CCS Pipeline. The main consideration in the assessment of alternatives has been to avoid and/or reduce adverse environmental effects whilst ensuring a technically compliant, constructable and cost-effective design solution for the Proposed Development in accordance with relevant planning policy. These alternatives have included alternative pipeline routes, alternative locations for above ground facilities and alternative crossing techniques.
- 6.4.6 The design of the Proposed Development has therefore evolved through a series of steps, set out below, and design iterations, that have been made in response to relevant considerations including safety, environmental constraints, stakeholder feedback, and engineering design.
- 6.4.7 NPS EN-1, 2011) paragraph 4.4.3 goes on to state that: 'where (as in the case of renewables) legislation imposes a specific quantitative target for particular technologies... the IPC should not reject an application for

development on one site simply because fewer adverse impacts would result from developing similar infrastructure on another suitable site, and it should have regard as appropriate to the possibility that all suitable sites for energy infrastructure of the type proposed may be needed for future proposals'.

6.4.8 Draft NPS EN-1, 2023 paragraph 4.2.23 similarly states that:

'the SoS should not refuse an application for development on one site simply because fewer adverse impacts would result from developing similar infrastructure on another suitable site'.

- 6.4.9 The draft NPS EN-1, 2023 goes on to outline in paragraph 4.2.15 that:
 - 'Applicants are obliged to include in their ES, information about the reasonable alternatives they have studied. This should include an indication of the main reasons for the applicant's choice, taking into account the environmental, social and economic effects and including, where relevant, technical and commercial feasibility'.
- 6.4.10 Therefore, whilst there is a requirement to include information about the reasonable alternatives considered by the developer in the ES (as provided in ES Chapter 2: Design Evolution and Alternatives [EN070008/APP/6.2.2] to meet the requirements of the EIA Regulations, there is no general policy requirement to consider alternative sites within the Planning Statement. It is also not the case that an application should be refused solely on the grounds that another site exists for the development that would result in fewer adverse effects.
- 6.4.11 The alternatives considered during the design development process has followed an eight-step process:
 - Step 1: Initial review of Onshore vs Offshore pipeline solution;
 - Step 2: Identification and assessment of potential pipeline corridors;
 - Step 3: Identification of Preferred Pipeline Corridor and presentation Non-Statutory Consultation;
 - Step 4: Consideration of feedback and further Pipeline Corridor refinement;
 - Step 5: Identification Proposed Pipeline Route and associated development;
 - Step 6: Development of Order Limits
 - Step 7: Consideration of feedback received during Statutory Consultation
 - Step 8: Development of Draft Order Limit for DCO submission
- 6.4.12 This process and details on how the pipeline route and supporting infrastructure has evolved is set out in more detail in ES Chapter 2: Design Evolution and Alternatives [EN070008/APP/6.2.2]. A summary of the alternatives that have been considered is also outlined below.

Alternative Pipeline Routes

- 6.4.13 The main objective of the Viking CCS Project is to connect emitters of CO₂ located in the Immingham industrial area to the offshore geological stores under the North Sea to provide the long term storage of carbon dioxide. The purpose of the Viking CCS Pipeline is to transport CO₂ from the Immingham industrial area (where CO₂ emitters are located) to the former TGT to create a link between emitters in the Humber region and the existing LOGGS pipeline at Theddlethorpe. As a result, Immingham and the former TGT are the defined start and end points for the pipeline.
- 6.4.14 Initially, consideration was given to the feasibility of an offshore pipeline from Immingham to Theddlethorpe, as an alternative to an onshore pipeline. However, the challenges associated with those listed below confirmed that, an onshore pipeline was the most viable option:
 - environmental designations (including the presence of the Humber Estuary SAC, SPA, and Ramsar site and SSSI):
 - high levels of shipping activity associated with the ports at Hull, Immingham, Grimsby and Goole:
 - the estuary having dredged channels that would require crossings:
 - landfall at Immingham would require a crossing of the sea wall defence:
 - anticipated shipwrecks and known UXO ordnance in the area: and
 - technical construction and design challenges were together considered too great to take the offshore option forward.
- 6.4.15 A preliminary high-level routeing options assessment was undertaken in 2021 to gain an understanding of the constraints and opportunities for the routeing of the Proposed Development. An assumption was made that the pipeline would extend between a site near to Phillips 66 and VPI sites in Immingham where CO₂ would be taken direct from industry; and terminate at the former TGT Site where connection would be made with LOGGS. This provided an initial study area within which constraints were reviewed. Following this, several potential onshore pipeline corridors between Immingham and Theddlethorpe were identified, providing up to three different pipeline corridor options. These options were considered on a section-by-section basis against safety, environmental, planning, technical, cost and land based factors. Based upon this review process the preferred pipeline corridor was identified. This corridor was included in the EIA scoping report which was submitted to the Planning Inspectorate in March 2022. This selected route corridor was later presented at non-statutory consultation (April-June 2022) which encouraged feedback on the preferred corridor.
- 6.4.16 Following the non-statutory consultation and EIA Scoping the corridor route for the pipeline, location and layout for above ground installations and Order Limits were refined taking into account information from the ongoing environmental surveys and assessment a second non-statutory consultation during September - October 2022 and Statutory Consultation between November 2022 and January 2023.

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6.4.17 The main consideration in the assessment of alternatives has been safety and to avoid and/or reduce adverse environmental effects whilst ensuring a technically compliant, constructable and cost-effective design solution for the Proposed Development which is compliant with relevant planning policy. The design of the Proposed Development has therefore evolved through a series of steps and design iterations.

Alternative Locations of the Immingham Facility

- 6.4.18 Through ongoing discussions with landowners, alternative locations for the Immingham Facility were considered. Options for the location of the Immingham Facility included land to the east of Rosper Road and land to the south of the VPI facilities. These areas are located on land owned by Phillips 66 and as such discussions were held to ensure that any future developments that Phillips 66 may wish to pursue were not compromised by the siting of the Immingham Facility. Considerations for the location of the Immingham Facility included:
 - Proximity to emitters to be able to receive CO_{2:}
 - Suitable access for construction: and
 - Suitable site size to accommodate the facility.
- 6.4.19 The Immingham Facility will be located on brownfield land covering an area of approximately 1.0 ha located off Rosper Road in the Immingham industrial area. This site meets the necessary criteria of the Applicant for the Immingham Facility. There are no other alternative locations that met the criteria listed above and therefore, the only solution is for the Immingham Facility to be sited in the location proposed.

Alternative locations of the Theddlethorpe Facility

- 6.4.20 A key factor in the location of the Theddlethorpe Facility is the necessity to connect with the LOGGS pipeline that will transport CO₂ to the offshore geological storage site. The LOGGS pipeline terminates on the previously developed land at the former TGT site and so connecting the Viking CCS Pipeline at this point was the favoured option. However this land is not owned by the Applicant and whilst there is ongoing discussion over a lease agreement with national grid it was deemed necessary to consider whether any other alternative sites may be suitable. Consequently, in addition to the former TGT site (Option 1), five alternative sites were identified for consideration. Each site was reviewed in terms of its existing environment, the viability of site access and its location in relation to the preferred Pipeline Corridor. One additional site (Option 2) was selected as an alternative site to take forward.
- 6.4.21 National Grid own the TGT site, during early discussions about the use of the site for the Proposed Development, the Applicant was advised by National Grid that they were exploring plans for its future development. National Grid has not, at this stage, disclosed to the Applicant what those alternative plans are.
- 6.4.22 National Grid is a statutory undertaker for the purposes of the Planning Act 2008 and may benefit from additional protections on 'statutory undertakers'

land', as defined in section 127(1). In the absence of further information from National Grid it remains unclear to the Applicant whether or to what extent National Grid have alternative plans for the site. The Applicant therefore considers it appropriate and justifiable to include alternative site options in the vicinity of the LOGGS pipeline where the Theddlethorpe Facility could be located. As a result the Applicant has included a second option to develop the Theddlethorpe Facility.

- 6.4.23 The preferred location remains the former TGT site (Option 1). The alternative site (Option 2) is located approximately 275m west of the former TGT site. This alternative site comprises arable agricultural land and a suitable access has been identified that would be needed for both construction and permanent access. The alternative site is located along the alignment of the Viking CCS Pipeline.
- 6.4.24 Whilst there are other agricultural sites immediately surrounding the former TGT site, due to landowners' constraints the location of Option 2 is the closest suitable and available alternative to the former TGT site. Whilst Option 1 is favoured, the decision to select Option 1 or Option 2 is subject to ongoing discussion with landowners. As a result the options for the location of the Theddlethorpe Facility are:
 - Option 1: A new Facility on brownfield land at the former TGT site covering an area of approximately 1.35 ha. The onshore pipeline would enter the site from the west and terminate at the new Facility, where a connection would be made to the existing LOGGS Pipeline, which then exits the site to the east.
 - Option 2: A new Facility west of the former TGT site located on arable land covering an area of approximately 1.76 ha. A new section of buried 36 "pipeline would connect the Theddlethorpe Facility to the existing LOGGS Pipeline.
- 6.4.25 For either option the Theddlethorpe Facility will consist of a local equipment room, analyser house and various pipework, valves, pipeline inspection equipment, safety protection systems and a 25 m high vent. An existing isolation valve is located on the onshore section of the LOGGS pipeline east of the former TGT site. This valve will be replaced, and new electrical cables may be installed. Only one options for the Theddlethorpe Facility would be selected and developed. The applicants preference is to make use of Option 1 as it is in closer proximity to the LOGGS Pipeline. Nevertheless both Option 1 and Option 2 have been designed in line with good design principles to provide an efficient and functional layout that is fit for purpose.

Alternative Locations of the Block Valve Stations

- 6.4.26 Three Block Valves Stations are required along the pipeline route to enable pipeline sections to be isolated for operational and maintenance reasons. Block valves were not considered a key driver in determining the location of the pipeline routeing itself due to the extensive availability of suitable land and their relatively limited footprint.
- 6.4.27 The requirement for Block Valve Stations was initially based upon the consideration against standard pipeline design code requirements, whilst a

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- Quantitative Risk Assessment was undertaken to identify the recommended spacing. The final locations were selected based on the safety evaluation conclusions taking into account the topography, ease of access for operation/ maintenance and proximity to normally occupied buildings.
- 6.4.28 Further engineering design work has been undertaken to refine and optimise the layouts for the Block Valve Stations the work identified locations at approximately 13 km, 24 km and 39 km along the pipeline route.

Alternative Construction Compound Locations

- 6.4.29 A number of studies were undertaken to identify suitable locations for construction compounds for the Proposed Development. In total, 14 potential locations were identified that were suitable for construction compounds. The 14 potential locations were assessed against environmental and construction factors, including access and previous site uses.
- 6.4.30 Based on the length of the pipeline, it was established that, from a logistics point of view, it would be beneficial to have a construction compound close to the northern end of the route and one in the central area, however due to the options at the Theddlethorpe Facility and potential for alternative construction arrangements, a third site towards the south was included. Initially two sites were identified for the northern compound and central compound, with the south site located within the old Theddlethorpe terminal car park as included in the Order Limits.

7. Planning Appraisal

7.1 Introduction

- 7.1.1 This chapter of the PDAS provides a summary of the Applicant's consideration of the Proposed Development against the relevant national and local planning policies, following a review of the policy documents identified in Chapter 2. In assessing compliance, consideration is given, where relevant, to mitigation measures proposed within the ES to reduce the likely environmental impacts. A detailed assessment of the Proposed Development compliance with the relevant national and local planning policies is presented in Appendix C and D respectively.
- 7.1.2 Each topic-based chapter within the ES (Chapters 6-20)
 [EN070008/APP/6.2] contains a section which explains the legislation, policy and guidance relevant to that topic. Section 2 within each ES chapter identifies the relevant NPS paragraphs relating to that particular topic and explains how the requirements relating to assessment for that particular topic have been satisfied.
- 7.1.3 Section 105 of the PA 2008 provides the matters upon which the SoS should make decisions for applications where no NPS has effect. Section 105(2) requires that, in decision making the SoS must have regard to; any local impact report; any matters prescribed in relation to development of the description to which the application relates; and any other matters which the Secretary of State thinks are both important and relevant.
- 7.1.4 Local Impact Reports have not yet been prepared by the relevant Local Authorities. They will be prepared in due course by North Lincolnshire Council, North East Lincolnshire Council, West Lindsey District Council, East Lindsey District Council and Lincolnshire County Council.
- 7.1.5 Prescribed matters relevant to applications for development consent that are being determined under Section 105 of the PA 2008 are set out in The Infrastructure Planning (Decisions) Regulations 2010 (referred to herein as the IPDR 2010). Regulations 3 and 7 are relevant to the Proposed Development. The IPDR 2010 will be considered further in this chapter, where relevant.
- 7.1.6 Whilst NPSs may not have effect in relation to projects determined under Section 105 of the PA 2008, it is considered that the policies and provisions incorporated within the NPSs are important and relevant in decision making for this Application.

7.2 National Policy Statements

7.2.1 The Proposed Development comprises an approximately 55.5 km cross country pipeline for the purpose of transporting CO₂, defined as a NSIP as such, the Applicant considers that the NPS EN-1 and NPS EN-4 are the primary planning policy documents that are relevant to the determination of the Application and should therefore be given significant weight. Consideration is given primarily to NPS EN-1 and NPS EN-4 adopted in July

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- 2011, with consideration also being given to the draft versions of each NPS published March 2023.
- 7.2.2 This chapter of the PDAS demonstrates the compliance of the Proposed Development with the relevant policies of NPS EN-1, 2011 and NPS EN-1, 2023 Part 4 'Assessment Principles' and Part 5 'Generic Impacts'; and NPS EN-4, 2011 and NPS EN-4, 2023 Part 2 'Assessment and Technology Specific Information.'
 - 'the UK needs all the types of energy infrastructure covered by this NPS in order to achieve energy security at the same time as dramatically reducing greenhouse gas emissions.'
- 7.2.3 Paragraph 3.1.3 of NPS EN-1, 2011 provides that, applications for the types of infrastructure covered by the energy NPSs should be determined on the basis that the government has demonstrated there is a need for those types of infrastructure projects.
- 7.2.4 Specific reference to the need for new nationally significant CCS technologies and infrastructure is contained within Section 3.5 of draft NPS EN-1, 2023;
 - 'There is an urgent need for new carbon capture and storage (CCS) infrastructure to support the transition to a net zero economy.'
- 7.2.5 Reinforcing the commitment to meeting energy security and carbon reduction objectives, paragraph 3.3.5 of NPS EN-1, 2011 acknowledges that:
 - 'The UK is choosing to largely decarbonise its power sector by adopting low carbon sources quickly. There are likely to be advantages to the UK of maintaining a diverse range of energy sources so that we are not overly reliant on any one technology (avoiding dependency on a particular fuel or technology type). Government would like industry to bring forward many new low carbon developments (renewables, nuclear and fossil fuel generation with CCS) within the next 10 to 15 years to meet the twin challenge of energy security and climate change as we move towards 2050'.
- 7.2.6 As part of the wider Viking CCS Project, the Proposed Development would transport CO₂ from large industrial emitters at the Immingham Industrial Site to offshore secure storage in the southern North Sea. The Viking CCS Project will result in a significant reduction in carbon emissions assisting the government to meet legally binding targets for Net Zero by 2050.
- 7.2.7 Part 4 of NPS EN-1, 2011 sets out general policies that applications for DCO relating to energy infrastructure are to be decided against. The assessment principles listed within NPS EN-1, 2011 are relevant to most types of energy infrastructure schemes. Paragraph 4.1.2 of NPS EN-1, 2011 states that,
 - 'the SoS should start with a presumption in favour of granting consent to applications for energy NSIPs. This presumption applies unless any more specific and relevant policies set out in the relevant NPSs clearly indicate that consent should be refused. The presumption is also subject to the

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provisions of the Planning Act 2008 as referred to at paragraph 1.1.2 of NPS EN-1'.

7.2.8 Whilst the Proposed Development does not directly benefit from this presumption in favour of granting consent as the development type is not accounted for within the NPS EN-1, 2011, the increased emphasis placed upon the use and need for CCS infrastructure in meeting national emissions targets within the draft NPS EN-1, 2023 as discussed above is considered to be important and relevant in the SoS's consideration of the Application. This increased emphasis placed on CCS within NPS EN-1, 2023 represents a step change in the support for CCS at a national level. Indeed, at NPS EN-1, 2023 paragraph 3.5.2, it states;

'the committee on climate change states CCS is a necessity not an option. As well as its role in reducing emissions associated with generating electricity from natural gas, CCS infrastructure will also be needed to capture and store carbon dioxide from hydrogen production from natural gas, industrial processes, the use of BECCS and from the air. CCS infrastructure could be new or repurposed infrastructure.'

7.2.9 Paragraph 4.1.3 in NPS EN-1, 2011 states that in considering applications for energy NSIP's and when weighing their adverse impacts against their benefits, the SoS should consider:

'The potential benefits including the contribution to meeting the need for energy infrastructure, job creation and any long-term or wider benefits; and the potential adverse impacts, including any long-term and cumulative adverse impacts as well as any measures to avoid, reduce or compensate for any adverse impacts'.

7.2.10 In response, the likely key benefits of the Proposed Development have been discussed in chapter 5 of this document.

7.3 Environmental Statement

- 7.3.1 In accordance with paragraph 4.2.1 of NPS EN-1, 2011 an Environmental Statement (ES) has been prepared to describe the aspects of the environment likely to be significantly affected by the Proposed Development. The ES assesses the likely significant effects of the Proposed Development at all stages (construction, operational and decommissioning) considering the proposed mitigation measures.
- 7.3.2 Paragraph 4.2.8 of NPS EN-1, 2011 identifies that it may not be possible at the time of the application for all aspects of the proposal to have been settled in precise detail and where this is the case, the applicant should explain in its application which elements are yet to be finalised and the reasons why this is the case. The Planning Inspectorate's Advice Note Nine: Using the Rochdale Envelope, provides guidance regarding the degree of flexibility that may be considered appropriate within an application for development consent. The advice note acknowledges that the EIA may need to assess the likely credible worse-case scenarios to ensure that all foreseeable significant environmental effects of a project have been assessed.

- 7.3.3 To accommodate for this flexibility the limits of deviation include space to allow for alteration of the final design of the Proposed Development. The Proposed Limit of deviation allows a 100 m corridor for the pipeline, and the pipeline construction working width would be a maximum of 30 m along the majority of the route, with exceptions at major road crossings, railways or watercourses where the working width may be greater than 30 m. The limits of deviation are contiguous with the Order Limits and so are not presented separately. The Order Limits are provided on the Works Plans [EN070008/APP/4.2]. When presenting the design information for the Proposed Development the requirements of The Planning Inspectorate's Advice Note 9 has been complied with to ensure that the likely significant effects of the Proposed Development are assessed on a reasonable worst-case basis.
- 7.3.4 Where feasible however, mitigation measures have been incorporated into the design of the Proposed Development such that they inform its detailed design and/or the approach to its construction. Embedded measures have been defined through an iterative process of assessment and design-development, the aim being to mitigate impacts and effects as much as possible through good design and avoidance of any sensitive areas where practicable.

7.4 Habitats and Species Regulations

Requirements of the NPS: Habitat Regulations Assessment (HRA)

- 7.4.1 Section 4.3 of NPS EN-1, 2011 provides that before granting development consent, consideration must be given to whether the Proposed Development may have a significant effect on a European Site or any site to which has the same protection applied by planning policy.
- 7.4.2 NPS EN-1, 2011 in paragraph 5.3.3 and the draft NPS EN-1, 2023 paragraph 5.4.17 requires that the Applicant clearly set out in their ES any effects on internationally, nationally and locally designated sites of ecological or geological conservation importance, on protected species and on habitats and other species identified as being of principal importance for the conservation of biodiversity.

Requirements of Local Policy

7.4.3 In terms of local policy, Policy 9: Habitat Mitigation – South Humber Bank, Policy 40: Developing a Green Infrastructure Network, Policy 41: Biodiversity and Geodiversity and Policy 43: Green Space and Recreation, of the NELLP; Policy S60: Protecting Biodiversity and Geodiversity of the CLLP; saved Policy LC1: Special Protection Areas, Special Areas of Conservation and Ramsar Sites of the NLLP; Policy CS12: South Humber Bank Strategic Employment Site – A Broad Location and Policy CS17: Biodiversity of the NLCS; and draft NLLP policies DQE3: Biodiversity and Geodiversity and CSC3: Protection and Provision of Open Space, Sports and Recreation Facilities, consider the potential impact of development on internationally, nationally and locally designated sites of ecological or geological importance, as well as the need for mitigation. Criteria of these policies that could be considered relevant to the Proposed Development and how they are addressed is fully set out in Appendix D.

Appraisal

- 7.4.4 Four European designated sites lie within the Order Limits and one further European designated site is located within 10 km of the Order Limits. These are:
 - Humber Estuary Special Protection Area (SPA) within the Order Limits:
 - Humber Estuary Special Area of Conservation (SAC) 1.27 km east of the Order Limits:
 - Humber Estuary Ramsar within the Order Limits:
 - Saltfleetby-Theddlethorpe Dunes & Gibraltar Point SAC within the Order Limits: and,
 - Greater Wash SPA with marine components within the Order Limits.
- 7.4.5 In accordance with section 4.3 of NPS EN-1, 2011 the Application is supported by a Report to Inform the HRA [EN070008/APP/6.5]. HRA screening determined that an appropriate assessment would be necessary for some receptors. An appropriate assessment was included as part of the Report to Inform the HRA which concluded that, there would be no adverse effects from the Proposed Development on the integrity of the Humber Estuary SPA and Ramsar and Saltfleetby Theddlethorpe Dunes and Gibraltar Point SAC, either when considered alone or in combination with other projects or plans.

7.5 Alternatives

Requirements of the NPS

7.5.1 Paragraph 4.4.1 of EN-1 sets out that from a policy perspective, the NPS does not provide a general requirement to consider alternatives or to establish whether the Proposed Development represents the best option. NPS EN-1, 2011 does require at paragraph 4.4.2 that applicants include in their ES information about the main alternatives that have been studied. NPS EN-1, 2011 also includes the requirement to consider alternatives at sections 5.3, 5.7 and 5.9 with regards to avoiding harm to biodiversity and geological conservation interests, flood risk and development within nationally designated landscapes.

Requirements of Local Policy

- 7.5.2 Local policy further sets out requirements for alternative development options to be considered, relevant policies include Policy 22: Good Design in New Developments of the NELLP. Policies SP16: Inland Flood Risk and SP23: Landscape of the ELLPCS which consider flood risk and landscape, respectively.
- 7.5.3 CLLP Policy S21: Flood Risk and Water Resources further outlines the requirements to consider alternatives in relation to flood risk impact, and Policy CS5: Delivering Quality Design in North Lincolnshire of the NLCP which requires design alternatives to be considered.

Assessment Conclusions

7.5.4 Information on the main alternatives considered by the Applicant is discussed above in section 6.4 of this document and in Chapter 2: Alternatives and Design Evolution of the ES [EN070008/APP/6.2.2]. The Proposed Development has evolved in response to feedback received and environmental, safety and engineering considerations. Alternative solutions have been considered comprising various route options for the pipeline and alternative siting locations for the Block Valve Stations, and the Immingham and Theddlethorpe Facilities.

Appraisal

- 7.5.5 In accordance with the EIA Regulations, 2017 alternatives have been considered to reduce the environmental effects of the Proposed Development. A 'do nothing' option was considered; however, this would result in the Proposed Development not being constructed and was discounted on the basis that there is a clear need for the Proposed Development as set out in this PDAS and separate Needs Case [EN070008/APP/7.3].
- 7.5.6 Alternative options have been considered as the design has evolved. These have included various routing options for the pipeline and alternative locations for the Block Valve Stations and the Immingham and Theddlethorpe Facilities. Changes were made following consideration of environmental factors, stakeholder feedback, safety and engineering feasibility to select the preferred option. Furthermore, mitigation was identified during design development to reduce potentially significant adverse effects.
- 7.5.7 The Order Limits illustrate an indicative arrangement and provide for a degree of flexibility that will be defined through detailed design. It is considered that the Applicant has met the necessary requirements of NPS EN-1, 2011 to consider alternatives during the evolution of the scheme design.

7.6 Criteria for Good Design for Energy Infrastructure

Requirements of the NPS

- 7.6.1 Section 4.5 of NPS EN-1, 2011 sets out the principles for good design that should be applied to all energy infrastructure projects. Paragraph 4.5.1 highlights that high quality and inclusive design goes far beyond aesthetic considerations by outlining that;
 - 'Applying "good design" to energy projects should produce sustainable infrastructure sensitive to place, efficient in the use of natural resources and energy used in their construction and operation, matched by an appearance that demonstrates good aesthetic as far as possible. It is acknowledged, however that the nature of much energy infrastructure development will often limit the extent to which it can contribute to the enhancement of the quality of the area'.
- 7.6.2 Draft NPS EN-1, 2023 section 4.6 states that,

'Applicant's should consider how good design can be applied at the early stages of a project, recommending that applicants embed opportunities for nature inclusive design into their scheme and wider impacts such as landscape and environmental impacts are important factors in the design process.'

7.6.3 Section 2.4 of NPS EN-4 reinforces this, referring applicants to NPS EN-1 section 4.6 at an early stage of project development.

Requirements of Local Policy

- 7.6.4 Various local policies set out general design criteria and objectives. These policies typically set broad design guidelines for development. Whilst these policies relate primarily to developments that create buildings some of the criteria are applicable to locally and regionally significant developments, and as a result are deemed relevant to the Proposed Development.
- 7.6.5 The relevant polices with the NELLP are Policy 22: Good Design in New Developments, Policy 32: Energy and Low Carbon Living and Policy 40: Developing a Green Infrastructure Network.
- 7.6.6 Policies relating to design within the ELLCS comprise SP10: Design, SP11: Historic Environment, SP16: Inland Flood Risk, SP23: Landscape and SP25: Green Infrastructure. CLLP sets out design polices considered relevant, comprising; S20: Resilient and Adaptable Design, S53: Design and Amenity, S57: The Historic Environment, S59: Green and Blue Infrastructure Networks, S61: Biodiversity Opportunity and Delivering Measurable Net Gain, S62: Areas of Outstanding Natural Beauty and Areas of Great Landscape Value, and S66: Trees, Woodland and Hedgerow.
- 7.6.7 NLLP Saved Policy RD2: Development in the Open Countryside; NLCS policies CS1: Spatial Strategy for North Lincolnshire, CS5: Delivering Quality Design in North Lincolsnhire, CS17: Biodiversity, CS25: Promoting Sustainable Transport; and draft NLLP policies DQE1: Protection of Landscape, Townscape and Views, DQE3: Biodiversity and Geodiversity DQE6: Sustainable Drainage Systems, DQE7: Climate Change and Low Carbon living, DQE11: Green Infrastructure Network, HE1: Conserving and Enhancing the Historic Environment and CSC1: Health and Wellbeing, set out expectations for good design that can be considered relevant to the Proposed Development
- 7.6.8 The full assessment of compliance with these local plan policies is provided in Appendix D.

Appraisal

- 7.6.9 The design for the Proposed Development has evolved as part of an iterative process. Various route options for the pipeline and location options for the Block Valve Stations and the Immingham and Theddlethorpe Facilities have been considered as outlined in section 6.4 above and in Chapter 2: Design Evolution and Alternatives of the ES [EN070008/APP/6.2.2].
- 7.6.10 Throughout the design process, the Applicant has developed a design for the Proposed Development that is safe and sustainable for the lifetime of the development. Whilst there are limited opportunities to influence the visual

appearance of the Proposed Development, opportunities have been taken to provide landscaping where appropriate. As such, the Proposed Development is considered to be in accordance with the objectives of national policy, NPS EN-1, 2011 which indicates that 'good design' for energy projects should produce sustainable infrastructure sensitive to place, efficient in the use of natural resources and energy used in their construction and operation, matched by an appearance that demonstrates good aesthetic as far as possible.

7.7 Carbon Capture and Storage (CCS)

Requirements of the NPS

- 7.7.1 Section 4.7 of NPS EN-1, 2011 identifies the technological processes involved within CCS, describing it as an emerging technology.
- 7.7.2 As detailed above, the offshore transport and storage of the CO₂ will be the subject of separate consent applications as part of the wider Viking CCS Project. Paragraph 4.7.7 of NPS EN-1, 2011 states that, the most likely method for transporting the captured CO₂ is through pipelines, located both onshore and offshore, explaining that;
 - 'there are currently no carbon dioxide pipelines in the UK and considerable future investment in pipelines will be required for the purpose of the demonstration programme.... In considering applications the SoS should therefore take into account that the Government wants developers to bear in mind foreseeable future demand when considering the size and route of their investments and may therefore propose pipelines with a greater capacity than necessary for their project alone.'
- 7.7.3 Whilst the Applicant considers the Proposed Development accords with NPS EN-1, 2011 there have been clear technological advances in the CCS area since its adoption in 2011 and to some extent the NPS EN-1,2011 is now outdated. The draft NPS EN-1, 2023 emphasises the government's commitment to developing CCS technology, paragraph 4.8.5 states that:

'The government has made its ambitions for CCS clear - committing to providing funding to support the establishment of CCS in at least four industrial clusters by 2030 and supporting, using consumer subsidies, at least one privately financed gas CCS power station in the mid-2020s.'

Requirements of Local Policy

7.7.4 Local policy support for carbon capture development in North Lincolnshire is set out in NLCS policy CS18: Sustainable Resource Use and Climate Change. Whilst there are no other carbon capture specific local policies there are multiple local policies in support of carbon reduction infrastructure. These include NELLP Policy 31: Renewable and Low Carbon Infrastructure, Policy 32: Energy and Low Carbon Living, ELLPCS Policy 27: Renewable and Low Carbon Energy, CLLP Policy S11: Embodied Carbon and draft NLLP Policy DQE7: Climate change and Low Carbon Living. The full assessment of the development compliance with these local plan policies is provided in Appendix D.

Appraisal

7.7.5 NPS EN-1, 2011 and the draft NPS EN-1, 2023 both recognise the importance and support the development of CCS. However, the draft NPS EN-1, 2023 places greater emphases on the need for nationally significant CCS infrastructure, paragraph 3.5.1 states that,

'there is an urgent need for new carbon capture and storage infrastructure to support the transition to a net zero economy.'

7.7.6 The Proposed Development will form part of a wider project to transport CO₂ to secure offshore storage facilities and is essential to creating a CCS Cluster in the Humber region. The Proposed Development is considered to accord with the Governments encouragement of CCS technology as set out within the NPS EN-1, 2011 and further emphasised within draft NPS EN-1, 2023 which weighs in favour of the making of the Order.

7.8 Climate Change Adaptation

Requirements of the NPS

7.8.1 NPS EN-1, 2011 paragraph's 4.8.1 to 4.8.13 set out how the effects of climate change should be considered. Section 4.9 of the draft NPS EN-1, 2023 also contains detail with regards to adaptation to climate change stating that, climate change mitigation is essential to minimise the most dangerous impacts of climate change. Paragraph 4.9.1 states that,

'If new energy infrastructure is not sufficiently resilient against the possible impacts of climate change, it will not be able to satisfy the energy needs as outlined in the NPS.'

7.8.2 NPS EN-4, 2011 part 2.2 and draft NPS EN-4, 2023 part 2.3 also consider climate change adaptation. Paragraph 2.2.2 states that,

'as climate change is likely to increase risks to some infrastructure from flooding or rising sea levels, applicants should set out how the proposal would be resilient to:

- Increased risk of flooding:
- effects of rising sea levels and increased risk of storm surge;
- higher temperatures;
- increased risk of earth movement or subsidence from increased risk of flooding and drought; and
- any other increased risks identified in the applicant's assessment.'

Requirements of Local Policy

7.8.3 The requirement for development to be climate change adaptable and resilient is considered at local policy level. The key policies considered relevant are NELLP policies 22: Good Design in New Developments, 33: Flood Risk, 40: Developing a Green Infrastructure Network, and 42: Landscape; CLLP Policy S21: Flood Risk and Water Resources, S53: Design and Amenity, S59: Green and Blue Infrastructure Networks; NLCS

CS5: Delivering Quality Design in North Lincolnshire, CS18: Sustainable Resource Use and Climate Change, CS19: Flood Risk and draft NLLP policies DQE1: Protection of Landscape, Townscape and Views, DQE5: Managing Flood Risk, and DQE7: Climate Change and Low Carbon Living. The full assessment of the development compliance with these local plan policies is provided in Appendix D.

Assessment Conclusions

7.8.4 Chapter 15: Climate Change of the ES **[EN070008/APP/6.2.15]** presents an assessment of the likely significant effects of the Proposed Development on the climate and the impact of climate change on the Proposed Development and surrounding environment during construction, operation and decommissioning. The assessment concluded that there would be no residual significant effects as a result of the Proposed Development during its construction or operation.

Appraisal

- 7.8.5 Sections 1 and 5 of the Proposed Development are located in an area of tidal flood risk. With regards to NPS EN-4, 2011 part 2.2 and draft NPS EN-4, 2023 part 2.3 an assessment of the potential for flooding from various sources including tidal flooding were considered in the Flood Risk Assessment (FRA) presented in Appendix 11-5 of the ES [EN070008/APP/6.4.11.5]. The FRA concludes that with mitigation it will be possible to manage flood risks to and from the proposed development from tidal sources and also fluvial (river), groundwater, surface water and drainage infrastructure.
- 7.8.6 ES Chapter 15: Climate Change [EN070008/APP/6.2.15] includes a climate change resilience assessment for all infrastructure and assets associated with the Proposed Development which includes extreme weather events such as higher temperatures, increased average temperatures and incidence of heatwaves, increased frequency of heavy precipitation events and sea level rise posed by climate change.
- 7.8.7 The following potential impacts on the Proposed Development were considered during the construction and operation stages:
 - damage to construction equipment due to storm events or intense rainfall,
 - damage to drainage systems, gutters and downpipes due to flooding from intense rainfall.
 - flooding from drainage systems during intense or prolonged rainfall,
 - restricted access to sites,
 - water-logged land due to prolonged rainfall,
 - flooding of construction sites,
 - damage to equipment,
 - damage to access roads.
 - overheating of equipment/machinery,

- increased heat stress/ heat exhaustion of workers.
- 7.8.8 In accordance with both NPS EN-1 and EN-4, 2011 the effects of climate change on the Proposed Development have been assessed and this includes various scenarios and potential impacts. The assessment concluded that there would be no residual significant effects to the Proposed Development and as a result the Proposed Development is considered to be in compliance with policy relating to climate change and its effects.

7.9 Grid Connection

Requirements of the NPS

7.9.1 Section 4.9 of EN-1, 2011 refers to the connection of proposed electricity generation plants to the existing electricity network for applicants wanting to construct or extend a generation plant. As such this section of the NPS is not relevant to the consideration of the Proposed Development.

7.10 Pollution Control and Other Environmental Regulatory Regimes

Requirements of the NPS

7.10.1 Paragraph 4.10.1 of EN-1, 2011 states that,

'Issues relating to discharges or emissions from a proposed project which affect air quality, water quality, land quality and the marine environment, or which include noise and vibration may be subject to separate regulation under the pollution control framework or other consenting and licensing regimes.'

- 7.10.2 In considering an application for development consent, paragraph 4.10.3 further states that the SoS should focus on whether the development itself is an acceptable use of the land and on the impacts of that use, rather than the control of processes, emissions or discharges themselves. This is further elaborated at paragraph 4.2.60 which states that:
 - 'The SoS should work on the assumption that the relevant pollution control regime and other environmental regulatory regimes, including those on land drainage, water abstraction and biodiversity, will be properly applied and enforced by the relevant regulator. It should act to complement but not seek to duplicate them.'
- 7.10.3 Paragraph 4.10.5 notes that many developments covered by NPS EN-1, 2011 will be subject to the Environmental Permitting (EP) regime. Paragraph 4.10.6 advises applicants to make early contact with relevant regulators, such as the EA, to discuss their requirements for EPs and other consents. This will ensure that applications take account of all relevant environmental considerations and that the relevant regulators are able to provide timely advice and assurance to the SoS.
- 7.10.4 The Consents and Agreements Position Statement [EN070008/APP/7.2] lists those additional consents and licences that will be required for the Proposed Development.

7.11 Safety

Requirements of the NPS

7.11.1 NPS EN-1, 2011 paragraph 4.11.1 states that,

'HSE is responsible for enforcing a range of health and safety legislation, some of which is relevant to the construction, operation and decommissioning of energy infrastructure. Applicants are required to consult with the HSE on matters relating to safety.'

Local Policy Requirements

7.11.2 Local policy relating to safety principally relate to highways safety. Whilst not specific to the safety of carbon capture infrastructure, these policies are relevant to the assessment of the proposed impact on the highway network during both construction and operation. The relevant policies are NELLP Policy 31: Renewable and Low Carbon Infrastructure; ELLPCS SP10: Design, SP27: Renewable and Low Carbon Energy, NLLC saved policies RD2: Development in the Open Countryside, T6: Pedestrian Routes and Footpaths, LC1: Special Protection Areas, Special Areas of Conservation and Ramsar Sites; NLCS Policy C25: Promoting Sustainable Transport, and draft NLLP Policy CSC3: Policy CSC3: Protection and Provision of Open Space, Sports and Recreation Facilities. The full assessment of the development compliance with these local plan policies is provided in Appendix D.

Assessment Conclusions

- 7.11.3 Chapter 19: Major Accidents and Disasters of the ES [EN070008/APP/6.2.19] which concludes that risks are considered to have been mitigated to a 'tolerable' level and therefore the effects are considered as 'Not Significant' for both construction and operation.
- 7.11.4 Chapter 19: Major Accidents and Disasters of the ES

 [EN070008/APP/6.2.19] presents an assessment of the Major Accidents and
 Disasters that have the potential to arise during the construction, operations
 and decommissioning of the Proposed Development.

Appraisal

- 7.11.5 The Applicant has consulted with the Health and Safety Executive (HSE) and other relevant bodies including the local highway authority and National Highways during the Scoping for the EIA and during the Statutory Consultation. A summary of which can be found within the Consultation Report [EN070008/APP/5.1].
- 7.11.6 The assessment set out in Chapter 19: Major Accidents and Disasters of the ES [EN070008/APP/6.2.19] considers a range of natural hazards and the consequences of these events which could include fires, explosions, physical damage and the release of CO₂. These incidents have an extremely low probability of occurrence but could have significant impacts on people and the environment without mitigation.

- 7.11.7 CO₂ is not flammable and will not support combustion and so compared with many other materials conveyed via major pipelines in the UK, the risks to human health and the environment from events such as explosion are relatively low. The key risk to people relates to its potential to act as a toxic material by inhalation. These incidents have an extremely low probability of occurrence. Mitigation methods include using heavy wall pipe for the entire length of the pipeline route. Additionally, a set of emergency plans and procedures will be developed and implemented should any incident occur, further controlling and mitigating the impact. The inclusion of block valves along the route have helped to optimise the safety of the Proposed Development as these allow sections of the route to be isolated if required. The assessment of the potential for Major Accidents and Disasters concluded that risks are considered to have been mitigated to a 'tolerable' level and therefore the effects are considered as 'Not Significant' for both construction and operation.
- 7.11.8 The Applicant will continue to consult with the HSE. An assessment of the potential for Major Accidents and Disasters has been carried out, concluding that risks are as low as reasonably practicable and tolerable and is included in the ES. The applicant has undertaken consultation with the HSE and highway authorities and so is considered to be in accordance with national and local policy for this topic.

7.12 Hazardous Substances

Requirements of the NPS

7.12.1 NPS EN-1, 2011 paragraph 4.12.1, confirms that all establishments wishing to hold stocks of certain hazardous substances above a certain threshold need Hazardous Substances Consent (HSC). This requirement is not relevant to the consideration of the Proposed Development.

7.13 Health

Requirements of the NPS

7.13.1 Paragraph 4.13 of NPS EN-1, 2011 and paragraph 4.3 of the draft NPS EN-1, 2023 discuss the potential health impacts of energy NSIPs and require applicants to present within their ES an assessment of the health effects for each project stage and identify measures to avoid, reduce or compensate for.

Requirements of Local Policy

7.13.2 Local plan policy also seeks to create a framework that encourages healthy lifestyles through transport and environmental considerations. These include Policy 36: Promoting Sustainable Transport and 43: Green Space and Recreation of NELLP; ELLPCS policy SP23: Landscape; CLLP Policy S59: Green and Blue Infrastructure Networks; saved policy from NLCLP LC1: Special Protection Areas, Special Areas of Conservation and Ramsar Site, ; NLCS policy CS2: Delivering More Sustainable Development and Draft NLLP Policies DQE11: Green Infrastructure Network and CSC1: Health and Wellbeing. The full assessment of the development compliance with these local plan policies is provided in Appendix D.

Assessment Conclusions

7.13.3 Chapter 17: Health and Wellbeing of the ES [EN070008/APP/6.2.17] presents an assessment of the likely significant effects of the Proposed Development on Human Health and Well-being during construction, operation and decommissioning. The assessments concludes that with the implementation of mitigation measures, there are no significant residual effects in the construction, operational or decommissioning phases. Where health effects are envisaged to be minor adverse, mitigation measures ensure that this effect is reduced to negligible, with the Chapter also considering that cumulative effects envisaged to be minor adverse.

Appraisal

- 7.13.4 Chapter 17: Health and Wellbeing of the ES **[EN070008/APP/6.2.17]** considers impacts on various matters including:
 - Access to healthcare services and other social infrastructure
 - Air quality, noise and neighbourhood amenity
 - Accessibility and active travel
 - Access to work and training and
 - Social cohesion and neighbourhoods.
- 7.13.5 The assessment concludes that with the implementation of mitigation measures there would be no significant effects on health in the construction, operational or decommissioning phases. Therefore, It is considered that the Proposed Development complies with policy in NPS EN-1, 2011 for health.

7.14 Common Law Nuisance and Statutory Nuisance

Requirements of the NPS

- 7.14.1 NPS EN-1, 2011 section 4.14 presents guidance on the relationship between statutory and common law nuisance and the extent to which the powers conferred by a DCO can be relied on as a defence against a claim of nuisance. On the relationship between statutory and common law nuisance and the extent to which the powers conferred by a DCO can be relied on as a defence against a claim of nuisance.
- 7.14.2 NPS EN-1, 2011 paragraph 4.14.2 highlights that, at the application stage of an energy NSIP, possible sources of nuisance under section 79(1) of the 1990 Act and how they may be mitigated or limited are considered during the determination period so that appropriate requirements can be included in any subsequent order granting development consent.

Appraisal

7.14.3 To reduce the risk of nuisance or environmental incident, including noise and vibration, air quality, materials and waste, traffic and transport and water resource the Draft CEMP included in Appendix 3-1 of the ES [EN070008/APP/6.4.3.1] sets out standard best practice measures to be

- implemented by the contractor during the construction process to minimise the potential for nuisances occurring.
- 7.14.4 The Application is also supported by a Statutory Nuisance Statement [EN070008/APP/6.6]. The Statutory Nuisance Statement considers if the Proposed Development could result in a nuisance and the measures where relevant, to prevent and mitigate any such nuisance occurring. The Statutory Nuisance Statement details that the only matters included in Section 79(1) of the EPA 1990 that could potentially arise as a consequence of the project are:
 - (d) relating to dust, steam, smell or other effluvia (where emanating from industrial trade or business premises);
- 7.14.5 Some of the construction activities have the potential to generate dust emissions that could give rise to a statutory nuisance. These would be limited to the excavation, stockpiling and replacement of soil associated with the pipeline trench and driving construction vehicles along temporary haul routes. An assessment of the potential effects of dust generated during construction has been undertaken and is reported in Chapter 14: Air Quality of the ES [EN070008/APP/6.2.14] which concluded that when taking account of the mitigation measures proposed, there would be no statutory nuisance related to dust, steam, smell or other effluvia during the construction phase of the Proposed Development and the operational effects of the Proposed Development on air quality are expected to be similar to the baseline situation.
 - (fb) relating to artificial light;
- 7.14.6 Temporary artificial lighting would be required to illuminate the construction compounds, temporary laydown areas, parking and welfare areas during pipeline installation, The Draft CEMP in Appendix 3-1 of the ES [EN070008/APP/6.4.3.1]. includes measures relating to artificial lighting and with these measure in place, the potential for temporary lighting to cause a nuisance would be low and there is no likelihood of the temporary lighting being injurious to health. During the operational phase the Immingham Facility would be lit outside of daylight hours, similar to the existing VPI Immingham and Phillips 66 site in the immediate vicinity. Block Valve Stations would be unlit except during maintenance or potential breakdown/emergency requirements. The Theddlethorpe Facility will be unmanned, and so lighting requirements are minimal. As with construction, the Operational Phase Mitigation document included within ES Appendix 3-6 [EN070008/APP/6.4.3.6] contains mitigation measures with regards artificial lighting. With these measures in place, the potential for the temporary lighting to cause a nuisance would be low and there is no likelihood of the temporary lighting being injurious to health.
 - and (ga) relating to noise (which for the purposes of the above, includes vibration).
- 7.14.7 Pipeline installation would include activities and equipment likely to produce noise and vibration, such as formation and use of the construction compounds, earthworks and excavations, auger units and drilling plant.

 Noise and vibration from the installation activities may cause significant

short-term effects at several receptors. Chapter 13: Noise and Vibration of the ES [EN070008/APP/6.2.13] identifies thresholds for significant observed adverse effect levels (SOAEL). The short term and transitory nature of the construction activities reduces the potential for statutory nuisance to occur. Chapter 13 considers at all receptors the rating level for operational noise is predicted to be below the Lowest Observable Adverse Effect Level (LOAEL) - the level above which adverse effects on health and quality of life can be detected - and therefore noise effects are not significant. There would be no statutory nuisance arising from operational noise from the Proposed Development.

7.14.8 It is considered that due regard has been given to Statutory Nuisance during the EIA process as required by NPS EN-1, as such it is considered that the Proposed Development accords with the NPS.

7.15 Security Considerations

Requirements of the NPS

7.15.1 Paragraph 4.15.1 of NPS EN-1, 2011 states that national security considerations apply across all national infrastructure sectors. Paragraph 4.15.2 goes on to state that,

'Government Policy is to ensure that, where possible, proportionate protective security measures are designed into new infrastructure developments at an early stage. Where applications for development consent for infrastructure relate to potentially critical infrastructure, there may be national security considerations, which will be identified to the relevant government department.'

Requirements of Local Policy

7.15.2 Local policy outlines general design criteria and objectives for safe and secure environments to be created through design considerations. Whilst these policies relate primarily to developments that create buildings some of the criteria are applicable to locally and regionally significant developments, and a result are deemed relevant to the Proposed Development. Relevant polices ELLPCS Policy SP10: Design, and Policy CS5: Delivering Quality Design in North Lincolnshire of the NLCS. The full assessment of the Proposed Development compliance with these local plan policies is provided in Appendix D.

Appraisal

- 7.15.3 During the construction phase the construction compounds, laydown and welfare areas will be securely fenced and attended during the daytime. If necessary night-time security staff could be employed to safeguard materials and equipment.
- 7.15.4 During the operation phase the above ground installations (including the Immingham Facility, Block Valve Stations and Theddlethorpe Facility) will be located in secure compounds enclosed by a security fence and gate. These facilities will be monitored by CCTV and lighting installed where necessary.

- Equipment and controls will be located in secure control rooms and kiosks. The majority of the pipeline will be buried and not accessible.
- 7.15.5 The proposed development provides an opportunity to decarbonise industry and energy production from a range of sources including fossil fuels. In this manner the Proposed Development provides an opportunity to help provide a mix of low carbon energy sources which will provide for future energy security.
- 7.15.6 As a result, it is considered that suitable protective security measures will be implemented during the construction and operation phases and the Proposed Development accords with this part of NPS EN-1, 2011.

7.16 Air Quality and Emissions

Requirements of the NPS

- 7.16.1 Paragraph 5.2.1 of NPS EN-1, 2011 acknowledges that infrastructure development can have adverse effects on air quality during the construction, operation and decommissioning phases and can lead to adverse impacts on health and wider area. Air emissions can include particulate matter such as dust as well as gases.
- 7.16.2 Paragraph 5.2.2 the NPS EN-1, 2011 outlines that; whilst CO₂ emissions can result in a significant adverse impact from some energy infrastructure which cannot be totally avoided, government has determined that these emissions are not a reason to prohibit consenting a new energy project.
- 7.16.3 Paragraph 5.2.6 and 5.2.7 of NPS EN-1, 2011 outlines that where a project is likely to have adverse effects on air quality then an impact assessment should be undertaken and include details of: emissions, mitigation, residual effects for each stage of the project along with baseline and emission levels.

Requirements of Local Policy

7.16.4 Local policy requires applicants to take account of individual and cumulative effects of developments and their associated infrastructure on air quality, ensuring there is no adverse effects of Proposed Developments. The relevant policies, (NLCS CS5: Delivering Quality Design in North Lincolnshire, NELLP Policy 31: Renewables and low carbon infrastructure, and CLLP S53: Design and amenity) are fully considered in Appendix D.

Assessment Conclusions

7.16.5 Chapter 14: Air Quality of the ES [EN070008/APP/6.2.14] assesses the impacts of the Proposed Development on local air quality during the construction phase. The impact on air quality during the operational and decommissioning phases were scoped out of the assessment. It is concluded that there are some dust and air quality sensitive receptors close enough to the route corridor that could be adversely impacted by the construction of the Proposed Development. However, providing that all construction activities adhere to the mitigation measures presented within Chapter 14 and within the Draft CEMP in Appendix 3-1 of the ES [EN070008/APP/6.4.3.1], the potential magnitude of impacts will be lowered

- so the residual significance will be negligible to minor adverse. These are therefore classed as not being significant.
- 7.16.6 Plant emissions from construction phase site plant, energy generation plant, and Non-Road Mobile Machinery NRMM are considered to be not significant. This is due to the good standard of baseline air quality, transient and intermittent nature of emissions as well as the limited duration of time that site plant and NRMM emissions will be present within proximity of sensitive receptors. It is not expected that there will be any significant adverse effects on local air quality as a result of construction traffic movements associated with the Proposed Development.

Appraisal

- 7.16.7 Chapter 14: Air Quality of the ES [EN070008/APP/6.2.14] considers impacts to amenity and human health and designated nature conservation sites by combustion and dust emissions from construction activities. The construction dust assessment identified the need for dust monitoring which has been included in the Draft CEMP in Appendix 3-1 of the ES [EN070008/APP/6.4.3.1].
- 7.16.8 The Order Limits are located mostly within a rural area and the alignment avoids close proximity to urban areas and nature conservation sites. There are some dust and air quality sensitive receptors close to the route that could be adversely impacted by the construction phase. However, providing that all of the mitigation measures, as listed within the Draft CEMP in Appendix 3-1 of the ES [EN070008/APP/6.4.3.1] are adhered to, the potential impact on air quality will not be significant.
- 7.16.9 The Proposed Development forms an essential part of the Viking CCS project and aims to transport CO₂ from industry in the Immingham area to secure offshore geological stores. As a result, the Proposed Development has a beneficial effect during the operation phase as it will assist in reducing CO₂ emissions in the region.
- 7.16.10 The Proposed Development comply's with paragraph 5.2.6 and 5.2.7 of NPS EN-1, 2011 an air quality assessment has been carried out to consider the potential effects of the Proposed Development and determines that, with the identified mitigation measures in place, there will not be significant effects on air quality as a result of the Proposed Development.

7.17 Biodiversity and Geological Conservation

Requirements of the NPS

- 7.17.1 Paragraph 5.3.4 of NPS EN-1, 2011 requires that applicants show how the project has taken advantage of opportunities to conserve and enhance biodiversity and geological conservation interests.
- 7.17.2 NPS EN-1, 2011, paragraph 5.3.7 requires that development should;

Avoid significant harm to biodiversity and geological conservation interests, including through mitigation and consideration of reasonable alternatives but where significant harm cannot be avoided, then appropriate compensation measures should be sought'.

- 7.17.3 This is also reflected in paragraph 5.4.6 of Draft NPS EN-1, 2023. NPS EN-4, 2011 section 2.21 refers to the impacts of gas and oil pipelines on biodiversity, landscape and visual. It reinforces the requirement of NPS EN-1, 2011 stating that an ES should include an assessment of the biodiversity effects of the proposed route.
- 7.17.4 Regarding decision making, paragraph 5.3.8. of NPS EN-1, 2011 outlines that the IPC (now the SoS) should ensure that appropriate weight is attached to designated sites of international, national and local importance; protected species; habitats and other species of principal importance for the conservation of biodiversity; and to biodiversity and geological interests within the wider environment.
- 7.17.5 NPS EN-1, 2011 at paragraph 5.3.13 advises that the SoS should give 'due consideration' to regional or local designations, although these should not be used themselves to refuse development consent due to the need for new infrastructure.
- 7.17.6 Paragraphs 5.3.10 and 5.3.11 identify the importance of avoiding likely effects on Sites of Special Scientific Interest (SSSIs), and the need to ensure the conservation of enhancement of sites.
- 7.17.7 Paragraph 5.3.13 refers to regional and local sites of biodiversity and geological interest, stating that these sites have a fundamental role to play in meeting overall national biodiversity targets, contributing to the quality of life and well-being of the community and in supporting research and education. Paragraph 5.3.13 goes on to state that,
 - 'Given the need for new infrastructure, these designations should not be used in themselves to refuse development consent.'
- 7.17.8 Paragraph 5.3.14 refers to ancient woodland and veteran trees outlining that development should not be granted for any development that would result in the loss or deterioration, unless benefits (including need) of the development, in that location, outweigh the loss of the woodland.
- 7.17.9 Paragraph 5.3.17 states that other species and habitats have been identified as being of principal importance and as such the SoS,
 - 'Should ensure that these species and habitats are protected from the adverse effects of development by using requirements or planning obligations. The SoS should refuse consent where harm to the habitats or species and their habitats would result, unless the benefits (including need) of the development outweigh that harm.'

Requirements of Local Plan Policy

7.17.10 Local plan policy relevant to ecology and biodiversity comprise Policy 9: Habitat Mitigation – South Humber Bank, Policy 41: Biodiversity and Geodiversity of the NELLP; Policy CS1: Spatial Strategy for North Lincolnshire, Policy CS16: North Lincolnshire's Landscape, Greenspace and Waterscape, Policy CS17: Biodiversity of the NLCS; SP24 Biodiversity and Geodiversity, SP 27 Renewable and Low Carbon Energy of the ELLPCS; and Policy S60: Protecting Biodiversity and Geodiversity, Policy S61: Biodiversity Opportunity and Delivering Measurable Net Gains and Policy

S66: Trees, Woodland and Hedgerows of the CLLP. The full assessment of the Proposed Development compliance with these local plan policies is provided in Appendix D.

Assessment Conclusions

- 7.17.11 Chapter 6: Ecology and Biodiversity of the ES **[EN070008/APP/6.2.6]**presents an assessment of the likely significant effects of the Proposed
 Development on ecology and biodiversity during construction, operation and
 decommissioning. The assessment includes consideration of impacts to
 sensitive ecological features such as designated sites, habitats of principal
 importance and protected and notable species. The assessment concludes
 that with the implementation of mitigation measures the Proposed
 Development would not result in any significant adverse effects for ecology
 and biodiversity.
- 7.17.12 Chapter 9: Geology and Hydrogeology of the ES [EN070008/APP/6.4.9] presents an assessment of the likely significant effects of the Proposed Development on geology and hydrogeology during construction, operation and decommissioning. It is concluded that the potential impacts which may occur during construction are primarily associated with spillages and leaks of fuel/oil associated with plant/machinery, disturbance of contaminated soils and potential degradation of soil quality and these can be controlled through good practice and standards mitigation measures as outlined within the Draft CEMP. During the operational phase, identified potential impacts are limited to effects resulting from potential land contamination on site users and groundwater receptors. Mitigation of the potential impacts will be put in place at construction phase which would also aid in the reduction of operational effects. The potential effects from decommissioning are considered to be at worst the same as construction. With these mitigation measures in place the significance of effects of the Proposed Development in relation to geology and hydrogeology is predicted to be not significant.
- 7.17.13 The Report to inform the HRA **[EN070008/APP/6.5]** concludes that the Proposed Development would not have an adverse effect on integrity of European sites.

Appraisal

International Sites

- 7.17.14 The assessment of biodiversity in relation to the Proposed Development considers designated sites, species and habitats. The designated sites assessed included:
 - Sites of international importance such as Special Protection Areas, Special Areas of Conservation and Ramsar:
 - Sites of national importance such as Sites of Special Scientific Interest and National Nature Reserves: and
 - Sites of County level importance such as Local Nature Reserves, Local Wildlife Sites and Sites of Nature Conservation Importance.
- 7.17.15 The assessment concluded that the Proposed Development would not result in significant adverse effects if mitigation measures outlined in the Draft

- CEMP in Appendix 3-1 of the ES **[EN070008/APP/6.4.3.1]** to prevent pollution, noise and visual disturbance are implemented and an Ecological Clerk of Works is present to oversee works.
- 7.17.16 Chapter 8: Ecology and Biodiversity of the ES [EN070008/APP/6.2.8] details the likely effect on local and regional sites. Chapter 8 explains that there are no statutory designated sites within the Order Limits, the closest is Bradley and Dixon Woods located 2.29 km to the north-east and designated as ancient woodland. Due to the separation distances between the Proposed Development and Bradley and Dixon Woods no affects are anticipated. The assessment identifies that without mitigation, the construction phase of the Proposed Development has the potential to have significant adverse effects upon ecological receptors including statutory and non-statutory designated sites, habitats and protected and notable species.
- 7.17.17 Mitigation measures have been embedded into the Proposed Development to avoid adverse effects where possible. Additional mitigation measures are presented within the Draft CEMP in Appendix 3-1 of the ES [EN070008/APP/6.4.3.1], which aims to address adverse effects upon designated sites and habitats. Where protected species will be affected, a licence from Natural England will be sought (as detailed within the Consents and Agreements Position Statement [EN070008/APP/7.2], and mitigation will be secured as part of the licensing process. Measures to avoid significant adverse effects upon European designated sites are detailed within the report to inform HRA [EN070008/APP/6.5]. These include measures to prevent dust and particulates, pollution of aquatic environments and noise and visual disturbance and these measures are secured through the Draft CEMP in ES Appendix 3-1[EN070008/APP/6.4.3.1] and Outline Landscape and Ecology Management Plan (OLEMP) [EN070008/APP/6.8].
- 7.17.18 With the application of the committed mitigation measures, no significant adverse residual effects are anticipated during construction relating to ecology and biodiversity.
- 7.17.19 No significant effects are anticipated during the operational phase of the development, with the exception of Invasive Non-Native Species (INNS) which could spread in the absence of mitigation. INNS will be treated prior to the construction of the Proposed Development and measures to prevent the spread of INNS will be adopted during the operational phase and are detailed within the OLEMP [EN070008/APP/6.8]. There will be no significant residual effects during the Operation of the Proposed Development.
- 7.17.20 The decommissioning phase would apply similar design and mitigation measures as the construction phase and with the application of mitigation, there will be no significant residual effects during decommissioning.

Ancient Woodland and veteran trees

7.17.21 There is no ancient woodland within the Order Limits. Chapter 8: Ecology and Biodiversity of the ES [EN070008/APP/6.2.8] explains that veteran trees have been identified within the Order Limits at Barnoldby le Beck parkland (refer to the Arboriculture Report in ES Appendix 6-10 [EN070008/APP/6.4.6.10] for locations). Whilst a small area of the parkland

- habitat will be lost, the veteran trees will be avoided. Mitigation measures will reduce any impacts on the veteran trees.
- 7.17.22 As a result of the above, the Proposed Development is considered to be in compliance with NPS EN-1, 2011 in respect of biodiversity.

7.18 Civil and Military Aviation and Defence Interests

Requirements of the NPS

7.18.1 Paragraph 5.4.1 of NPS EN-1, 2011 identifies that civil and military aerodrome, aviation technical sites and other types of defence interests both on and offshore can be affected by new energy development. The preferred route of the Proposed Development has evolved following consultation with key stakeholders. The Ministry of Defence (MoD) was consulted on the proposals and provided feedback confirming that they did not have any safeguarding objections to the proposals. Correspondence with the MoD can be found within the Consultation Report [EN070008/APP/5.1]. The consultation process demonstrates that an appropriate engagement exercise was undertaken, in line with paragraph 5.4.11 of NPS EN-1, 2011.

7.19 Coastal Change

Requirements of the NPS

- 7.19.1 Section 5.5 of NPS EN-1, 2011 seeks to ensure that the Proposed Development will be resilient to coastal erosion and deposition, taking into account climate change during the operational life of the project. NPS EN-1, 2011 at paragraph 5.5.11 requires the impacts on coastal processes to be managed to minimise adverse impacts on other parts of the coast. Where such proposals are brought forward consent should only be granted where the SoS is satisfied that the benefits (including need) of the development outweigh the adverse impacts. At paragraph 5.5.16 it is stated that, substantial weight should be attached to the risks of flooding and coastal erosion.
- 7.19.2 Chapter 15: Climate Change of the ES [EN070008/APP/6.2.15] presents the assessment of the likely significant effects of the Proposed Development on the climate and impact of climate change on the Proposed Development. Chapter 15 acknowledges that the Proposed Development is located in an area that is susceptible to sea level rise. Specifically, approximately the first 3 km of the DCO Site Boundary (Section 1) intersects with Flood Zone 2 and 3 associated with the tidal flooding from the Humber Estuary. Additionally, the last 9km (from the crossing of the B1200 onwards) of this corridor (Section 5) lies within the tidal flood zone 2-3 from the North Sea. However, sea level rise is not considered to present a likely effect with the existing land drainage in place. Furthermore, the location of the Proposed Development is such that it will not be affected by coastal erosion and deposition and so this topic is not considered further.

7.20 Dust, Odour, Artificial Light, Smoke, Steam and Insect Infestation

Requirements of the NPS

7.20.1 Paragraph 5.6.1 of NPS EN-1, 2011 states that,

'During the construction, operation and decommissioning of energy infrastructure, there is potential for the release of a range of emissions such as odour, dust, steam, smoke, artificial light and infestation of insects. All have the potential to have a detrimental impact on amenity or cause a common law nuisance or statutory nuisance under Part III, Environmental Protection Act 1990'.

7.20.2 Paragraph 2.19.8 of NPS EN-4, 2011 (and carried forward into paragraph 2.21.1 of draft NPS EN-4, 2023) states that,

'When designing the route of new pipelines applicants should research relevant constraints including proximity of existing and planned residential properties, schools and hospitals, railway crossings, major road crossings, below surface usage and proximity to environmentally sensitive areas, main river and watercourse crossings. These can be undertaken by means of desk top studies in the first instance, followed up by consulting the appropriate authority, operator, or conservation body if necessary.'

Appraisal

- 7.20.3 In response, the Application is supported by a Statement of Statutory Nuisance [EN070008/APP/6.6] which details whether the Proposed Development engages in one or more of the matters set out in section 79(1) of the Environmental Protection Act, 1990 and if so how the Applicant proposes to mitigate them.
- 7.20.4 Other supporting documents such as the Draft CEMP in Appendix 3-1 of the ES [EN070008/APP/6.4.3.1] and the Draft CTMP in Appendix 12-5 of the ES [EN070008/APP/6.4.12.5] provide additional considerations towards dust emissions and use of artificial lights specifically during construction.
- 7.20.5 It is not anticipated that there will be any effects associated with odour, or insect and vermin infestation as a result of the Proposed Development.
- 7.20.6 The preferred route of the Proposed Development is explained in Chapter 2: Design Evolution and Alternatives of the ES [EN070008/APP/6.2.2]. The route has been selected to avoid existing urban areas, other planned development, major road crossings, railway crossings, below surface usage and proximity to environmentally sensitive areas, main rivers and water crossings thereby minimising potential impacts as far as possible. Accordingly, the Proposed Development accords with the NPS requirements detailed above, which weighs in favour of the making of the Order.

7.21 Flood Risk

Requirements of the NPS

- 7.21.1 Section 5.7 of NPS EN-1, 2011 outlines that flood risk from all sources should be taken into account to avoid inappropriate development in areas at risk of flooding and to direct development away from areas at highest risk. Paragraph 5.7.4 of EN-1, 2011 states that applications for energy projects of 1 hectare or greater in Flood Zone 1 in England and all proposals for energy projects located in Flood Zones 2 and 3 in England should be accompanied by a flood risk assessment (FRA). The minimum requirements for a FRA are set out in paragraph 5.7.5
- 7.21.2 NPS EN-1, 2011 encourages Applicants to engage in pre-application discussions with the Environment Agency and other bodies such as Internal Drainage Boards, sewerage undertakers, navigation authorities, highway authorities and reservoir owners and operators where relevant. This consultation should inform the scope of the FRA and identify the information that will be required in the determination of the Application.
- 7.21.3 With regards to decision making, paragraph 5.7.12 of NPS EN-1, 2011 states that, the SoS should not consent development in Flood Zone 2 unless it is satisfied that the sequential and exception test requirements have been met. The sequential test gives preference to locating projects in Flood Zone 1, if there are no available sites then projects can be located in Flood Zone 2 unless there is no reasonable available site then NSIPs can be located in Flood Zone 3, subject to the exception test.
- 7.21.4 Paragraphs 5.7.14-5.7.16 of NPS EN-1, 2011 state that, the exception test provides a method of managing flood risk while still allowing necessary development to occur. The exception test is only appropriate for use where the sequential test cannot deliver an acceptable site, considering the need for energy infrastructure to remain operational during floods. All three elements of the exception test as set out below must be passed for the development to be consented:
 - It must be demonstrated that the project provides wider sustainability benefits to the community that outweigh flood risk:
 - The project should be on developable, previously developed land or if it
 is not on previously developed land, that there are no reasonable
 alternative sites on developable previously developed land subject to
 any exceptions set out in the technology specific NPSs: and
 - An FRA must demonstrate that the project will be safe, without increasing flood risk elsewhere subject to the exception below and where possible reduce flood risk overall.
- 7.21.5 Exceptionally, where an increase in flood risk elsewhere cannot be avoided or mitigated, consent may be granted if it is satisfied that the increase in present and future flood risk can be mitigated to an acceptable level and taking account of the benefits of, and need for NSIPs.

Requirements of Planning Practice Guidance

- 7.21.6 The Flood Risk and Coastal Change PPG states that for the Exception Test for development in Flood Zone 3 to be passed it must be demonstrated that:
 - the development provides wider sustainability benefits to the community that outweigh flood risk; and
 - the development will be safe for its lifetime taking account of the vulnerability of its users, without increasing flood risk elsewhere and, where possible, will reduce flood risk overall.

Requirements of Local Policy

- 7.21.7 Local planning polices require new development to respond to existing flood risk and seek to ensure that development does not increase the risk of flood elsewhere.
- 7.21.8 The following policies are considered relevant to the Proposed Development: NELLP Policy 33: Flood Risk; ELLPCS Policies SP16: Inland Flood Risk and SP17: Coastal East Lindsey; CLLP Policy S20: Resilient and Adaptable Design; Saved Policy DS16 of the NLLP; NLCS Policies CS1 Spatial Strategy for North Lincolnshire, CS2: Delivering More Sustainable Development, CS5: Delivering Quality Design in North Lincolnshire, CS18: Sustainable Resource Use and Climate Change, CS19: Flood Risk; draft NLLP Policy, DQE5: Managing Flood Risk, and Policy DQE6: Sustainable Drainage Systems. The full assessment of the Proposed Development compliance with these local plan policies is provided in Appendix D.

Assessment Conclusions

- 7.21.9 The Proposed Development is located in areas of Flood Zone 1, 2 and 3 and accordingly, an FRA has been carried out along with a Sequential Assessment and Exceptions Test which is included in ES Appendix 11-5 [EN070008/APP/6.4.11.5].
- 7.21.10 The FRA includes a review of baseline information relating to flood risk posed to Proposed Development and the effects arising from the Proposed Development. Where necessary the FRA includes recommendations for mitigation measures to ensure the Proposed Development remains safe over its lifetime.
- 7.21.11 The Sequential Test included in the FRA was carried out to assess the flood risk for the Proposed Development and to direct it to areas of lowest probability of flooding (flood zone 1) where possible. Elements of the Proposed Development including the Immingham Facility, Theddlethorpe Facility and sections of the pipeline are located in Flood Zones 2 & 3. The Proposed Development is classed as 'Essential Infrastructure' which is considered to be acceptable in the Flood Zones 1 and 2 and also in Flood Zone 3 where the requirements of an Exception Test are met.
- 7.21.12 The exceptions test in the FRA concludes that, the Proposed Development accords with the first part of the Exception Test in that it provides wider sustainability benefits to the community that outweigh flood risk. The second part of the Exception Test is complied with, as it has been demonstrated that the infrastructure will be safe for the duration of its lifetime, without

- increasing flood risk elsewhere. Further, where possible the Proposed Development is making use of previously developed land.
- 7.21.13 The FRA demonstrates that it is possible to manage flood risks to and from the Proposed Development in accordance with planning policy and guidance.

Appraisal

Sequential Test

- 7.21.14 A sequential approach was adopted during the site selection stage for the Proposed Development, to direct the most vulnerable elements of the Proposed Development to areas of lowest flood risk. The sequential test was applied at the site level to minimise risk by directing the most vulnerable uses to areas of lowest flood risk. Throughout the design evolution consideration was given to several pipeline corridor routes, which were appraised and refined to ensure an informed and robust decision could be made when selecting a preferred route.
- 7.21.15 The Proposed Development is a linear scheme comprising a pipeline to transport CO₂ emissions from the Immingham Industrial Area to the Theddlethorpe and the existing LOGGS pipeline. The start and end points are relatively fixed and it is necessary for the above ground installations to be located at Immingham and Theddlethorpe to operate the pipeline. The land for the Proposed Immingham and Theddlethorpe Facilities is located in Flood Zone 3. It is also necessary for the pipeline to pass through areas of Flood Zone 3 that are associated with watercourses. Taking the above into account, the Proposed Development passes the requirements of the sequential test.

Exceptions Test

7.21.16 The Proposed Development comprises essential infrastructure according to Table 2 of the Flood Risk and Coastal Change Planning Practice Guidance. Essential Infrastructure is considered appropriate in Flood Zones 2 and 3 subject to the application of the Exception Test. Where it has not been possible to direct elements of the proposed development to areas of lower flood risk, an exceptions test has been carried out. As set out in the FRA, it is considered that the requirements of the exceptions test have been met.

Wider Sustainability Benefits

7.21.17 The Proposed Development will provide wider sustainability benefits to the community and the wider area which outweigh flood risk. These wider sustainability benefits include that the Proposed Development will provide for the transport of CO2 to offshore geological stores to reduce Green House Gas emissions and help to tackle the effects of global warming. The Proposed Development will assist in decarbonising industry while generating new employment and significant investment in the area. The Viking CCS project will also enable local authorities to exploit renewable energy and low carbon sources that have potential in the region and contribute to a reduction in emissions.

Previously developed land

7.21.18 NPS EN1 requires that the project be on developable, previous developed land or, if it is not on previously developed land, that there is no reasonable alternative sites on developable previously developed land subject to any exceptions set out in the technology-specific NPSs. Where possible, elements of the proposed development would be located on previously developed land and this includes the Immingham Facility and option 1 for the Theddlethorpe Facility.

Safe for its lifetime

- 7.21.19 The FRA presented in Appendix 11-5 [EN070008/APP/6.4.11.5] concludes that it will be possible to manage flood risks associated with the Proposed Development and the Development will be safe for its lifetime.
- 7.21.20 Taking the above into account, the Proposed Development is in accordance with the NPS in relation to flood risk.

7.22 Historic Environment

Requirements of the NPS

- 7.22.1 Section 5.8 of NPS EN-1, 2011 details the importance of the historic environment and acknowledges that the construction, operation and decommissioning of energy infrastructure has the potential to result in adverse impacts on the historic environment. Paragraph 5.8.14 states that;
 - "There should be a presumption in favour of the conservation of designated heritage assets and the more significant the designated heritage asset, the greater the presumption in favour of its conservation should be. Once lost heritage assets cannot be replaced and their loss has a cultural, environmental, economic and social impact. Significance can be harmed or lost through alteration or destruction of the heritage asset or development within its setting. Loss affecting any designated heritage asset resulting from its alteration or development in its setting should require clear and convincing justification".
- 7.22.2 This is also reflected in the draft NPS EN-1, 2023 which states at paragraph 5.9.25 that:
 - "When considering the impact of a proposed development on the significance of a designated heritage asset, the Secretary of State should give great weight to the asset's conservation. The more important the asset, the greater the weight should be. This is irrespective of whether any potential harm amounts to substantial harm, total loss, or less than substantial harm to its significance".
- 7.22.3 Paragraph 5.8.15 of NPS EN-1, 2011 States that 'Any harmful impact on the significance of a designated heritage asset should be weighed against the public benefit of development, recognising that the greater the harm to the significance of the heritage asset the greater the justification will be needed for any loss'.

- 7.22.4 Paragraph 5.8.18 of NPS EN-1, 2011 states that when considering an application the IPC should weigh any negative effects on a designated heritage asset against the wider benefits of the application. The greater the negative impact on the significance of the designated heritage asset, the greater the benefits that will be needed to justify approval'.
- 7.22.5 The NPPF in chapter 16 titled *Conserving and enhancing the historic environment* outlines in paragraphs 199 to 203 how decision makers should take into account the harm that may occur to heritage assets. Paragraph 199 provides that:
 - 'When considering the impact of a proposed development on the significance of a designated heritage asset, great weight should be given to the asset's conservation (and the more important the asset, the greater the weight should be). This is irrespective of whether any potential harm amounts to substantial harm, total loss or less than substantial harm to its significance.'
- 7.22.6 Paragraphs 200 and 201 of the NPPF consider when 'substantial harm' to a designated heritage asset occurs. The heritage assessment provided in Chapter 8: Historic Environment of the Environmental Statement [EN070008/APP/6.2.8] concludes that harm to heritage assets is 'less than substantial' and so paragraphs 200 and 201 are not of relevance.
- 7.22.7 Paragraph 202 of the NPPF considers when 'less than substantial harm' occurs to a designated heritage asset and outlines that:
 - 'Where a development proposal will lead to less than substantial harm to the significance of a designated heritage asset, this harm should be weighed against the public benefits of the proposal including, where appropriate, securing its optimum viable use'.
- 7.22.8 Similarly paragraph 203 in the NPPF provides that the effect of a development on a non-designated heritage asset should also be taken into account.
 - 'The effect of an application on the significance of a non-designated heritage asset should be taken into account in determining the application. In weighing applications that directly or indirectly affect non-designated heritage assets, a balanced judgement will be required having regard to the scale of any harm or loss and the significance of the heritage asset.'
- 7.22.9 The SoS is advised within paragraph 5.8.13 to consider the desirability of sustaining and, where appropriate, enhancing the significance of heritage assets. At paragraph 5.8.15 it is concluded that any harmful impact on the significance of a designated heritage asset should be weighed against the public benefit of the development being considered, the greater the harm to the significance of the heritage asset, the greater the justification will be needed for any loss thereof.

Requirements of Local Policy

7.22.10 Local Policy further considers the historic environment. It is expected that development will take consideration of heritage assets and provide suitable mitigation to limit any harm to the historic environment where relevant.

Where there is harm a result of development local policies require the public benefits to outweigh the harm. Relevant polices include Policy 39:
Conserving and Enhancing the Historic Environment; ELLPCS Policy SP11:
Historic Environment, Policy SP25: Green Infrastructure, Policy 27:
Renewable and Low Carbon Energy; CLLP Policy S53: Design and Amenity, Policy S57: The Historic Environment; NCLP saved policy LC13: Parks, Gardens and Landscapes of Special Historic Interest; NLCS policy CS5:
Delivering Quality Design in North Lincolnshire, Policy CS6: Historic Environment; draft NLLP Policy SS9: Land at North Killingholme Airfield, Policy HE1: Conserving and Enhancing the Historic Environment, and Policy CSC1: Health and Wellbeing. The full assessment of the Proposed Development compliance with these local plan policies is provided in Appendix D.

Requirements of the Decisions Regulations

7.22.11 The IDPR 2010 states in regulation 3(1) that,

'when deciding an application which affects a listed building or its setting, the decision maker must have regard to the desirability of preserving the listed building or its setting or any features of special architectural or historic interest which it possesses'.

7.22.12 Similarly, regulations 3(2) and 2(3) of the IPDR 2010 state that, when deciding an application, the decision maker must have regard to the desirability of preserving and enhancing conservation areas and scheduled monuments.

Assessment conclusions

- 7.22.13 Chapter 8: Historic Environment of the ES [EN070008/APP/6.2.8] presents the assessment of the likely significant effects of the Proposed Development on the historic environment during construction, operation and decommissioning; including consideration of temporary and permanent impacts on archaeological remains, historic buildings and the historic landscape character. It concluded that operation of the Theddlethorpe Facility (Option 2) would have significant residual effects on the setting of one designated heritage asset (the grade II listed Ashleigh Farm). This effect is assessed as moderate adverse and would be permanent during the operational lifetime of the Proposed Development.
- 7.22.14 Decommissioning of the Theddlethorpe Facility would reverse this effect and reinstate the existing baseline conditions. Residual effects on other built heritage assets due to operation and decommissioning of the Proposed Development are assessed to be not significant. It is assessed that the operation and decommissioning phases of the Proposed Development would not result in any additional significant effects on buried archaeological remains.
- 7.22.15 With regard to the harm to heritage assets caused by the Proposed Development, the assessment included in Chapter 8: Historic Environment of the ES [EN070008/APP/6.2.8] concludes that the residual effects of the Proposed Development will result in less than substantial harm to three designated heritage assets during construction (for a temporary period) and

at one designated heritage asset during operation (a forty year period). The assessment concludes that there will also be less than substantial harm to non-designated heritage assets.

Appraisal

- 7.22.16 The design evolution for the Proposed Development has taken into consideration the presence of known archaeological features with the aim of conserving assets and minimising adverse effects where possible. The assessment presented within Chapter 8: Historic Environment of the ES [EN070008/APP/6.2.8] confirms that there are no designated heritage assets located within the Order Limits, although within a 2 km buffer of the Order Limits various assets are present.
- 7.22.17 Effects have been assessed on archaeological remains, historic assets and the historic landscape character, within a study area relevant to the nature of the impacts and the heritage assets likely to be affected.
- 7.22.18 Temporary changes to the settings of designated and non-designated heritage assets up to 2 km from the Proposed Development have been considered, including the presence and movement of construction plant that may alter the setting of heritage assets, such as change arising from noise and dust, and the presence of construction compounds which may change the setting of heritage assets because of noise or light intrusion.

Historic landscape

7.22.19 Chapter 8: Historic Environment of the ES **[EN070008/APP/6.2.8]** identifies that the construction, operation and decommissioning of the Proposed Development would not result in any significant effects on historic landscape character.

Buried archaeology

- 7.22.20 The historic environment assessment in the ES [EN070008/APP/6.2.8] has identified likely significant residual effects on non-designated buried archaeological remains at one site due to construction of the pipeline. This is where Section 5 will affect cropmark enclosures at Theddlethorpe [622]. The archaeological site affected relates to medieval settlement activity. The significant residual effects identified are assessed as Moderate adverse permanent effects which is considered significant and permanent.
- 7.22.21 It was assessed that the operation and decommissioning phases of the Proposed Development would not result in any additional significant effects on buried archaeological remains.

Built heritage assets

7.22.22 The historic environment assessment has identified likely significant residual effects on three designated heritage assets, the grade II* listed Church of St Edmund in Riby, the grade II listed Ashleigh Farm at Theddlethorpe, and the grade II listed Manor House and non-designated former parkland at Barnoldby le Beck due to construction of the pipeline. The significant residual effects identified are assessed as moderate adverse effects, which would be temporary during the construction phase, and would be transient, reducing as construction progresses.

7.22.23 The operation of the Theddlethorpe Facility (Option 2) would have significant effects on the setting of one designated heritage asset (the grade II listed Ashleigh Farm). This affect has been assessed as moderated adverse and would be permanent during the operational lifetime of the Proposed Development. However, decommissioning of the Theddlethorpe Facility would reverse the effect and reinstate the baseline conditions as such the effects are temporary and not considered significant.

IPDR Considerations

- 7.22.24 In terms of the IDPR 2010 regulation 3(1), consideration has been given to listed buildings and their setting. Chapter 8: Historic Environment of the ES [EN070008/APP/6.2.8] concludes that during the construction phase there will be likely significant residual effects at three designated heritage assets including, the grade II* listed Church of St Edmund in Riby, the grade II listed Ashleigh Farm at Theddlethorpe, and the grade II listed Manor House at Barnoldby le Beck due to construction of the pipeline. These effects would be temporary during the construction phase and would be transient, reducing as construction progresses. During the operational phase, the Theddlethorpe Facility (Option 2) would have significant residual effects on the setting of one designated heritage asset (the grade II listed Ashleigh Farm). This effect is assessed as moderate adverse and would be permanent during the operational lifetime of the Proposed Development. Decommissioning of the Theddlethorpe Facility would reverse this effect and reinstate the existing baseline conditions.
- 7.22.25 Similarly, regulations 3(2) and 2(3) of the IPDR 2010 state that when deciding an application, the decision maker must have regard to the desirability of preserving and enhancing conservation areas and scheduled monuments. In Chapter 8: Historic Environment of the ES [EN070008/APP/6.2.8] the potential effect on both conservation areas and scheduled monuments within the defined study area is considered. The assessment concluded that the Proposed Development would not result in any significant adverse effects to conservation areas and scheduled monuments.
- 7.22.26 The design for the Proposed Development has taken into consideration the presence of known archaeological features with the aim of conserving assets and minimising adverse effects where possible. An archaeological site investigation will be carried out in advance of construction works to minimise significant adverse effects on buried archaeology.

Harm to heritage assets

7.22.27 Section 5.8 of NPS EN-1, 2011 consider when harm to heritage assets occurs and outlines in paragraph 5.8.15 that any harm on the significance of a designated heritage asset should be weighed against the public benefit of development. Paragraph 5.8.18 of NPS EN-1, 2011 states that the IPC should weigh any negative effects on a designated heritage asset against the wider benefits of the application. The greater the negative impact on the significance of the designated heritage asset, the greater the benefits that will be needed to justify approval'.

- 7.22.28 With regard to the harm to heritage assets caused by the Proposed Development, the NPPF paragraph 202 concerning designated assets and paragraph 203 covering non designated heritage assets the NPPF are of relevance.
- 7.22.29 NPPF paragraph 202 outlines that,

'where a development proposal will lead to less than substantial harm to the significance of a designated heritage asset, this harm should be weighed against the public benefits of the proposal including, where appropriate, securing its optimum viable use'.

7.22.30 Similarly, NPPF paragraph 203 provides that:

In weighing applications that directly or indirectly affect non-designated heritage assets, a balanced judgement will be required having regard to the scale of any harm or loss and the significance of the heritage asset.'

- 7.22.31 The Applicant considers that the benefits of the Proposed Development to the public outweigh the less than substantial harm caused to the grade II listed Ashleigh Farm which is assessed as moderate adverse during the operational lifetime of the Proposed Development. The benefits to the public of the Proposed Development include providing carbon capture and storage facilities which will reduce CO₂ emissions from industry in the Immingham Area. This will lead to a reduction in Green House Gas emissions associated with global warming while also allowing existing employment and economic activity to be maintained while helping the government to meet legally binding targets to achieve Net Zero by 2050. The Proposed Development will also generate significant investment to the area.
- 7.22.32 Great weight should be given to these public benefits which will be advantageous locally, regionally and nationally. The benefits of the Proposed Development are considered to significantly outweigh the less than substantial harm to heritage assets reported in the ES.

Summary

7.22.33 It is considered that the Proposed Development accords with National Policy in respect of the historic environment as the significant effects are limited to a single grade II listed building which are reversible. The wider benefits of the scheme in reducing greenhouse gas emissions is considered to outweigh the harm to heritage assets on this instance.

7.23 Landscape and Visual

Requirements of the NPS

Landscape and Visual Impacts

7.23.1 NPS EN-1, 2011 paragraph 5.9.8 acknowledges that;

'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.'
- 7.23.2 This is further considered in draft NPS EN-1, 2023 at paragraph 5.10.18 which reinforces policy regarding landscape and visual impact outlining that:
 - "The applicant should consider landscape and visual matters in the early stages of siting and design, where site choices and design principles are being established. This will allow the applicant to demonstrate in the ES how both negative effects have been minimised and opportunities for creating positive benefits or enhancement have been recognised."
- 7.23.3 Section 2.21 of NPS EN-4 considers landscape and visual impact, stating that during construction the mitigation of temporary visual impacts should be considered, it sets out that post construction proposals should seek to reinstate and should seek to restore the pipeline route to its original state. Draft NPS EN-4, 2023 reinforces this, outlining that that long-term harm to the landscape should be minimised, including by reasonable mitigation measures to restore the landscape.
- 7.23.4 Paragraph 5.9.18 of NPS EN-1, 2011 refers to the likely visual effects new energy infrastructure is likely to have for many receptors. It states that,

'the SoS will have to judge whether the visual effects on sensitive receptors, such as local residents and visitors to the area, outweigh the benefits of the project. Coastal areas are particularly vulnerable to visual intrusion because of the potential high visibility of development on the foreshore, on the skyline and affecting views along stretches of undeveloped coast.'

AONB Impacts

7.23.5 Paragraph's 5.9.9 - 5.9.11 of NPS EN-1, 2011 refer to development proposed within nationally designated landscapes and state that;

"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 SoS should have regard to in its decisions. The conservation of the natural beauty of the landscape and countryside should be given substantial weight by the SoS in deciding on applications for development consent in these areas".

"Nevertheless, the SoS 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 national considerations, and the impact of consenting or not consenting 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 moderated."
- 7.23.6 NPS EN-1, 2011 also advises that projects should avoid compromising the purposes of a national designation and should be designed sensitively according to the various siting, operational, and other relevant constraints. Outside nationally designated areas, local landscapes may be highly valued or protected. Although local polices based on landscape character assessment should be paid particular attention, NPS EN-1, 2011 advises at paragraph 5.9.14 that,

'Local landscape designations should not be used in themselves to refuse consent, as this may unduly restrict acceptable development.'

Requirements of Local Policy

7.23.7 Local Policy across the Lincolnshire region considers the protection of the Lincolnshire Wolds AONB. The NELLP includes several landscape policies including Policy 42: Landscape. Policy 42 Policy S62 in the CLLP specifically considers the AONB and Areas of Great Landscape Value (AGLV) designations. The policy highlights that the AONB is a nationally designated landscape with the highest level of protection and that great weight should be given to conserving and enhancing the landscape. With regards to the AGLV Policy S62 states that the AGLV is a locally designated landscape area that afforded a high level of protection to reflect their high scenic quality. Policies SP10, SP23 and SP27 within the ELLPCS. The NLCS reinforces the need for development to protect the distinctive character and quality of the landscape in policies CS5, CS12 and CS16. The full assessment of the Proposed Development compliance with these local plan policies is provided in Appendix D.

Assessment Conclusions

- 7.23.8 A full assessment of the likely landscape and visual impacts of the Proposed Development including mitigation measures to reduce impacts is provided with Chapter 7: Landscape and Visual of the ES [EN070008/APP/6.2.7].
- 7.23.9 Chapter 7 explains that the landscape effects have been assessed at a national, regional and local level and range from minor adverse to negligible adverse and are anticipated to result in no significant effects during construction, operation and decommissioning phases of the Proposed Development.
- 7.23.10 The assessment has determined that there would be temporary to short term significant effects on the Lincolnshire Wolds AONB during construction. Effects would reduce to not significant during operation and decommissioning.
- 7.23.11 Visual effects were assessed at 30 viewpoints and represent the likely views experienced by a range of visual receptors, including residential, recreational and road users. The visual amenity assessment has determined that recreational users at: VP6 (PRoW NELC 16 Walk Lane, Irby Upon Humber), VP7 (PRoW NELC 17 Welbeck Hill, Irby Upon Humber (Lincolnshire Wolds AONB)), VP8 (PRoW NELC 122 Welbeck Hill, Irby Upon Humber

(Lincolnshire Wolds AONB)) and users of the heritage railway at VP17 (Station Road, Ludborough) are likely to experience significant short-term adverse effects during the construction phase of the Proposed Development as a result of the high sensitivity of the receptor and proximity to the construction operations associated with the pipeline route and limited intervening vegetation. No additional measures have been identified that would assist in reducing the impacts at the identified locations, and therefore the assessed effects remain.

7.23.12 During the operational phase, the visual influence of the Proposed Development would be limited because of the scale of the overall field boundaries that would reduce the perception of hedgerow loss along sections of the pipeline route. Impacts for the majority of viewpoints impacts would reduce to negligible adverse or neutral at operation year 1.

Appraisal

7.23.13 The Proposed Development has been designed to take into account the existing landscape. Order Limits pass through the part of the Immingham industrial area and open countryside including an area in North East Lincolnshire designated as the Lincolnshire Wolds AONB. An area north west of the AONB is designated as an AGLV which is located in West Lindsey. The Proposed Development does not include above ground installations in the AONB or AGLV. The buried pipeline passes through the AONB for a distance of approximately 2.34 km. The Order Limits pass close to but not through the AGLV.

Construction phase

- 7.23.14 The effect on landscape during the construction of the Proposed Development will be temporary and result from: site clearance; ground excavation; the introduction of temporary construction compounds and construction activities.
- 7.23.15 During the construction of Section 1, including the Immingham Facility, views of the works would be localised and from locations heavily influenced by existing industrial infrastructure such that there is no significant effect on visual amenity. The construction of Section 2 is also considered to have limited impact upon landscape and visual viewpoints as there are relatively few publicly accessible viewpoint locations. In Section 3, views of the pipeline works would be open, from local roads often as a distant but noticeable element across large scale arable fields. There would be very localised/ limited geographical extent of views in proximity to the works and where they exist for most highway users the duration of visual impact would be transitory. For those locations the pipeline route works would form a localised temporary, prominent but not significant change in visual amenity. Elsewhere, the construction of the pipeline route would be substantially or fully screened by intervening landform and vegetation on field boundaries. The landscape and visual impact assessment included in the ES considers that overall, taking the scale/ extent, reversibility and geographical extent of the open views at selected viewpoints into account, the effect on visual amenity would be medium magnitude and of short duration, resulting in a moderate adverse effect that is significant.

- 7.23.16 The construction of the Immingham and Theddlethorpe Facility Option 1 will take place on land within an area dominated by large scale existing and former industrial use while the Theddlethorpe Facility Option 2 would be constructed on arable field in a largely rural context. Taking into account the sensitivity of the landscape it is assessed in ES Chapter 7: Landscape and Visual [EN070008/APP/6.2.7] that there would be no significant landscape effects during construction, whilst during construction there would be changes to views resulting in short-term significant adverse effects at four viewpoints.
- 7.23.17 Three construction compounds are proposed to facilitate the construction of the Proposed Development.
 - The north construction compound, located to the south of Habrough Roundabout and the A160 on arable land with access via Habrough Road. The landscape context in this area is characterised by intensive agricultural land use with some limited influence from the urban edge of South Killingholme/ Immingham and a strong influence from the A160. The construction and presence of the compound would result in both direct and indirect effects. However, landscape elements, such as individual trees/shrubs/ditches on the southern boundary would be retained and post construction, the compound would be restored to arable agricultural use. Considering the context, small scale of the site, duration of construction and reversibility of the impacts, the effects on landscape character are considered to be very low and not significant.
 - The central construction compound, located near Welbeck Hill to the east of Barton Street (A18) adjacent to the AONB boundar, whilst the construction and presence of the compound would result in direct effects on the Landscape character Area (LCA) the small scale of the compound directly impacted within the LCA its location on the periphery of the LCA, the short duration and reversibility of the impacts on landscape character, result in the effects of the central compound being not significant.
 - The southern construction compound will be located at the car park on the former TGT site. The compound would be located in an area which is influenced by the infrastructure of the National Gas Transmission, Theddlethorpe Terminal. The location is a within a degraded part of semi-industrial landscape influenced both by the former TGT but also adjacent to the urban area of Mablethorpe. Assuming the compound occupies the terminal surfacing, there will be no temporary loss of arable land or other key landscape elements. Post construction the compound will be restored to the current use, disused hardstanding. Considering the context of the site and existing urbanised/industrial land use, coupled with the duration and reversibility of the impacts, effects on landscape character are considered to be low and not significant.

Construction Phase effect on the Lincolnshire Wolds AONB

7.23.18 Approximately 2.34 km of the proposed pipeline will be located within the Lincolnshire Wolds AONB. There are no above ground installations located in the AONB. The Pipeline will be installed with the original land profiles being reinstated within 9 months, subject to installation methods and complexity. Chapter 7: Landscape and Visual of the ES [EN070008/APP/6.2.7] has determined that there would be temporary short-

- term significant effects on the Lincolnshire Wolds AONB during construction. These impacts relate to the removal of existing landscape features such as hedgerows and arable land, and the visibility of new temporary features such as construction machinery. This would result in short-term significant adverse effects at four representative viewpoints.
- 7.23.19 Short term significant visual effects for the construction phase would be limited to highly sensitive viewpoints located in close proximity to the pipeline route. There would be the potential for these impacts to occur in combination, however as stated these impacts would be temporary.
- 7.23.20 During construction of the Proposed Development there would be changes to views through the addition of detracting visual features associated with the construction process. This would result in short-term significant adverse effects at four representative viewpoints. Short term significant visual effects for the construction phase would be limited to highly sensitive viewpoints located in close proximity to the pipeline route. Chapter 7: Landscape and Visual of the ES [EN070008/APP/6.2.7] concludes that when considering the small scale of the Order Limits, short duration and reversibility of the impacts on landscape character, then the effects on the Lincolnshire Wolds AONB would at most be moderate adverse and not significant, resulting in localised temporary, prominent but not significant change in visual amenity.
- 7.23.21 Chapter 7: Landscape and Visual of the ES [EN070008/APP/6.2.7] sets out that following the implementation of mitigation during construction, the Proposed Development will have a Minor Adverse effect (not significant) on Lincolnshire Wolds AONB and AGLV landscape and moderate adverse effect (significant) on some viewpoints. Following the implementation of mitigation during operation phase the Proposed Development will have a negligible adverse effect on the AONB and AGLV landscape and a negligible adverse effect on some viewpoints within the AONB.

Operation Phase

7.23.22 During the operational phase the pipeline will be buried along the majority of its route. Visual influence of the Proposed Development would be limited to the above ground installations which comprise the Immingham Facility, Theddlethorpe Facility and three Block Valve Stations. The Immingham Facility is located in a heavily industrialised setting as such it is considered that this would limit the magnitude of effect to be very low. The Block Valve Stations will be screened on a minimum of three sides by a strip of native tree and shrub planting which would reduce the impacts on viewpoints to negligible adverse at operation year 1 reducing further to neutral at operation year 15. At Theddlethorpe both Option 1 and 2 will impact on visual amenity through a slight intensification of infrastructure, including the 25 m vent stack. Option 1 would constitute an industrial use on a former industrial site as such is assessed as a negligible significance, Option 2 will be partially mitigated by planting around the facility and is considered to be a not significant effect.

Operational Phase effect on the Lincolnshire Wolds AONB

7.23.23 The Lincolnshire Wolds AONB and AGLV are assessed as being less susceptible to adverse effects during the operational phase than construction activity. The pipeline will be buried where it passes through the AONB and in

close proximity to the AGLV. Following installation of the pipe, soils and hedgerows will be reinstated so the magnitude of change to landscape character would be very low for the high sensitivity Lincolnshire Wolds AONB and consequently effects of the operational pipeline would be of negligible adverse and not significant. The effect during the operational phase in the AGLV would also be of very low magnitude given the scale and extent of change to the landscape and limited introduction of visible elements which includes a Block Valve Station along Washingdales Lane east of the AGLV such that effects would be of negligible adverse and not significant and resulting in a neutral and not significant effect.

Decommissioning Phase

- 7.23.24 Decommissioning of the Proposed Development will involve leaving the buried pipeline in-situ and removal of the above ground installations which will give rise to the same effects as identified during the operational phase.
- 7.23.25 The decommissioning of the Immingham Facility and Theddlethorpe Facility will result in a localised, temporary changes in views. Due to the existing industrial context, and the duration and reversibility of the decommissioning impacts, the effects on visual amenity will result in minor adverse effects that are not significant. The decommissioning of the Block Valve Stations is considered to have at maximum, negligible adverse effect that is not significant.
- 7.23.26 As the above ground installations will be returned to their former or other compatible land uses, the Landscape and Visual Impact assessment concludes that the decommissioning phase will have no likely effects on visual amenity.
- 7.23.27 NPS EN-1, 2011 sets out in section 5.9 that AONBs have the highest status of protection to ensure their continued protection. In accordance with this section of the NPS EN-1, 2011 and NPS EN-1, 2023 regard has been given to this designation during the design of the Proposed Development and the presence of the AONB was a key factor in determining the pipeline route. As outlined in Chapter 2: Design Evolution and Alternatives of the ES [EN070008/APP/6.2.2], options were considered to route the pipeline outside of the AONB, but this was not considered feasible due to interactions with a consented solar farm and residential areas.
- 7.23.28 As demonstrated, the Applicant has sought to minimise harm to the landscape and visual impacts through the provision of sensitive design, the inclusion of mitigation measures including tree and shrub planting has sought to reduce the likely effects accordingly the Proposed Development addresses the relevant policy relating to landscape and visual impact in the NPS. Effects on the AONB have been minimised by avoiding the designated area where possible, only the minimal amount of development necessary takes place in the AONB and this comprises 2.34 km of buried pipeline. No above ground installations would be located within the AONB resulting in temporary adverse effects which would reduce to a non-significant effect once installation of the pipeline has been completed.
- 7.23.29 The Needs Case **[EN070008/APP/7.3]** outlines the overriding need for the Proposed Development. In providing the buried pipeline for the transport of

CO₂ from emitters to secure offshore storage facilities as part of the wider Viking CCS Project, the Proposed Development will assist the government in achieving net zero whilst maintaining employment and economic prosperity. The Proposed Development will generate significant investment in the region and has also been recognised by the government by being included in the Track 2 process to receive government support for development. These benefits are in the public interest.

- 7.23.30 It is considered that the Proposed Development does not result in unacceptable harm to the landscape. The landscape effects have been assessed at a national, regional and local level and effects range from minor adverse to negligible adverse and are anticipated to result in no significant effects during construction, operation or decommissioning phases. Effects on the AONB and the AGLV are assessed to result in temporary, short term adverse effects during construction which would reduce to negligible adverse effects during the operation phase. It is also considered that the benefits of the Proposed Development in assisting the Government to meet its national goals to achieve Net Zero by 2050 while maintaining employment as outlined in the separate Needs Case [EN070008/APP/7.3] far outweigh the temporary short term adverse effects to the AONB, and visual amenity during the construction phase.
- 7.23.31 NPS EN-1, 2011 requires the decision maker to ensure that any projects given consent in designated areas are carried out to high environmental standards, including through the application of appropriate requirements where necessary though at paragraph 5.9.10 confirms that the SoS may grant development consent in AONBs in exceptional circumstances and if it can be demonstrated to be in the public interest.

7.24 Land use Agricultural Land and Soil

Requirements of the NPS

7.24.1 Agricultural Land is identified using the Agricultural Land Classification (ALC), which identifies Grades 1, 2, 3a, 3b, 4 and 5 in accordance with the land quality and productivity. Agricultural land within Grades 1, 2 and 3a is defined as the Best and Most Versatile (BMV) land and is considered a national resource. NPS EN-1, 2011 paragraph 5.10.8 and the draft NPS EN-1, 2023 paragraph 5.11.12 state that:

"Applicants should seek to minimise impacts on the best and most versatile agricultural land (defined as land in grades 1, 2 and 3a of the Agricultural Land Classification) and preferably use land in areas of poorer quality (grades 3b, 4 and 5) except where this would be inconsistent with other sustainability considerations."

7.24.2 The NPS EN-1, 2011 goes on to state in paragraph 5.10.16 that the decision maker:

"Should ensure that applicants do not site their scheme on the best and most versatile agricultural land without justification" but that, "little weight should be given to the loss of poorer quality agricultural land (in grades 3b, 4 and 5)"

Requirements of Local Policy

7.24.3 Policy S67: Best and Most Versatile Agricultural Land states that, proposals should protect the best and most versatile agricultural land so as to protect opportunities for food production and the continuance of the agricultural economy and SP10: Design of the ELLPCS seeks to ensure poorer quality agricultural land is used in preference to the BMV quality land. Policy 31: Renewable and Low Carbon Infrastructure of the NELC Local Plan suggests that proposals for renewable and low carbon energy generating systems will be supported where any significant adverse impacts are satisfactorily minimised, development will be assessed on their merits and taking into consideration cumulative effects of: (including others) the land, including loss of agricultural land. Further policies that aim to protect agricultural land, where possible, include; NELLP Policy 5: Development Boundaries; Saved NLLP policy RD2: Development in the Open Countryside; and NLCS Policy CS2: Delivering More Sustainable Development. The full assessment of the Proposed Development compliance with these local plan policies is provided in Appendix D.

Assessment Conclusions

7.24.4 Chapter 10: Agriculture and Soil of the ES [EN070008/APP/6.2.10] presents an assessment of the likely significant effects of the Proposed Development on agriculture and soils during construction and decommissioning, including consideration of impacts on soil resources and agricultural land. The assessment concludes that although both BMV and non-BMV land would be directly impacted by the Proposed Development the majority of impacts will be temporary and for the duration of the construction phase only, as all land within the pipeline corridor, temporary compounds and temporary accesses will be reinstated immediately following construction to its original condition and land use. Loss of agricultural land through above ground-built development or land use change is restricted to the Theddlethorpe Facility (Option 2) and its associated access, and the three Block Valve Stations. Although this land will be reinstated to agricultural use at decommissioning (long-term reversible change) for the purposes of the assessment the loss is considered permanent as a worst case.

Appraisal

7.24.5 The assessment in Chapter 10: Agriculture and Soil of the ES [EN070008/APP/6.2.10] is based on the worst-case scenario assessing all of the land within the Order Limits, when in reality the actual area of disturbance i.e. the working width (typically a 30 m corridor) plus temporary accesses and construction compounds is significantly smaller. Whilst the Applicant has had regard to agricultural land quality in site selection and layout of the Proposed Development, the proposed corridor will intersect areas identified as BMV land. The permanent loss of BMV land due to the Proposed Development will be a result of land use change from agriculture to above ground installations (such as the Block Valve Stations and the Immingham Facility Option 2). The total permanent loss of agricultural land to the Proposed Development is 0.2 ha of Grade 2 and 2.0 ha of subgrade 3a BMV land. The temporary loss of agricultural land has been calculated as a percentage of the worst-case scenario where all land within the Order

Limits is included, where the proposed working area comprises approximately 26 % of that area. The temporary and reversible loss of BMV agricultural land for the duration of the construction would be 21.29 ha of Grade 2 land and 135.45 ha of Subgrade 3a land. It is noted that the permanent loss of Grade 2 land equates to 0.0001% of Grade 2 land in Lincolnshire, 0.0005 % of Grade 2 land in North Lincolnshire, and 0.0055 % of Grade 2 land in North East Lincolnshire.

- 7.24.6 The Applicant has considered various routes for the Proposed Development, however it is necessary for it to pass through areas of BMV agricultural land to avoid urban areas and residential properties for safety reasons and to avoid sensitive environmental receptors. As a linear scheme of substantial length, it is necessary for the Proposed Development to pass through areas of open countryside. The Applicant has given consideration to BMV agricultural land when determining the route of the pipeline and siting of above ground installations. The permanent loss of Subgrade 3a land could potentially be partially mitigated should Theddlethorpe Facility (Option 1) be chosen, as this facility and the access to it are existing hard standing with no potential impact to agricultural land. The loss of Grade 2 land cannot be mitigated as Block Valve Station 1 cannot be moved out of the area provisionally mapped as Grade 2. Chapter 3: Description of the Proposed Development of the ES [EN070008/APP/6.2.3] provides more detail on the required positioning / spacing of Block Valve Stations.
- 7.24.7 The loss of the vast majority of the Grade 2 and 3a BMV agricultural land occurs during the construction phase and is temporary and reversible. The permanent loss of Grade 2 and 3a BMV land falls significantly below the 20 ha threshold when effects are considered to be significant. The residual impacts to agricultural land as a result of the temporary development are assessed within the Chapter 10: Agriculture and Soils of the ES [EN070008/APP/6.2.10] as not significant.
- 7.24.8 The Applicant has given due consideration to the presence of BMV agricultural land in the design and layout for the Proposed Development and minimised the use and loss of BMV agricultural land in accordance with national and local planning policy.

7.25 Land Use - Minerals

Requirements of the NPS

- 7.25.1 NPS EN-1, 2011 paragraph 5.10.9 and the draft NPS EN-1, 2023 paragraph 5.11.19 both include that:
 - 'Applicants should safeguard any mineral resources on the proposed site as far as possible, taking into account the long-term potential of the land use after any future decommissioning has taken place.'
- 7.25.2 The matter of minerals is considered further in NPS EN-1, 2011 paragraph 5.11.19 and NPS EN-1, 2023 paragraph 5.11.28 where they state:
 - "Where a proposed development has an impact upon a Mineral Safeguarding Area (MSA), the Secretary of State should ensure that

appropriate mitigation measures have been put in place to safeguard mineral resources."

Requirements of Local Policy

7.25.3 NELC Local Plan Policy 44 Safeguarding Minerals and Related Infrastructure draws attention to the minerals safeguarding areas illustrated on the policy map and requires the prior extraction of minerals. The full assessment of the Proposed Development compliance with local plan policies is provided in Appendix D of this document.

Appraisal

- 7.25.4 The Proposed Development does not interact with any operational, dormant or allocated mineral extraction sites or mineral processing sites. The Order Limits pass through several areas designated in the North East Lincolnshire Local Plan as Mineral Safeguarding Areas (MSA) but do not pass through any such designated areas in North Lincolnshire Council or Lincolnshire County Council. MSAs are areas where there is a known naturally occurring mineral reserve and the purpose of the designation is to safeguard the mineral from sterilisation.
- 7.25.5 The purpose of the policies in NPS EN-1, 2011 and the NELC Local Plan are to safeguard mineral reserves from sterilisation and provide mineral supply for future use. The MSAs are designated for Sand and Gravel and distributed throughout the rural and urban areas in North East Lincolnshire.
- 7.25.6 With regard to paragraph 5.10.9 of NPS EN-1, 2011 and NELC Local Plan Policy 44, Part 1 it has not been possible to avoid all of the MSAs in North East Lincolnshire. Due to the number of MSAs, their distribution and the long narrow shape of some, it has not been possible to select a route for the Proposed Development that avoids all of the MSAs while also meeting other criteria such as avoiding residential areas, individual dwelling and sensitive environmental receptors.
- 7.25.7 The presence of MSAs was taken into account at an early stage in the development of the route of the Proposed Development, however in some areas, selecting a route that avoided MSAs would result in different adverse effects on the environment. For example, the Order Limits pass through part of an MSA west of Laceby and the A18 Barton Street and locating the Proposed Development further west to avoid the MSA would increase the length of pipeline that passes through the Lincolnshire Wolds AONB, thereby increasing disturbance in this sensitive location. In other areas, selecting a route for the Order Limits that avoids the MSA would move the pipeline closer to sensitive receptors including urban areas such as Barnoldby Le Beck and Brigsley, or individual dwellings or features of biodiversity value.
- 7.25.8 Part 2 of NELC Policy 44 outlines that prior extraction of mineral should be undertaken, however this is not considered feasible. This would involve excavating mineral along a narrow corridor or small area within the MSA where the Viking CCS Pipeline would be installed. The resulting ground levels would be lower in these isolated areas and would affect surface water drainage and reducing the agricultural land quality. It is possible that prior

- extraction would result in a loss of productive agricultural land and is not considered feasible in this instance.
- 7.25.9 Part 3 of NELC Policy 44 provides that non-mineral development within or adjacent to MSAs which do not allow for the prior extraction will be permitted in certain circumstances. It is considered that the Proposed Development meets several of the criteria in this policy because the need for the development outweighs the need to safeguard the site for future mineral extraction. There is an urgent need for the Proposed Development to reduce CO₂ emissions and assist in achieving Net Zero while maintaining existing industry and employment in the Humber Region, further detail is contained in the separate Needs Case [EN070008/APP/7.3].
- 7.25.10 Part 3 of Policy 44 also considers that non mineral development will be permitted where 'the proposed development is temporary in nature and would not prevent minerals extraction taking place in the future.' During the operation phase the Proposed Development would sterilise any mineral along its land take. Following the decommissioning of the Proposed Development, any mineral could be extracted from the MSA.
- 7.25.11 Despite a number of MSA's being allocated in NELC, there are no active mineral extraction sites or processing plants in the authority area. There is a lack of demand for land won sand and gravel which is reflected in the Local Plan, which states at paragraph 6.65 that:

"The area features some mineral deposits of economic importance, however, no primary extraction occurs in the Borough. The Borough's role is limited to the production of secondary and recycled aggregates, and the importation and transportation of minerals through the Ports of Immingham and Grimsby."

7.25.12 It is considered that the Proposed Development accords with the NPS EN-1, 2011 policy and the NELC local plan for mineral safeguarding as once the Viking CCS Pipeline has been decommissioned it would be possible to undertake mineral extraction from the MSA.

7.26 Noise and Vibration

Requirements of the NPS

- 7.26.1 NPS EN-1, 2011 paragraph 5.11.1 and the draft NPS EN-1, 2023 section 5.12 recognise that noise can have wide-ranging impacts on the quality of human-life, health and use and enjoyment of areas of value, such as quiet places and areas with high landscape quality. NPS-EN-1, 2011 paragraph 5.11.3 details the factors that will determine the likely noise impact, this includes:
 - the inherent operational noise from the Proposed Development and its characteristics;
 - the proximity of the Proposed Development to noise sensitive premises (including residential properties, school and hospitals) and noise sensitive areas;

- the proximity of the Proposed Development to quiet places and other areas that are particularly valued for their acoustic environment or landscape quality; and
- the proximity of the Proposed Development to designated sites where noise may have an adverse impact on protected species or other wildlife.
- 7.26.2 Paragraph 5.11.4 advises the Applicant to undertake a noise assessment which is proportionate to the likely noise impact, this assessment is to include consideration to ancillary activities associated with the proposal such as road traffic movements.
- 7.26.3 The draft NPS EN-4, 2023 sets out the specific considerations which apply to natural gas reception facilities. Section 2.17 reiterates that the ES must include an assessment of noise and vibration effects. Paragraph 2.18.1 provides mitigation measures that applicants should consider within the design of their schemes.

Requirements of Local Policy

7.26.4 Local planning policies set out an expectation for noise impact to be managed, and for new development to ensure that during both construction and operation there is not unacceptable effect on residential and environmental amenity. The Proposed Development compliance with these local plan policies is provided in Appendix D of this document. The relevant policies discussed are NELLP Policy 31: Renewable and Low Carbon Infrastructure; CLLP Policy S53: Design and Amenity; NLCS Policy CS23: Sport, Recreation and Open Space and draft NLLP Policy CSC1: Health and Wellbeing.

Assessment Conclusions

7.26.5 Chapter 13: Noise and Vibration of the ES [EN070008/APP/6.2.13] concludes that with the mitigation measures detailed within the Draft CEMP in Appendix 3-1 of the ES [EN070008/APP/6.2.3.1] in place, there are no significant noise effects either during the construction or operation of the Proposed Development. The assessment assumes that noise effects during the decommissioning phase will be similar to or less than the noise effects during the construction phase and therefore, construction and decommissioning noise effects are considered together.

Appraisal

7.26.6 Chapter 13: Noise and Vibration of the ES [EN070008/APP/6.2.13], assesses the likely significant effects of the Proposed Development on noise and vibration during construction, operation and decommissioning. The scope of the assessment covers, noise associated with construction and decommissioning works, road traffic associated with construction and decommissioning works, and noise associated with operational activities associated with pipeline offtake facilities at Immingham, Block Valve Stations and the Theddlethorpe Facility (Options 1 and 2). The assessment acknowledges that due to the flexibility in design, the specific location of construction may be subject to change and therefore within the assessment the distances have been calculated from the edge of the Order Limits to nearby sensitive receptors, thus presenting a worst case scenario.

- 7.26.7 The assessment identifies that, there are likely to be significant effects on sensitive receptors during construction however, with mitigation measures in place including the use of noise barriers the significance of the effect is successfully reduced.
- 7.26.8 Mitigation methods proposed include; the use of acoustic fencing, which block the line-of sight from high noise generating plant to sensitive receptors, the adoption of a communication strategy which would entail liaison with occupiers of sensitive receptors to enable sharing the detail of timings and duration of high noise generating activity. Consideration has also been given to traffic routing, timing and access points to the Proposed Development to minimise noise impacts at existing receptors, mitigation measures are detailed within the Draft CEMP in Appendix 3-1 of the ES [EN070008/APP/6.4.3.1].
- 7.26.9 In accordance with the NPS EN-1 a noise assessment has been carried out and is reported in Chapter 13: Noise and Vibration of the ES [EN070008/APP/6.2.13]. Mitigation measures specific to the nature of the Proposed Development are included in the Draft CEMP in Appendix 3-1 of the ES [EN070007/APP/6.4.3.1] with these measures in place, no significant adverse effects from noise and vibration impacts are anticipated. As such, significant adverse effects on health and quality of life from noise would not occur and the Proposed Development is considered to comply with the requirements of the NPSs.

7.27 Socio-Economic

Requirements of the NPS

- 7.27.1 Section 5.12 of NPS EN-1, 2011 and section 5.13 of the draft NPS EN-1, 2023 set out the requirements of the assessment of local and regional socio-economic impacts of energy NSIPs. Paragraph 5.12.2 of NPS EN-1, 2011 sets out that where a project is likely to have socio-economic impacts at local or regional levels, the Applicant should undertake an assessment of these impacts.
- 7.27.2 Paragraphs 5.12.4 to 5.12.9 of NPS EN-1, 2011 go on to state that the assessment should describe the existing conditions in the area, consider positive effects and the need for mitigation to address any significant impacts.
- 7.27.3 The socio-economic impact of development is also considered at a local level. Local policies consider that economic needs and wellbeing of the area surrounding should be positively impact a result of the Proposed Development. Policies that are considered relevant include LCC MWLP DM1: Presumption in Favour of Sustainable Development; NELLP Policy 1: Employment Land Supply, Policy 8: Existing employment areas, Policy 11: Skills and training; ELLPCS Policy SP2: Sustainable Development; CLLP Policy S20: Resilient and Adaptable Design; Saved policy LC14: Area of Special Historic Landscape Interest; NLCS CS1: Spatial Strategy for North Lincolnshire, CS2: Delivering More Sustainable Development, CS12: South Humber Bank Strategic Employment Site A Broad Location; draft NLLP Policy SS1: Presumption in Favour of Sustainable Development, Policy EC2:

Existing Employment Areas. The full assessment of the Proposed Development compliance with these local plan policies is provided in Appendix D of this document.

Assessment Conclusions

- 7.27.4 Chapter 16: Socio-Economic of the ES **[EN070008/APP/6.2.16]** assesses the likely significant effects of the Proposed Development for socio-economics during the construction and decommissioning phases. The chapter considers effects on employment (including training and apprenticeship opportunities) and the local economy, users of recreational routes and PRoW, community severance and private assets.
- 7.27.5 During the construction of the Proposed Development there will be employment generated, GVA generation in the local economy; and whilst traversing a number of ProW, the Proposed Development will not result in any PRoW closures during construction. Due to construction traffic there may be instances of community severance and land take may be required from existing business premises at the Humber Refinery and the TGT, also land take may be required from the disused open space at the former Immingham Golf Club. The decommissioning activities are considered to be of smaller magnitude; therefore the socio-economic effects are likely to be less than at construction. As such, it is concluded that there will be no potential significant adverse socio-economic effects during the construction or decommissioning phases of the Proposed Development.

Appraisal

Creation of Jobs and Training Opportunities

- 7.27.6 Chapter 16: Socio-Economics of the ES [EN070008/APP/6.2.16], estimates that the Proposed Development will require an average of 197 gross full-time equivalent (FTE) jobs on-site per day during the construction period. There will also be indirect job creation resulting in the Proposed Development, supporting on average 222 total net jobs per annum during the construction period in total. While these jobs are temporary, they represent a positive economic effect for a substantial period.
- 7.27.7 The Proposed Development will provide training and upskilling opportunities including apprenticeships during the construction phase, these will be detailed within the contractors Skills, Employment and Supply Chain Plan which is a requirement of the CEMP [EN070008/APP/6.4.3.1]. If feasible, the Proposed Development will provide training and upskilling opportunities including apprenticeships during the construction phase.
- 7.27.8 The potential for the creation of training opportunities is considered to be limited, based on the scale of the operational employment generated as a result of the Proposed Development.
- 7.27.9 It is anticipated that decommissioning works will be smaller in magnitude and extent to those required during the construction phase and therefore it is assumed that a third of the construction employment will be required on a temporary basis. It is estimated that the Proposed Development will require an average of 66 gross FTE jobs on site per day over the decommissioning period. Similar to the construction phase there will be indirect job creation

- associated with the decommissioning phase and as such it is anticipated on average the Proposed Development will support 74 jobs FTE during the decommissioning period.
- 7.27.10 There is potential for the creation of training and upskilling opportunities, including apprenticeships, during the decommissioning of the Proposed Development.

Effects on Tourism

- 7.27.11 There are no visitor attractions located within the Order Limits although within the study area the following visitor attractions have been identified:
 - Section 2, there are a number of business premises that offer accommodation and food and beverage premises;
 - Section 3, Bellsby Model Flying Club is located 1 km west of the Order Limits and the Ludborough station of the Lincolnshire Wolds Railway (located approximately 500 m east of the Order Limits;
 - Section 4, Alvingham Fishing Lakes is located adjacent to the Order Limits and Rushmoor Farm Park is located approximately 500 m south of the Order Limits; and
 - Section 5, Haven Golden Sands Holiday Park, Swallow Park, Golden Sands Campsite and Arklow House Farm Camping and Caravan Site. The Seal Sanctuary Wildlife Centre is located approximately 900 m south of the Order Limits.
- 7.27.12 Due to the construction activities required for the installation of the pipeline in Section 3, 4 and 5; the activities associated with the construction compound, and the above-ground infrastructure of the Theddlethorpe Facility and the Dune Isolation Valve there is a potential for noise, vibration, traffic, transport landscape and visual or air quality effects to arise which could impact the amenity of those visitor attractions listed above. Chapter 16: Socio-Economics of the ES [EN070008/APP/6.2.16] assesses these effects to be negligible.

Cumulative Effects

- 7.27.13 All of the short listed projects in the cumulative impact assessment listed in ES Chapter 20: Cumulative Effects Assessment [EN070008/APP/6.2.20] will generate additional construction related employment in the surrounding areas if they were to go ahead. The scale of construction employment cannot be readily quantified as this information required for each scheme is commercially sensitive and not available. Cumulative construction employment in addition to the 222 construction jobs, generated by the Proposed Development represents a temporary minor beneficial effect on the local economy.
- 7.27.14 The overall inter-project cumulative effect from the generation of GVA from construction activities is likely to remain temporary minor beneficial.
- 7.27.15 The overall inter-project cumulative effect on PRoWs has the potential to increase disruption to users via longer journey times or community severance effects. However, as these schemes are unlikely to involve

- disruption to users of the same PRoWs, there will be no additional cumulative impact on users of PRoW.
- 7.27.16 The overall cumulative effect on residential properties, business premises, community facilities, visitor attractions and open space is likely to remain as a negligible effect.

Public Rights of Way

- 7.27.17 Chapter 16: Socio-Economics of the ES [EN070008/APP/6.2.16] acknowledges that no recreational routes or PRoW will be permanently diverted during the construction phase of the Proposed Development. Any temporary diversions as shown on the Public Access and Rights of Way Plan [EN070008/APP/4.20] will be reinstated to the original route on the completion of the construction works. This disruption will be avoided as much as possible and suitable diversions or temporary closures will be agreed with the relevant Local Authority in advance. An Outline PRoW Management Plan [EN070008/APP/6.11] has been included in the DCO application.
- 7.27.18 Chapter 16: Socio-Economics of the ES **[EN070008/APP/6.2.16]** states that on the basis that the pipeline is anticipated to be left in-situ, no land take would be required such that PRoW would be temporarily or permanently diverted or closed. Therefore, there will be no effect on community severance resulting from disruptions to users of PRoW during the decommissioning phase.

Community Severance

- 7.27.19 The construction of the Proposed Development will require land for construction compounds, the installation of the pipeline, the construction of Block Valve Stations, Dune Isolation Valve and facilities at Immingham and Theddlethorpe. These activities have the potential to lead to temporary severance of access to community facilities for residents. However, Chapter 12: Traffic and Transport of the ES [EN070008/APP/6.2.12] finds that there will be no significant effects on severance across the entire Proposed Development with the exception of the road link at Thacker Bank.
- 7.27.20 There will be no impact during operation to community severance and development land. The pipeline will be buried and will have no effects on private assets once operational.
- 7.27.21 The decommissioning of the Proposed Development may require land take for the removal of the Block Valve Stations and the facilities at Immingham and Theddlethorpe and potentially for minor works on the pipeline. These activities will introduce traffic to the local road network, which has the potential to lead to a temporary severance of access to community facilities. Chapter 12: Traffic and Transport of the ES [EN070008/APP/6.2.12] anticipates that the decommissioning phase will have a similar impact to the construction phase and sets out that appropriate Construction Traffic Management Plan CTMP will be prepared to cover this phase at an appropriate time.
- 7.27.22 In summary, the Proposed Development results in beneficial socio-economic effects because of the employment created during construction and decommissioning phases. Further, it is anticipated that no permanent

closures of PRoW will be required as a result of construction activities the contractor will be responsible for developing a PRoW Management Plan (as a requirement of the Draft CEMP [EN070008/APP/6.4.3.1].) in order to reduce the adverse impacts of potential temporary PRoW closures/diversions. Some community severance may occur as a result of construction traffic, though this will be a temporary effect and considered not significant.

- 7.27.23 Mitigation measures specific to the nature of the Proposed Development are included in the Draft CEMP at ES Appendix 3-1 [EN070008/APP/6.4.3.1]. It is concluded that when mitigation measures are implemented there would be no potential significant adverse effects during the construction or decommissioning of the Proposed Development in relation to socio economics. The mitigation measures will be adopted during the preconstruction phase and comprise:
 - A Skills, Employment and Supply Chain Plan to be prepared by the principal contractor in liaison with the four Local Authorities, to identify measures by which the potential economic benefits of the Proposed Development for local people and businesses might be maximised.
 - The PRoW Management Plan [EN070008/APP/6.11] will be further developed by the principal contractor which aims to reduce the adverse impacts of potential temporary PRoW closures/diversions and ensure the safety of users of PRoW during the construction works.
 - The Proposed Development is therefore considered to comply with the requirements of the national and local planning policy objectives.

7.27 Traffic and Transport

Requirements of the NPS

- 7.27.1 Section 5.13 of NPS EN-1, 2011 and section 5.14 of draft NPS EN-1, 2023 outline the requirements for considering the potential transport and traffic related impacts of NSIPs. Paragraph 5.13.1 states that the transport of materials, goods and personnel to and from a development during all phases can have a variety of impacts on the surrounding transport infrastructure. Paragraphs 5.13.2 of NPS EN-1, 2011 and 5.14.2 of draft NPS EN-1, 2023 explain that the consideration and mitigation of transport impacts are;
 - 'an essential part of Government's wider policy objectives for sustainable development.'
- 7.27.2 With regards to decision making, Paragraph 5.13.6 of NPS EN-1,2011 and paragraph 5.14.18 of draft NPS EN-1, 2023 state that:
 - 'A new energy NSIP may give rise to substantial impacts on the surrounding transport infrastructure and the Secretary of State should therefore ensure that the applicant has sought to mitigate these impacts, including during the construction phase of the development and by enhancing active, public and shared transport provision and accessibility'.

Requirements of Local Policy

7.27.3 Local policy sets out that development should be designed to ensure there are no negative impacts on traffic congestion and can be accessed by all users. Relevant policies include NELLP Policy 22: Good Design in New Developments, Policy 36: Promoting Sustainable Transport, Policy 37: Safeguarding Transport Infrastructure; saved NLLC policies T1: Location of Development, and T2 Access to Development; NLCS CS2: Delivering More Sustainable Development, CS25: Promoting Sustainable Transport; draft NLLP Policy DQE7: Climate Change and Low Carbon Living. The full assessment of the Proposed Development compliance with these local plan policies is provided in Appendix D of this document.

Assessment Conclusions

- 7.27.4 Chapter 12: Traffic and Transport of the ES [EN070008/APP/6.2.12] presents the assessment of the likely significant effects of the Proposed Development on traffic and transport during the construction phase. Once operational, any traffic generated will be minimal and so operational traffic has not been included within the assessment. It is not possible to accurately predict the decommissioning traffic numbers or predict the future baseline conditions during the decommissioning phase, likely decommissioning effects have not been included in the assessment either. It is assumed that any impact at decommissioning is likely to be lower than the impacts experienced at the construction phase.
- 7.27.5 The traffic and transport assessment concludes that, significant effects during construction are anticipated on 5 construction routes. The assessment within Chapter 12 Traffic and Transport of the ES [EN070008/APP/6.2.12] considers that further mitigation measures that will be adopted by the contractor to reduce traffic levels and this may include the contractor's Construction Travel Management Plan.

Appraisal

- 7.27.6 In accordance with Paragraph 5.13.1 to 5.13.3 of NPS EN-1, 2011 and 5.14.2 of draft NPS EN-1, 2023 a Transport Assessment is included in Appendix 12-4 of the ES [EN070008/APP/6.4.12.4]. This considers the potential traffic impacts at the Proposed Development and in the surrounding area during construction and operation Given the nature of the Proposed Development, construction traffic will comprise construction vehicles and workers travelling to each of the access points onto the pipeline; and Pipeline deliveries from the port of Immingham to the three compounds.
- 7.27.7 Construction activities related to the Proposed Development will result in traffic changes on the roads around the Order Limits. As such, mitigation measures have been identified and adopted as part of the evolution of the Proposed Development's design in accordance with Paragraph 5.13.6 of NPS EN-1,2011 and paragraph 5.14.18 of draft NPS EN-1. These embedded mitigation measures comprise:
 - The routes proposed for construction traffic, which have been considered to reduce both the number of routes affected and to remove more sensitive routes where possible.

- All access points that require the creation of a junction bellmouth will be designed based on the relevant standard from Development Manual Roads and Bridges and in consultation with the relevant Local Highway Authority which negates any potential safety impact associated with construction activity.
- 7.27.8 Two links, Thacker Bank and Yarburgh Road, have been identified as resulting in traffic change that is considered significant, albeit temporary. Further mitigation measures have been proposed within the Draft Construction Traffic Management Plan (CTMP) in Appendix 12-5 of the ES [EN070008/APP/6.4.12.5] which will be secured by requirement 6 of the Order [EN070008/APP/2.1] and the Construction Workers Travel Plan (CWTP) which is a requirement of the Draft CEMP. These seek to mitigate the adverse effects through the implementation of mitigation measures comprising; the implementation of a travel plan to encourage car sharing, public transport use and active travel modes by construction workers; agreeing vehicle routing plans in consultation with the Local Highways Authority, safe access and egress to construction compounds and, a construction logistics plan will be produced to manage the sustainable delivery of goods and materials.
- 7.27.9 Chapter 12 Traffic and Transport of the ES [EN070008/APP/6.2.12] also considers the likely effect on traffic and transport caused by the cumulative impact of other committed developments in the area. The Chapter concludes that there are a small number of other developments which have an overlapping construction period, these are mostly located within Section 1 of the Proposed Development, within the Immingham area.
- 7.27.10 In keeping with Paragraph 5.13.6 of NPS EN-1, 2011 and paragraph 5.14.18 of draft NPS EN-1 and local planning policy various mitigation measures are included to reduce the impact of the construction phase on the local highway network as far as possible. While residual significant adverse effects are anticipated along 5 construction routes, it is anticipated that with the implementation of mitigation such as a Construction Traffic Management Plan will be sufficient to reduce the impact for these routes to operate to an acceptable level.

7.28 Waste Management

Requirements of the NPS

7.28.1 Paragraphs 5.14.1 and 5.15.2 of NPS EN-1, 2011 clarifies that the Governments policy on hazardous and non-hazardous waste is intended to protect human health and the environment by producing less waste and by using it as a resource wherever possible. Where this is not possible, waste management regulations ensure that waste is to be disposed of in a way that is least damaging to the environment and to human health. Paragraph 5.14.2 of NPS EN-1, 2011 and 5.15.2 of NPS EN-1, 2023 state that;

'Sustainable waste management is implemented through the waste hierarchy which sets out the priorities that must be applied when managing waste:

Prevention

- Preparing for reuse
- Recycling
- Other recovery, including energy recovery and
- Disposal'.
- 7.28.2 Paragraph 5.15.6 of NPS EN-1, 2011 goes on to state that:

"an applicant should set out the arrangements that are proposed for managing any waste produced and prepare a Site Waste Management Plan...The applicant should seek to minimise the volume of waste produced and the volume of waste sent for disposal unless it can be demonstrated that this is the best overall environmental outcome."

7.28.3 Paragraph 5.14.4 of the NPS EN-1, 2011 and similarly NPS EN-1, 2023 describe that:

'All large infrastructure projects are likely to generate hazardous and nonhazardous waste. The EA's Environmental Permitting (EP) regime incorporates operational waste management requirements for certain activities. When an applicant applies to the EA for an Environmental Permit, the EA will require the application to demonstrate that processes are in place to meet all relevant EP requirements'.

7.28.4 Paragraph 5.14.7 of NPS EN-1, 2011 and paragraphs 5.15.14 and 5.15.15 of NPS EN-1, 2023 outline that during decision making consideration should be given to the extent the applicant has proposed an effective system for managing hazardous and non-hazardous waste from the construction and operation stages to make sure that waste will be properly managed and dealt with at appropriate waste infrastructure sites. Paragraph 5.14.7 also required adequate steps to be taken to minimise the volume of waste arisings and volume sent for disposal.

Requirements of Local Policy

7.28.5 Local plan policy considers the reduction of waste during the lifetime of a development, including reducing energy waste and providing opportunities to dispose of waste, where relevant, during construction and operation of a development. Relevant policies include Policy 32: Energy and Low Carbon living, NLCS Policy CS18: Sustainable Resource Use and Climate Change and CLLP Policy S53: Design and Amenity. In addition to this local policy considers the management and minerals and waste sites, relevant policies include NELLP Policy 45: Future Mineral Extraction and Secondary Aggregates, NLCS CS20: Sustainable Waste Management, and draft NLLP Policy WAS1: Waste Management Facilities The full assessment of the Proposed Development compliance with these local plan policies is provided in Appendix D of this document.

Assessment conclusions

7.28.6 Chapter 18: Materials and Waste of the ES **[EN070008/APP/6.2.18]** concludes that there are no significant effects anticipated in relation to materials and waste during the construction of the Proposed Development.

- The assessment considers the worst case scenario for waste arising during the construction phase.
- 7.28.7 The assessment outlines that during construction, a large proportion of non-hazardous and inert waste from the Proposed Development is likely to be recovered rather than disposed of to landfill, reducing the overall quantities of waste for disposal. The waste recovery target for the Proposed Development is: at least 90% (by weight) recovery of non-hazardous construction and demolition waste. Based on this the construction of the Proposed Development is likely to result in a less than 1% reduction in landfill capacity. The assessment also considers the worst case scenario for the disposal of hazardous waste generated during the construction phase.
- 7.28.8 The Proposed Development has been designed to achieve a cut-fill balance, however a slight imbalance could result in approximately 2,200 m3 of excess excavated material being available. A worst-case scenario where all waste is disposed of to landfill has been applied. This equates to between 0.002% of the inert and non-hazardous landfill capacity within the waste management study area (East Midlands and Yorkshire and the Humber).
- 7.28.9 Mitigation measures will be embedded within the CEMP to manage waste arisings in accordance with the waste hierarchy. The Draft CEMP [EN070008/APP/6.4.3.1] sets out mitigation measures such as: segregating waste, using surplus inert excavated materials in land reclamation projects and provide suitable areas and storage for waste to prevent waste from deteriorating before they are reused or recycled. Targets for recycling are set out and secured in the Draft CEMP [EN070008/APP/6.4.3.1], this includes a target for at least 90% (by weight) recovery of non-hazardous C&D waste. This is above the 70% national target set out in the Waste Framework Directive and in line with Institute of Environmental Management and Assessment (IEMA) good practice.
- 7.28.10 Similarly, the Draft CEMP [EN070008/APP/6.4.3.1] includes a target of at least 25% (by weight) of materials imported to site for use within the Proposed Development will comprise alternative (reused, recycled or secondary) content. This shows the applicants commitment to minimising waste, managing waste in accordance with the waste hierarchy and making use of sustainable materials.

Appraisal

- 7.28.11 Chapter 18: Materials and Waste of the ES [EN070008/APP/6.2.18] provides the assessment of the likely significant environmental effects of the Proposed Development on Materials and Waste during the construction phase of the Proposed Development. The chapter presents the key mitigation measures that will be adopted during the construction phase in accordance with IEMA Guidance.
- 7.28.12 In keeping with paragraphs 5.14.1 and 5.15.2 of NPS EN-1, 2011 the construction of the proposed development will be carried out to minimise waste and where possible make use of waste as a resource either within the Proposed Development or other projects in keeping with the waste hierarchy set out in NPS EN-1, 2011 paragraph 5.14.2 which aims to prioritise waste

- prevention followed by preparing for re-use, recycling and recovery and lastly disposal to landfill.
- 7.28.13 Accordingly, the Proposed Development will aim to prioritise waste prevention, followed by preparing for re-use, recycling and recovery and lastly disposal to landfill.
- 7.28.14 Chapter 18: Materials and Waste [EN070008/APP/6.2.18] sets out arrangements for managing waste and also includes additional mitigation in the Draft CEMP [EN070008/APP/6.4.3.1] in accordance with the aim of paragraphs 5.14.7 of NPS EN-1, 2011 and paragraphs 5.15.14 and 5.15.15 of NPS EN-1, 2023.
- 7.28.15 Chapter 18: Materials and Waste [EN070008/APP/6.2.18] concludes that there are no significant effects anticipated in relation to materials and waste during the construction of the Proposed Development. It is considered that the Proposed Development complies with the policies set out in 5.14 of NPS EN-1, 2011 and 5.15 of NPS EN-1, 2023 for sustainable waste management during the construction of the Proposed Development.

7.29 Water Quality and Resources

Requirements of the NPS

- 7.29.1 Section 5.15 of NPS EN-1, 2011 and section 5.16 of draft NPS EN-1, 2023 consider Water Quality and Resources. Paragraph 5.15.2 of NPS EN-1, 2011 sets out that where a project is likely to have effects on the water environment the Applicant should undertake an assessment of the existing status of, and impacts of the proposed project on water quality, water resources and physical characteristics of the water environment.
- 7.29.2 Paragraph 5.15.5 outlines that the SoS will generally need to give impacts on the water environment more weight where a project would have an adverse effect on the achievement of the environmental objectives established under the Water Framework Directive (WFD). A WFD Assessment is included in Appendix 11-4 of the ES [EN070008/APP/6.4.11.4], which considers the potential effect of the Proposed Development on the WFD classifications of waterbodies within the study area.
- 7.29.3 In decision making, draft NPS EN-1, 2023 sets out that activities that discharge to the water environment are subject to pollution control. These considerations will also apply in an analogous way to the abstraction licensing regime regulating activities that take water from the water environment, and to the control regimes relating to works to, and structures in, on, or under controlled waters. Further the SoS will need to give impact on the water environment more weight where a project would have an adverse effect on the achievement of the environmental objectives established under the Water Environment Regulations, 2017. The SoS must also consider duties under other legislation including duties under the Environment Act 2021 in relation to environmental targets and have regard to the policies set out in the Government's Environmental Improvement Plan. The SoS should satisfy itself that a proposal has had regard to the River Basin Management Plans and meets the requirements of the Water

Framework Directive including those on priority substances and groundwater. The Secretary of State must refuse development consent where a project is likely to cause deterioration of a water body or its failure to achieve good status or good potential. Mitigation is considered in paragraph 5.15.7 of NSP EN-1, 2011 and states that the SoS should consider whether appropriate requirements should be attached to any development consent and/or planning obligations entered into to mitigate adverse effects on the water environment.

Requirements of Local Policy

7.29.4 Local planning policies further consider the regard to water quality that new development should give. Relevant policies include NELLP Policy 34: Water Management, Policy 45: Future mineral extraction and Secondary Aggregates; ELLPCS Policy SP10: Design, SP16: Inland Flood Risk, SP27: Renewable and Low Carbon Energy; CLLP Policy S21: Flood Risk and Water Resources; saved policies DS13: Groundwater Protection and Land Drainage, Policy DS14: Foul Sewage and Surface Water Drainage, Policy DS15: Water Resources of the NLLP.; NLCS CS2: Delivering More Sustainable Development, CS18: Sustainable Resource Use and Climate Change, CS19: Flood Risk; draft NLLP Policy DQE5: Managing Flood Risk, and Policy DQE6: Sustainable Drainage Systems. The full assessment of the Proposed Development compliance with these local plan policies is provided in Appendix D of this document.

Assessment conclusions

- 7.29.5 Chapter 11: Water Environment of the ES [EN070008/APP/6.2.11] and its relevant appendices report the likely significant effects of the Proposed Development on the surface water environment during construction, operation and decommissioning. The chapter is supported appendices which provide baseline information and additional assessments on specific matters, this includes:
 - Appendix 11-1: Water Environment Baseline Supporting Information;
 - Appendix 11-2: Site Visit Technical Note;
 - Appendix 11-3: Drainage Strategy;
 - Appendix 11-4: Water Framework Directive Assessment;
 - Appendix 11-5: Flood Risk Assessment; and
 - Appendix 11-6: Outline Water Management Plan.
- 7.29.6 Chapter 11: Water Environment of the ES [EN070008/APP/6.2.11] details the main potential impacts relating to the water environment during construction and operation. The main potential impacts that could occur during construction include:
 - increased surface water runoff and changes to existing runoff rates through increases in impermeable areas.
 - temporary impacts to local hydromorphology due to watercourse crossings (open cut pipeline crossing and temporary haul roads)

- impacts to water quality from the mobilisation of fine sediment to water features effecting water quality through run off or scour,
- mobilisation of oils, cement or other chemicals effecting water quality,
- changes to the existing flow regime of watercourses as a result of crossings; and
- potential increase in flood risk elsewhere due to available compensatory floodplain storage is being displaced.
- 7.29.7 The main potential impacts relating to operation include increased surface water run off through increases in impermeable areas.
- 7.29.8 The Water Environment assessment reported in Chapter 11 of the ES concludes that with the incorporation of embedded design mitigation and additional mitigation, the significance of residual effects for the Proposed Development on the water environment are defined as minor adverse to negligible and therefore not considered to be significant.

Appraisal

- 7.29.9 In accordance with NPS EN-1, 2011 Chapter 11: Water Environment of the ES [EN070008/APP/6.2.11] is supported by Appendix 11-1 Water Environment Baseline Supporting Information [EN070008/APP/6.4.11.1] within which the results for the last five years from the EA Water Quality Archive are presented. The ES acknowledges that there has been a general improvement in water quality and the environmental health of waterways in the UK since investment in sewage treatment in the 1990s, the adoption of the WFD from 2003 and the implementation of the Environment Act 2021. Chapter 11: Water Environment of the ES is also supported by the water quality monitoring programme detailed in the Outline Water Management Plan in ES Appendix 11-6 [EN070008/APP/6.4.11.6].
- 7.29.10 At a regional level, water management is coordinated in England through eight River Basin Management Plans (RBMPs). RBMPs are prepared by the EA for six-year cycles and set out how organisations, stakeholders and communities will work together to improve the water environment. Their review and update of the current RBMPs is underway. The consultation of the draft RBMPs ran from 22 October 2021 to 22 April 2022. The most recent plans were updated in 2022 (the third cycle) and will remain in place until 2027. The water features within the study area fall under the Louth Grimsby and Ancholme Management Catchment within the Humber River Basin district and Witham Management Catchment within the Anglian River Basin district. The ES reviews the current overall and ecological status of the WFD surface waterbodies within the study area according to the current River Basin Management Plan.
- 7.29.11 In accordance with paragraph 5.15.2 of NPS EN-1, 2011, a WFD assessment is included within Appendix 11-4 of ES Chapter 11 [EN070008/APP/6.4.11.4]. This assessment has considered the existing status of and the potential impacts and associated mitigation of the Proposed Development in relation to the WFD quality elements of the following surface and groundwater water bodies.

- 7.29.12 Mitigation measures to be implemented prior to construction works commencing are detailed within Appendix 11-4 of ES Chapter 11 [EN070008/APP/6.4.11.4] to ensure that there is no deterioration of water quality in relation to sensitive watercourses, water quality monitoring as detailed within the outline water management plan (contained within ES Appendix 11.6) will be undertaken pre, during and post construction to ensure good practices are being followed and to identify any potential impacts to surface water features.
- 7.29.13 The assessment included within Appendix 11-4 of ES Chapter 11 [EN070008/APP/6.4.11.4] demonstrates that the Proposed Development is compliant with the objectives of the WFD in that it would not cause deterioration in status of the water bodies and would not prevent the water bodies achieving Good Ecological Status and Good Ecological Potential.
- 7.29.14 In accordance with paragraph 5.15.6 of draft NPS EN-1, 2023 the applicant has demonstrated that the Proposed Development meets the requirements of the Water Framework Directive and associated directives as detailed within Appendix 11-4 of ES Chapter 11 [EN070008/APP/6.4.11.4]. The effects of the Proposed Development would be suitably mitigated and would not result in adverse effect on the achievement of the objectives of a WFD watercourse. It is considered that the Proposed Development accords with the objectives of the NPS EN-1 in respect of water quality and the Water Framework Directive.

7.30 Greenhouse Gas Emissions

Requirements of the NPS

- 7.30.1 Section 5.3 of the draft NPS EN-1, 2023 discusses Greenhouse Gas Emissions as a standalone generic impact of energy NSIPs. Whilst primarily aimed at energy generating development, some elements of Section 5.3 are relevant in the consideration of the Proposed Development. Paragraph 5.3.1 of draft NPS EN-1, 2023 states that,
 - 'Significant levels of energy infrastructure development are vital to ensure the decarbonisation of the UK economy. The construction, operation and decommissioning of that energy infrastructure will in itself, lead to GHG emissions.'
- 7.30.2 Paragraph 5.3.4 requires all proposals for energy infrastructure projects to include a GHG Assessment within their ES.
- 7.30.3 Draft NPS EN-1, 2023 requires the Applicant to assess the GHG emissions of all stages of the development and takes steps to reduce the GHG emissions during the construction and decommissioning stage of the development. the NPS acknowledges that, in light of the vital role energy infrastructure plays in the process of economy wide decarbonisation, the SoS must accept that there are likely to be some residual emissions from construction and decommissioning of energy infrastructure, also operational GHG emissions are a significant adverse impact from some types of energy infrastructure which cannot be totally avoided. Government has determined that operational GHG emissions are not reasons to prohibit the consenting of energy projects or to impose more restrictions on them.

Requirements of Local Policy

7.30.4 Local policy considers that new developments should not increase greenhouse gases and should take opportunities to reduce greenhouse gas emissions where possible, relevant policies include Policy S11: Embodied Carbon, CLLP Policy S16: Wider Energy Infrastructure, NLCS CS18: Sustainable Resource Use and Climate Change, draft NLLP Policy DQE7: Climate Change and Low Carbon Living. The full assessment of the Proposed Development compliance with these local plan policies is provided in Appendix D of this document.

Assessment conclusions

7.30.5 Chapter 15: Climate Change of the ES **[EN070008/APP/6.2.15]** concludes that the construction, operation and decommissioning of the Proposed Development would not result in significant effects relating to GHG emissions.

Appraisal

- 7.30.6 Chapter 15: Climate Change of the ES [EN070008/APP/6.2.15] presents an assessment of the likely significant effects of the Proposed Development on the climate and the impact of climate change on the Proposed Development and surrounding environment during construction, operation and decommissioning. Chapter 15 includes a GHG Assessment and Climate Change Resilience (CCR) assessment in accordance with paragraph 5.3.4 of NPS EN-1, 2023.
- 7.30.7 The Draft CEMP [EN070008/APP/6.4.3.1] incorporates proposed mitigation measures to reduce the GHG emissions impact of the Proposed Development. The mitigation measures presented within the Draft CEMP [EN070008/APP/6.4.3.1] will be secured through requirement 5 of the DCO [EN070008/APP/2.1.] which requires the submission of the Draft CEMP to the local planning authority for approval prior to commencement of development. The mitigation measures are also listed within Chapter 15 of the ES Climate Change of the ES [EN070008/APP/6.2.15].
- 7.30.8 The GHG Assessment identifies that;
 - GHG emissions from the Proposed Development during the construction phase are calculated to be around 84,279 tCO2e with a large majority of construction emissions being associated with the embodied carbon of materials;
 - The lifetime operational GHG emissions from the Proposed Development within the Order Limits are calculated to be approximately 2,514 tCO2e with 100% of operational emissions associated with electricity usage onsite; and
 - During the decommissioning phase the total GHG emissions from the Proposed Development are calculated to be approximately 91 tCO2e with the majority (60%) of emissions associated with the transport of waste material from the Proposed Development site.

- 7.30.9 The Proposed Development will have a wider benefit of providing the pipeline to transport CO₂ as part of the wider Viking CCS Project, abating carbon emissions from industry in the Immingham Industrial Area resulting in a significant reduction in carbon emissions that will outweigh any direct emissions form the construction, operation and decommissioning of the Proposed Development resulting in a beneficial effect that is significant.
- 7.30.10 It is considered that the Proposed Development complies with the policy requirements in section 5.3 of draft NPS EN-1, 2023.

7.31 Summary

- 7.31.1 Where it has been necessary to apply the planning balance, this has been set out in each topic specific section of Chapter 7 in this PDAS. Planning balance has been based on the benefits of the Proposed Development as set out in chapter 5 of this document, the ES [EN070008/APP/6.2] and Needs Case [EN070008/APP/7.3] and whether they are sufficient to outweigh the potential significant adverse effects arising from the Proposed Development.
- 7.31.2 The Applicant has set out the matters they consider to be both important and relevant to the decision making for the Application and which should be considered under section 105(2)(c) of the Planning Act 2008. The Proposed Development has been influenced through consultation with local planning authorities, key stakeholders and the community. This engagement has shaped the design of the Proposed Development including careful site selection, the preferred route for the pipeline and location for above ground installations resulting in an Application that has few adverse impacts and will provide beneficial impacts.
- 7.31.3 As described within the PDAS, where likely adverse effects have been identified, a sensitive, flexible design approach and detailed mitigation measures have been included in the design of the Proposed Development to reduce the significance of adverse impacts.
- 7.31.4 As outlined within this Chapter, the Proposed Development is considered to be compliant with current National Policy Statements EN-1, and EN-4, 2011 and draft National Policy Statements EN-1 and EN-4, 2023.
- 7.31.5 The Proposed Development is also considered to be broadly consistent with relevant local planning policy objectives.

8. Conclusion

8.1 Section 105(2) of the Planning Act 2008

- 8.1.1 As discussed within this document, section 105(2) of the PA 2008 states that in deciding the application the Secretary of State must have regard to:
 - a) any local impact report (within the meaning given by section 60(3)) submitted to the Secretary of State before the deadline specified in a notice under section 60(2),
 - b) any matters prescribed in relation to development of the description to which the application relates, and
 - c) any other matters which the Secretary of State thinks are both important and relevant to the Secretary of State's decision.
- 8.1.2 Whilst local impact reports have not yet been prepared by the Local Authorities, within the appraisal presented in Chapter 7 above and within Appendix D of this document, it is considered that the Proposed Development is in accordance with local plan policy.
- 8.1.3 In terms of prescribed matters, it has been demonstrated that a decision to grant consent would be appropriate having regard to the matters prescribed by Regulation 3 and Regulation 7 of the Infrastructure Planning (Decisions) Regulations, 2010; and in accordance with Regulation 6 (4) of the APFP Regulations.
- 8.1.4 In terms of other matters, whilst NPSs may not have direct effect in relation to schemes determined under section 105, the matters and objectives within those NPSs and considered important and relevant in the consideration of determining such applications. Accordingly, the Proposed Development has been assessed against NPS EN-1, 2011 and NPS EN-4, 2011 and the draft NPS EN-1 and NPS EN-4, 2023. These NPSs support the urgent need for new CCS infrastructure, which weigh in favour of the grant of consent.

8.2 Conclusion

- 8.2.1 The Proposed Development presented within this Application is a well-considered scheme that has evolved following feedback gained through the consultation process and through the EIA process. As such, through the incorporation of mitigation measures, the identified likely significant effects of the Proposed Development have been minimised where possible.
- 8.2.2 This PDAS demonstrates in Chapter 5 the substantial benefits of the Proposed Development, in response to the urgent need for new CCS infrastructure, to enable the contribution to climate change policy objectives and the Government's legally binding target of achieving Net Zero by 2050. The Proposed Development may draw industry to the region as it will provide a route to decarbonise industry and energy generation. It will also provide employment generation and benefits to the local economy. In contrast, the likely significant adverse effects of the Proposed Development are limited in scale and local in nature. It is considered that these effects are significantly outweighed by the very substantial benefits.

8.2.3 Given the urgent need to provide CCS technologies, the clear benefits delivered, and the limited adverse effects caused by the Proposed Development, there is a compelling case for the granting of the DCO.

9. References

- Ref 1. Planning Act 2008 (as amended). The Stationery Office Limited (2008).
- Ref 2. Harbour Energy (2023). Viking CCS
- Ref 3. The Stationery Office (2017). Infrastructure Planning (Environmental Impact Assessment) Regulations 2017.
- Ref 4. The Stationery Office (2010). The Infrastructure Planning (Decisions) Regulations 2010.
- Ref 5. The Stationery Office (2009). Infrastructure Planning (Applications: Prescribed Forms and Procedure) Regulations 2009
- Ref 6. The Stationery Office (2017). The Conservation of Habitats and Species Regulations 2017.
- Ref 7. Department of Energy and Climate Change (2011). Overarching National Policy Statement for Energy (EN-1).
- Ref 8. Department of Energy and Climate Change (2011). National Policy Statement for Gas Supply Infrastructure and Gas and Oil Pipelines.
- Ref 9. Department for Energy Security and Net Zero (2023). Draft Overarching National Policy Statement for Energy (EN-1)
- Ref 10.Department for Energy Security and Net Zero (2023). Draft National Policy Statement for Gas Supply Infrastructure and Gas and Oil Pipelines.
- Ref 11.Department for Levelling Up, Housing and Communities (2023). National Planning Policy Framework
- Ref 12.Department for Levelling Up, Housing and Communities (2016). Planning Practice Guidance.
- Ref 13a. North Lincolnshire Council (2011). The North Lincolnshire Local Development Framework.
- Ref 13b. North Lincolnshire Council (2002). The North Lincolnshire Local Plan Saved Policies.
- Ref 14. North Lincolnshire Council (2003). The North Lincolnshire Local Plan.
- Ref 15. North East Lincolnshire Council (2018). The Local Plan.
- Ref 16. North Kesteven District Council (2023). Adopted Central Lincolnshire Local Plan
- Ref 17. East Lindsey District Council (2018). Adopted Local Plan 2018.
- Ref 18. Lincolnshire County Council (2016). Lincolnshire Minerals and Waste Local Plan Core Strategy and Development Management Policies.
- Ref 19. Lincolnshire County Council (2017). Lincolnshire Minerals and Waste Local Plan Site Locations.

- Ref 20. The Stationery Office (2008). Climate Change Act 2008.
- Ref 21. HM Treasury (2020). National Infrastructure Strategy.
- Ref 22. HM Government (2020). The Ten Point Plan for a Green Industrial Revolution.
- Ref 23. Department for Business, Energy & Industrial Strategy (2022). Energy White Paper: Powering our net zero future.
- Ref 24. Department for Business, Energy & Industrial Strategy (2022). British Energy Security Strategy.
- Ref 25. Department for Business, Energy & Industrial Strategy (2021). Net Zero Strategy: Build Back Greener.
- Ref 26. Department for Business, Energy & Industrial Strategy (2021). CCUS Supply Chains: a roadmap to maximise the UK's potential.
- Ref 27. Department for Energy Security and Net Zero (2023). Cluster sequencing for carbon capture (CCUS): Track-2.
- Ref 28. Lincolnshire County Council (2019). Carbon Management Plan.
- Ref 29. North East Lincolnshire Council (2021). Net Zero Carbon Roadmap.
- Ref 30. East Lindsey District Council (2020). Carbon Reduction Plan.
- Ref 31.West Lindsey District Council (2021). Sustainability, Climate Change and Environment Strategy.
- Ref 32. West Lindsey District Council (2021). Carbon Management Plan 2021-2026.
- Ref 33. North Lincolnshire Council (2022). The Humber Vision 2030.

Appendices

Appendix A – Glossary

Acronym o	
Abbreviatio	n
10 lo	Above Ground Installations
AGIS	
AGLV	Area of Great Landscape Value
ALC	Agricultural Land Classification
AONB	Area of Outstanding Natural Beauty
APFP Regs	The Infrastructure Planning (Applications: Prescribed Forms and
40444	Procedure) Regulations 2009.
AQMA	Air Quality Management Areas
BECCS	Bioenergy with Carbon Capture and Storage
BESS	British Energy Security Strategy
BEIS	Department for Business, Energy and Industrial Strategy
BMV	Best and Most Versatile
BNG	Biodiversity Net Gain
CCC	Climate Change Committee
CCR	Climate Change Resilience
CCS	Carbon Capture and Storage
CCUS	Carbon Capture Utilisation and Storage
CEMP	Construction Environmental Management Plan
CLJSPC	Central Lincolnshire Joint Strategic Planning Committee
CLLP	Central Lincolnshire Local Plan
CMP	Carbon Management Plan
CO ₂	Carbon Dioxide
DAS	Design and Access Statement
DCO	Development Consent Order
DESNZ	Department for Energy Security and Net Zero
EIA	Environmental Impact Assessment
ELDC	East Lindsey District Council
ELLP	East Lindsey Local Plan
ExA	Examining Authority
NPS EN-1	Overarching National Policy Statement for Energy
	National Policy Statement for Natural Gas Supply Infrastructure and
	Gas and Oil Pipelines
ES	Environmental Statement
ESDV	Emergency Shutdown Valve
EWP	Energy White Paper
ExA	Examining Authority
FEED	Front End Engineering and Design
FRA	Flood Risk Assessment
GHG	Greenhouse Gas
GIS	Geographic Information System
GW	GigaWatt
Ha	Hectares
HERs	Historic Environment Records
HIPPS	High-integrity Pressure Protection System
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HLCP	Humber Low Carbon Pipeline	
HRA	Habitats Regulations Assessment	
HSC	Hazardous Substances Consent	
IERRT	Immingham Eastern Ro-Ro Terminal	
IGET	Immingham Green Energy Terminal	
IPCC	Intergovernmental Panel on Climate Change	
IPDR	Infrastructure Planning (Decisions) Regulations	
LCC	Lincolnshire County Council	
LER	Local Equipment Room	
LNR	Local Nature Reserve	
LOAEL	Lowest Observable Adverse Effect Level	
LOGGS	Lincolnshire Offshore Gas Gathering Systems	
LPA	Local Planning Authority	
LWS	Local Wildlife Site	
LWT	Local Wildlife Trust	
MEP	Marine Energy Park	
MLWS	Mean Low Water Spring	
MSA	Mineral Safeguarding Area	
MSS	Mineral Safeguarding Site	
MTPA	Million Tonnes Per Annum	
MW	Megawatts	
NCN	National Cycle Network	
NELC	North East Lincolnshire Council	
NELLP	North East Lincolnshire Local Plan	
NLC	North Lincolnshire Council	
NLCS	North Lincolnshire Core Strategy	
NNR	National Nature Reserve	
NPPF	National Planning Policy Framework	
NPS	National Policy Statement	
NSIP	Nationally Significant Infrastructure Project	
NZS	Net Zero Strategy	
OCGT	Open Cycle Gas Turbine	
PA 2008	Planning Act 2008	
PDAS	Planning Design and Access Statement	
PEIR	Preliminary Environmental Information Report	
PLA	Pipelines Act	
PPG	Planning Practice Guidance	
PRoW	Public Rights of Way	
RNR	Roadside Nature Reserve	
SAC	Special Area of Conservation	
SNCI	Sites of Nature Conservation Interest	
SOAEL	Significant Observed Adverse Effect Levels	
SoS	Secretary of State	
SPA	Special Protection Area	
SSSI	Site of Special Scientific Interest	
TCE	The Crown Estate	
TGT	Theddlethorpe Gas Terminal	
UK	United Kingdom	

UXO	Unexploded Ordnance
VCR	Virtual Consultation Room
VPI	Vitol Power International
WFD	Water Framework Directive
WFDa	Water Framework Directive Assessment
WLDC	West Lindsey District Council
WMP	Water Management Plan

Appendix B – Planning History

The planning application searches were carried out in the Local Authorities that the Order Limits pass through. This included North Lincolnshire, North East Lincolnshire, West Lindsey District Council, East Lindsey District Council and Lincolnshire County Council.

The search was filtered to include all planning applications within 250 m of the Order Limits and submitted in the last ten years to ensure those major applications which may take longer to determine or construct were included. The results were then filtered to include the applications with the following status:

- Current, valid planning applications that have yet to be determined (pending decision);
- Planning applications for which there is an extant planning permission (that has not been implemented); and
- Proposals which have been refused planning permission and are currently subject to appeal.

Where a formal request for an EIA screening or scoping opinion has been submitted to a LPA, they have been included (provided they remain valid – registered or formal response received from LPA within the last 5 years (between 01 November 2016 to present date)).

The results of the planning searches were recorded and mapped in GIS with other constraints. The information was used to inform and develop the design for the Proposed Development and the Order Limits. The results were also used to confirm that there were no extant planning permissions for development that were not yet implemented.

North Lincolnshire Council 250m Corridor		
Application Number	Description	Status
PA/2021/274	Planning permission to erect 2 storage tanks to store FAME (Bio-diesel)	Withdrawn
PA/2022/1400	Planning permission to demolish existing office building and replace with office building and new secure vehicle compound	Approved- 08/11/2022
PA/2022/1223	Hybrid application comprising full planning permission for the construction of a hardstanding area for external level storage with landscaping, drainage, access and associated works, and outline planning permission to erect 26,096m² floor space for industrial/storage and distribution, (Use Class B2/Use Class B8) including ancillary offices (Use Class E) with appearance, landscaping, layout	Pending

	and scale reserved for subsequent consideration - AMENDED DOCUMENT - Heritage Statement.	
PA/2022/1548	Planning permission to construct and operate a temporary pilot post- combustion carbon capture plant and associated infrastructure	Approved- 26/10/2022
PA/SCO/2022/13	EIA Scoping request for a 100MV hydrogen electrolyser together with an underground electrical cable connection to the Hornsea Two onshore substation, water discharge and a hydrogen export pipeline to the Humber Refinery	Response Issued - 17 Mar 2023
PA/2022/2130	Planning permission for lean to extension of existing administration building	Approved- 31/01/2023
PA/2022/2222	Planning permission to construct an air products nitrogen skid to enable deliveries outside of normal working hours	Approved - 11/07/2023
PA/2023/422	Planning permission for the construction and operation of a post-combustion carbon capture plant, including carbon dioxide compression and metering, cooling equipment, stacks, substations, new and modified services, connections, internal roads, new access onto Eastfield Road, and maintenance and laydown areas (EIA development)	Pending - Validated 16 Mar 23
PA/2023/421	Planning permission for the construction & operation of a post-combustion carbon capture plant, including carbon dioxide compressor & metering, cooling equipment, stacks, substations, internal roads, partial ditch realignment, new & modified services, connections, internal roads, accesses, maintenance & laydown areas	Pending - Validated 8 Mar 23
PA/SCO/2023/1	EIA Scoping request for Immingham onshore wind including up to three wind turbines	Opinion Given - 20 June 2023
PA/SCO/2023/2	EIA scoping request for three wind turbines with a maximum tip height of up to 150m - PLEASE REFER TO CON/2023/635	Pending - Validated 3 Apr 2023
PA/2023/612	Planning permission for the installation of a 71.28 kwp solar carport and infrastructure for renewable energy generation	Pending - Validated 27 March 2023
PA/2018/918	Planning permission to construct a new gas-fired power station with a gross electrical output of upto 49.9 megawatts	Approved- 07/09/2018

PA/SCO/2022/2	Scoping opinion request to determine the information to be provided in an Environmental Statement relating to the first phase of the Humber Zero project for the proposed Post-Combustion Carbon Capture (PCC) developments	Opinion issued January 2022
PA/2021/2090	Planning permission to create a new access	Approved
	North East Lincolnshire Council 250m Corrid	· · ·
Application Number	Description	Status
DM/0113/21/REM	Reserved matters application following DM/0167/17/OUT to erect 7 detached two story dwellings with garages and associated hard and soft landscaping with appearance, landscaping, layout and scale to be considered	Approved
DM/0728/18/OUT	Outline planning application for the development of up to 525 residential dwellings together with an extra care facility for the elderly with up to 80 units with access to be considered	Approved
DM/0996/15/FUL	Change of use of land to caravan site for four number caravans with associated access and boundary treatments Gatehouse Farm Bungalow Stallingborough Road Immingham Grimsby North East Lincolnshire DN41 8BP	Approved
DM/1004/18/FUL	Change of use from residential care home to one domestic dwelling with various internal and external alterations	Approved
DM/0899/21/FUL	Install solar farm with associated works and infrastructure to include ground mounted solar panels, access tracks, inverters, transformers, storage units, substation compound, underground cables and conduits, temporary construction compound, perimeter fencing and planting scheme	Approved - 25/11/2022
DM/0092/18/FUL	Retrospective permission for the construction of a 4 metre wide vehicle access track at Beach Holt Lane/Nooking Lane to access the cable installation working area	Approved

DM/0416/14/FUL	Installation of biomass fuelled boiler house and flue	Approved
DC/765/12/WOL	Construction of a sewer	Approved
DM/0076/20/FUL	Demolition of existing outbuilding and change of use of site to house 31 holiday lodges and 1 managers lodge with attached site supply shed/shop, and erect double garage to existing dwelling	Approved
DM/1097/18/FUL	Change of use of land for the siting of 74 timber lodges and associated infrastructure including access roads, drainage ponds and landscaping and associated infrastructure including access roads, drainage ponds and landscaping. Amended Landscape information September 2019	Approved
DM/0126/19/SCR	Screening request for the siting of 74 timber lodges	Environmental Impact Assessment not req
AP/006/15 Related App ref: DM/1049/14/FUL	Change of use of land to touring caravan site for 30 pitches	Approved
DC/5/12/WOL	Change of use of land for the siting of 36 timber holiday lodges sewage treatment plants and associated works.	Approved
DM/0560/17/FUL	Change of use of land for the siting of 26 timber lodges	Approved
DM/0907/15/FUL	Excavate a new meandering river channel adjacent to the Waithe Beck near to Hatcliffe top. Spoil excavated from creating the new channel will be used onsite to infill the old channel and redundant mill race. Information boards will be	Withdrawn

	erected to explain the work for those visiting the site as part of educational excursions.	
DC/104/13/WAB	Erect nine holiday cabins with vehicle parking in association with the existing commercial lake	Approved
DC/17/12/WAB	Reserved matters application following the outline application DC/8/10/WAB- Outline application to erect five holiday cabins in association with the existing commercial lake	Approved
DM/0988/18/FUL	Change of use from 12 touring caravans to 7 lodges with associated landscaping and car parking	Approved
DM/0991/18/FUL	Change of use of land from field to 18 holiday cabins with vehicle parking in association with the existing commercial lake, landscaping and environmental enhancements including enlargement of balancing pond	Approved
DM/0483/15/FUL	Installation of a 21MW solar photovoltaic (PV) development including ancillary development, landscaping & temporary access to site during construction Low Farm Bradley Road Bradley Grimsby North East Lincolnshire DN37 0AL	Approved
DM/0174/15/FUL	27.14 MW solar panel development, erection of fencing/gates, substation, containers, CCTV and associated works Land At Manor Top Farm Access Road To Laceby North East Lincolnshire	Approved
DM/0908/21/FUL	Erect 7 dwellings with associated works Land Adjacent To Grange Farm House Waltham Road Barnoldby Le Beck North East Lincolnshire DN37 0AR	Refused
DM/0186/20/REM	Reserved matters application to consider appearance, landscaping, layout and scale as granted on DM/0285/18/REM (Reserved matters application following DM/0579/16/OUT (Outline application for the erection of 14 dwellings with access and drainage to be considered) Full layout of site, house types,	Approved

	boundary treatments and landscaping, discharge of conditions 3 and 4 of DM/0579/16/OUT) to amend house types on plots 7 and 10	
AP/010/15	Erection of 51 dwellings including garages, vehicular access, landscaping & attenuation ponds (Resubmission of DM/0502/14/FUL)	Approved at Appeal
DM/0118/15/OUT	Outline application with access to be considered for residential development (of up to 400 dwellings) including the provision of a small corner shop, open space and associated infrastructure.	Approved at Appeal
DM/1238/21/CND	Details in discharge of Condition 9 (Foul Drainage) pursuant to DM/0113/21/REM	Approved 11/3/22
DM/0113/21/REM	Reserved matters application following DM/0167/17/OUT	Approved with conditions 14/05/21
DM/0167/17/OUT	to erect 7 detached two story dwellings with garages and associated hard and soft landscaping with appearance, landscaping, layout and scale to be considered	Approved 2018
DM/0899/21/FUL	Install solar farm with associated works and infrastructure to include ground mounted solar panels, access tracks, inverters, transformers, storage units, substation compound, underground cables and conduits, temporary construction compound, perimeter fencing and planting scheme	Approved
DM/1121/21/PNAG	Prior notification for the change of use of agricultural grain store to 5 dwellinghouses	Approved
DM/1035/21/FUL	Erect 9 holiday lodges to include enhancement of existing lake, landscaping and new access	Withdrawn July 2022
DM/1175/17/FUL	Residential development for 145 dwellings with associated parking, landscaping and emergency vehicular access only onto Mill Lane. (amended plans and documents January 2019)	Approved December 2019

DM/0508/19/FUL	Variation application of condition 2 (Approved Plans) as granted on	Approved September 2019
	DM/0939/17/FUL (Erection of a dwelling, part above, part below ground,	
	erection of storage building and summer houses with associated works and	
	landscaping) to omit proposed basement and construct two glass links.	
DM/1087/17/FUL	Additional land is being applied for in order to install buried electrical cables	Approved
	under the railway at Roxton Sidings via Horizontal Directional Drill (HDD) to	
	connect the Hornsea Project One Offshore Wind Farm to the grid.	
DM/1119/19/FUL	Extend existing site to enable Horizontal Directional Drilling (HDD) works and	Approved
	the subsequent installation of cable associated with the Hornsea Project Two	
	Offshore Wind Farm	
DM/0082/20/FUL	Demolish two existing semi-detached dwellings and erect two detached	Approved
	dwellings to include integral garage for Plot 2 (Amended Plans received 23rd	
	July 2020 and Amended Description)	
DM/1035/21/FUL	Erect 9 holiday lodges to include enhancement of existing lake, landscaping	Withdrawn
	and new access	
DM/1180/16/FUL	Conversion of existing buildings into holiday accommodation with associated	Approved
	internal and external works including the erection of a link single storey	
	extension and the creation of additional car parking	
DM/0622/16/FUL	The application is for a temporary site construction compound to support the	Approved
	onshore cable installation for Hornsea Project One Offshore Wind Farm	
DM/0186/18/FUL	Change of use for additional storage area as an extension of temporary on site	Approved
	construction compound to support the onshore cable installation for Hornsea	
	Project One	
DM/0967/18/FUL	Demolish existing property and erect detached dwelling with integrated double	Approved 2019
	garage	
		Validated - 30 Nov 22 -
DM/1049/22/FUL	Erect industrial unit and associated works	Pending Consideration
		Validated - 1 Dec 22 - Pending
DM/0769/22/FUL	Construction of new foul sewer and associated works	Consideration
	Extension to existing stables to create 11no. new stables, tack room, veternary	
DM/0595/22/FUL	room and associated works	Approved - 9 Sep 2022

Erect 5 deatched bungalows and 4 sem-detached dormer bungalows with garages to include access, landscaping and attenuation pond and various	Approved
associated works	
Demolition of the existing petrol filling station and HGV facilities and the	
construction of a new petrol filling station, including shop, bakery, drive-thru	
	Pending
Outline erection of 7 dwellings with associated access and land scaping (All	Refused - 11/08/2023
matters reserved)	
West Lindsey District Council 250m corrido	r
Description	Status
Updated Onshore Cable Route Landscape Scheme and Management Plan -	Approved
Revision B/Version 2 - (Doc. No. 00292403_B) pursuant to Hornsea Project	
Two Offshore Wind Farm DCO Requirement 8.	
East Lindsey District Council 250m Corrido	r
Description	Status
Environmental Impact Assessment (E.E.C. Directive 85/337/E.E.C. as	Not EIA
·	
to the erection of a solar farm.	
Erection of 1no. 225kW wind turbine with a hub height of 30.0 metres high	Approved
and a maximum height to blade tip of 45.0 metres.	
	EIA Development
amended by Council Directive 97/11E.C) for a scoping opinion with respect to	·
the erection of 2 no. wind turbines	
	garages to include access, landscaping and attenuation pond and various associated works Demolition of the existing petrol filling station and HGV facilities and the construction of a new petrol filling station, including shop, bakery, drive-thru coffee pod, HGV parking, HGV wash facilities and driver facilities. Outline erection of 7 dwellings with associated access and land scaping (All matters reserved) West Lindsey District Council 250m corrido Description Updated Onshore Cable Route Landscape Scheme and Management Plan - Revision B/Version 2 - (Doc. No. 00292403_B) pursuant to Hornsea Project Two Offshore Wind Farm DCO Requirement 8. East Lindsey District Council 250m Corrido Description Environmental Impact Assessment (E.E.C. Directive 85/337/E.E.C. as amended by Council Directive 97/11E.C.) for a screening opinion with respect to the erection of a solar farm. Erection of 1no. 225kW wind turbine with a hub height of 30.0 metres high and a maximum height to blade tip of 45.0 metres. Environmental Impact Assessment (E.E.C Directive 85/337/E.E.C. as amended by Council Directive 97/11E.C.) for a scoping opinion with respect to

N/218/00928/14	Planning Permission - To construct a solar farm comprising construction and operation over a 25 year period of 790 solar PV panels (33,330 modules) with a maximum overall height of 2.23 metres together with support structures, temporary construction compound, access tracks, site substation, inverter cabins, 8 no security cameras each 3.0 metres in height, fencing and gates and associated electrical cabling for the generation of 8MW of renewable energy	Approved
N/133/01413/21	Erection of 198no. dwellings with associated garages and construction of a vehicular and pedestrian access	Pending
		Approved
N/085/00883/15	Hybrid application consisting of outline erection of up to 300 dwellings with means of access to be considered and full planning permission for change of use of land from agricultural land to a recreation ground	Approved
N/178/00721/20	Environmental Impact Assessment (E.E.C. Directive 85/337/E.E.C. as amended by Council Directive 97/11E.C.) for a screening opinion with respect to extension to the existing oil terminal and construction of 2no. additional oil storage tanks	Not EIA
N/178/00568/20	Erection of 4no. industrial units and cafe on the site of existing buildings which are to be demolished.	Approved
Change of use of land for the siting of touring caravans and erection of a toilet/shower block		Approved
N/067/00380/22	Erection of 1 no. detached bungalow and construction of vehicular access	Withdrawn
N/128/00956/22	Erection of a house, and an outbuilding that comprises of a carport and greenhouse, erection of a stable building and construction of 2no. wildlife ponds.	Approved
N/019/01060/13	Installation of ground mounted photovoltaic solar panels.	Approved

N/180/00600/14	Erection of an agricultural building to use as a tractor and hay/straw store.	Approved
N/133/00274/22 Demolition of dilapidated single storey buildings, construction of new extension to accommodate processing machinery		Approved
N/133/01749/19	Erection of a detached building to be used in connection with the existing commercial fishing lake and construction of a vehicular access track.	
Outline erection of 7no. dwellings on the site of an existing garden centre which is to be demolished (means of access to be considered)		Approved
N/019/00598/22 Change of use, conversion of, extensions and alterations to existing outbuilding to provide a dwelling with crew yard and associated parking		Approved
N/004/01978/18	Construction of a motor control centre (MCC) kiosk, ammonia kiosk and landscape bund	Approved
N/128/01991/21 Conversion of, extensions and alterations to 2no. existing outbuildings to provide additional living accommodation and a double garage. App		Approved
N/113/01698/22 Environmental Impact Assessment (E.E.C. Directive 85/337/E.E.C. as amended by Council Directive 97/11E.C.) for a scoping opinion/consultation with respect to the proposed Immingham Green Energy Terminal - ABP Green Hydrogen.		Pending
N/061/01641/22	Planning Permission - Change of use of land to site 10no. timber lodges, excavation of land to form a pond with embankments to maximum height 1.2m, erection of a laundry room, provision of parking and construction of a vehicular access with brick walls, piers and sliding gate	Approved - 30/01/2023

N/085/01378/16	To use land as a temporary site storage compound to support the onshore cable installation for Hornsea Project One Offshore Wind Farm which includes the storage of the onshore cable drums and ducts, administrative base for employees, clients and subcontractors and plant maintenance, erection of 6no. floodlights no more than 3 metres in height, erection of fencing 2.0 metres in height, provision of parking and alterations to an existing vehicular access.	Approved
footpaths, internal access roads, landscaping and infrastructure above and below ground		Approved 28/02/2023
N/110/02159/22	Siting of 13 no. static caravans with associated vehicular parking, pedestrian footpaths, internal access roads, landscaping and infrastructure above and below ground.	Approved 28/02/2023
N/110/02068/22	extensions and alterations including solar panels to the existing facility to provide activity hall/dining space and extension and alterations including solar panels to the existing toilet block	Approved - 23/12/2022
N/179/02040/22 Change of use, conversion of and alterations to the existing building including the partial demolition of the existing crew yard to provide 2no. holiday lets.		Approved 13/04/2023
N/105/01879/22		
N/105/01778/22	Erection of 3no. dwellings on the site of 3no. existing dwellings which are to be demolished (works started). 15-19 GRESLEY ROAD, LOUTH	Approved - 09/01/2023

N/192/02472/22	Determination of whether or not prior approval is required as to a) transport and highways impacts of the development, b) the noise impacts of the development, c) Contamination risks on the site, d) flooding risks on the site, e) whether the location or siting of the buildings makes it otherwise impractical or undesirable for the buildings to change from agricultural use to provide 4no. dwellings, a use falling within Class C3 (dwellinghouses) of the Schedule to the Use Classes Order, f) the design or external appearance of the building and g) the provision of adequate natural light in all habitable rooms of the dwellinghouses	Decided - Not required - 14/02/2023
	Lincolnshire County Council 250m Corrido	r
Application Number	Description	Status
PL/0060/20 Installation and operation of an underground gas pipeline up to 750 metres in length, connecting the existing Saltfleetby/Theddlethorpe underground gas pipeline to the National Grid National Transmission System, Theddlethorpe via the Uniper gas distribution terminal, together with temporary laydown areas, parking, security and welfare facilities		Approved
PL/0180/19		
PL/0073/21	For a sidetrack drilling operation from an existing borehole at Saltfleetby B wellsite to enable a lateral borehole to be drilled up to 1500m to the south west. Address, Eastings 542525 Northings 391375	Approved

PL/0052/20	For Prior Approval for development ancillary to mining operations (gas) comprising the installation of processing facilities, including metering refrigeration unit manifold, Glycol dehydration unit, acoustically-housed compression and generation equipment, pipework and manifold at the Salffleetby 'B' site.	Approved
PL/0012/22	For the demolition of dilapidated single storey buildings, construction of new extension to accommodate processing machinery	Approved
PL/0108/18	For the construction of a motor control centre (MCC) kiosk, ammonia kiosk and landscape bund	Approved

Appendix C - National Planning Policy Accordance Table

Introduction

This Appendix to the Planning Design and Access Statement presents the relevant national planning policies to the Proposed Development and presents commentary around whether the Proposed Development accords with each policy. The following policies documents have been considered relevant to the Proposed Development:

- Overarching National Policy Statement for Energy (EN-1), adopted in in July 2011.
- Draft Overarching National Policy Statement for Energy (EN-1), published in March 2023.
- National Policy Statement for natural gas supply infrastructure and gas and oil pipelines (EN-4) adopted in in July 2011.
- Draft National Policy Statement for natural gas supply infrastructure and gas and oil pipelines (EN-4) published March 2023.
- The National Planning Policy Framework (NPPF) published September 2023.

Appendix C - National Planning Policy Accordance Table

Introduction

This Appendix has been produced to provide a detailed assessment of the Proposed Developments compliance with the policies and objectives of national planning policy that is considered to be of relevance to the Proposed Development.

The tables below outline the extent to which the Proposed Development complies with policies in the adopted Overarching NPS for Energy EN-1 published in July 2011 and the draft published for consultation in March 2023.

The tables include consideration of the NPS for Natural Gas Supply Infrastructure and Gas and Oil Pipelines EN-4 published in July 2011 and the revised draft published for consultation in March 2023 are also considered.

The relevant objectives in the National Planning Policy Framework (NPPF), 2023 is also considered in the table below.

Table C1: Planning Policy Accordance Assessment: Overarching National Policy Statement for Energy EN-1, 2011

The table below considers the extent to which the Proposed Development complies with the policies within the Overarching National Policy Statement for Energy (EN-1), 2011. The compliance assessment column demonstrates how the Proposed Development complies with relevant policies within the NPS with the Proposed Development supporting the delivery of a CCS scheme.

Paragraph	Relevant Policy Text: Requirement of the Policy	Compliance Assessment
2.2.1	We are committed to meeting our legally binding target to cut greenhouse gas emissions by at least 80% by 2050, compared to 1990 levels. Analysis done on possible 2050 pathways show that moving to a secure, low carbon energy system is challenging, but achievable. It requires major investment in new technologies to renovate our buildings, the electrification of much of our heating, industry and transport, prioritisation of sustainable bioenergy and cleaner power generation. And it requires major changes in the way energy is used by individuals, by industry, and by the public sector.	
2.2.8	To avoid the most dangerous impacts of climate change, the increase in average global temperatures must be kept to no more than 2°C, and that means global emissions must start falling	Project and will enable the transport of CO ₂ emissions to geological storage facilities.
	as a matter of urgency. To drive the transition needed the Government has put in place the world's first ever legally binding framework to cut emissions by at least 80% by 2050, that will deliver emission reductions through a system of five-year carbon budgets that will set a trajectory to 2050.	The Wider Viking CCS development will prevent those CO ₂ emissions from being released into the atmosphere. CCS is recognised by the Intergovernmental Panel on Climate Change (IPCC) and the UK Government as a vital step on the road to achieving Net Zero carbon emissions.
2.2.11	This NPS also sets out how the energy sector can help deliver the Government's climate change objectives by clearly setting out the need for new low carbon energy infrastructure to contribute to climate change mitigation.	The Proposed Development will assist the government in meeting these targets for reductions in greenhouse gas emissions.
2.2.12	The EU Emissions Trading System (EU ETS) forms the cornerstone of UK action to reduce greenhouse gas emissions from the power sector. Since 2005, the EU ETS has set a cap on emissions from the large industrial sectors such as electricity generation and heavy industry and from Phase III (2013-2020) this cap will reduce at an annual rate of 1.74%. It is expected to deliver reductions from these sectors of 21% on 2005 levels by 2020, underpinning the transition to low carbon electricity generation.	
Part 3 The r	need for nationally significant energy infrastructure projects	
3.1.1	The UK needs all the types of energy infrastructure covered by this NPS in order to achieve energy security at the same time as dramatically reducing greenhouse gas emissions.	The Proposed Development will consist of an onshore transportation system, comprising a buried 55.5 km onshore pipeline, shutdown valves, an offtake facility at Immingham and a connection point at the former Theddlethorpe Gas Terminal. The Viking CCS Project aims to transport and store up to 10 million tonnes of CO ₂ annually by 2030, rising to 15 million tonnes by 2035. The Proposed Development will assist in decarbonising industry and other energy infrastructure in the future.
3.2.3	This Part of the NPS explains why the Government considers that, without significant amounts of new large-scale energy infrastructure, the objectives of its energy and climate change policy cannot be fulfilled. However, as noted in Section 1.7, it will not be possible to develop the necessary amounts of such infrastructure without some significant residual adverse impacts. This Part also shows why the Government considers that the need for such infrastructure will often be urgent. The IPC should therefore give substantial weight to considerations of need. The weight which is	The Viking CCS Pipeline ('the Proposed Development') comprises the development of a 55.5 km buried pipeline, which will enable CO ₂ captured by emitters in Immingham to be transport to the former Theddlethorpe Gas Terminal (TGT) site, for onward transportation within the existing offshore Lincolnshire Offshore Gas Gathering System Pipeline.

Overarching	g National Policy Statement for Energy (EN-1), 2011	
Paragraph	Relevant Policy Text: Requirement of the Policy	Compliance Assessment
	attributed to considerations of need in any given case should be proportionate to the anticipated extent of a project's actual contribution to satisfying the need for a particular type of infrastructure.	It is considered that there is an urgent need to provide caron capture and storage projects of the nature proposed to provide for the decarbonisation of the energy industry and to provide for a suitable mix of energy sources. The Proposed Development
3.3.5	The UK is choosing to largely decarbonise its power sector by adopting low carbon sources quickly. There are likely to be advantages to the UK of maintaining a diverse range of energy sources so that we are not overly reliant on any one technology (avoiding dependency on a particular fuel or technology type). This is why Government would like industry to bring forward many new low carbon developments (renewables, nuclear and fossil fuel generation with CCS) within the next 10 to 15 years to meet the twin challenge of energy security and climate change as we move towards 2050	while decarbonising existing infrastructure. This is where carbon capture technology is set
3.6.4	To meet emissions targets, dependency on unabated fossil fuel generating stations must be reduced. To help achieve this reduction but maintain security of supply, it is necessary to reduce carbon emissions particularly from coal-fired generating stations. Carbon Capture and Storage (CCS) has the potential to reduce carbon emissions by up to 90%, although the process of capturing, transporting and storing carbon dioxide also means that more fuel is used in producing a given amount of electricity than would be the case without CCS. The complete chain of CCS has yet to be demonstrated at commercial scale on a power station. Whilst there is a high level of confidence that the technology involved in CCS will be effective, less is known about the impact of CCS on the economics of power station operation. There is therefore uncertainty about the future deployment of CCS in the economy, which in the Government's view cannot be resolved without first demonstrating CCS at commercial scale.	The overall Viking CCS Project intends to transport compressed and conditioned CO_2 received at the Immingham Facility to store in depleted gas reservoirs in the Southern North Sea. The Oil and Gas Authority (now known as the North Sea Transition Authority) awarded the Applicant a CO_2 appraisal and storage licence in 2021. The Viking CCS Project aims to transport and store up to 10 million tonnes of CO_2 annually by 2030, rising to 15 million tonnes by 2035.
	ssment Principles	
4.1 General	Points	
110	Cives the level and urganay of pood for infrastructure of the types equand by the energy NDCs act	The Applicant considers that the Dressered Development should be treated as if the

- 4.1.2 Given the level and urgency of need for infrastructure of the types covered by the energy NPSs set out in Part 3 of this NPS, the IPC should start with a presumption in favour of granting consent to applications for energy NSIPs. That presumption applies unless any more specific and relevant policies set out in the relevant NPSs clearly indicate that consent should be refused. The presumption is also subject to the provisions of the Planning Act 2008 referred to at paragraph 1.1.2 of this NPS.
- 4.1.3 In considering any proposed development, and in particular when weighing its adverse impacts against its benefits, the IPC should take into account:
 - its potential benefits including its contribution to meeting the need for energy infrastructure, job creation and any long-term or wider benefits; and
 - its potential adverse impacts, including any long-term and cumulative adverse impacts, as well as any measures to avoid, reduce or compensate for any adverse impacts.

The Applicant considers that the Proposed Development should be treated as if the presumption in favour of granting consent applies, as more recent planning and energy policies set out that CCS is expected to comprise an important part of the energy mix required to meet objectives and commitments for the energy system and climate change. For example, the Draft NPS EN-1, 2023 states:

"Known technologies that are included within the scope of this NPS are: Offshore Wind (including floating wind), Solar PV, Wave, Tidal Range, Tidal Stream, Pumped Hydro, Energy from Waste (including ACTs) with or without CCS, Biomass with or without CCS, Natural Gas with or without CCS, low carbon hydrogen, large-scale nuclear, Small Modular Reactors, Advanced Modular Reactors, and fusion power plants. The need for all these types of infrastructure is established by this NPS and is urgent."

The Planning Design and Access Statement (PDAS) [EN070008/APP/7.1] sets out the overall planning balance and policy support for the CO₂ pipeline. The urgent need for the Proposed Development, and its role in facilitating the wider Viking CCS Project is explained in the Needs Case [EN070008/APP/7.3].

It is considered that the need to provide carbon capture and storage to meet the governments legally binding targets for Net Zero by 2050, to decarbonise energy

Paragraph Relevant Policy Text: Requirement of the Policy

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production and support low carbon energy production from a range of sources outweighs any limited adverse effects resulting from the Proposed Development.

4.2: Environmental Statement

All proposals for projects that are subject to the European Environmental Impact Assessment Directive must be accompanied by an Environmental Statement (ES) describing the aspects of the environment likely to be significantly affected by the project. The Directive specifically refers to effects on human beings, fauna and flora, soil, water, air, climate, the landscape, material assets and cultural heritage, and the interaction between them. The Directive requires an assessment of the likely significant effects of the proposed project on the environment, covering the direct effects and any indirect, secondary, cumulative, short, medium and long-term, permanent and temporary, positive and negative effects at all stages of the project, and also of the measures envisaged for avoiding or mitigating significant adverse effects.

In accordance with the EIA Regulations 2017, the Application includes an ES [EN070008/APP/6.1/6.2/6.3/6.4]. The ES assesses all significant environmental, social and economic effects arising from all phases of the Proposed Development. The ES complies with national and local policies, legislations, regulations, standards and guidance. Mitigation measures, controls and further assessment if required are included in the ES.

An assessment of the combined and cumulative impacts is included in Chapter 20: Cumulative Effects Assessment of the ES **[EN070008/APP/6.2.20]**.

4.3: Habitats and Species Regulations

4.3.1 Prior to granting a development consent order, the IPC must, under the Habitats and Species Regulations, (which implement the relevant parts of the Habitats Directive and the Birds Directive in England and Wales) consider whether the project may have a significant effect on a European site, or on any site to which the same protection is applied as a matter of policy, either alone or in combination with other plans or projects. Further information on the requirements of the Habitats and Species Regulations can be found in a Government Circular. Applicants should also refer to Section 5.3 of this NPS on biodiversity and geological conservation. The applicant should seek the advice of Natural England and/or the Countryside Council for Wales and provide the IPC with such information as it may reasonably require to determine whether an Appropriate Assessment is required. In the event that an Appropriate Assessment is required, the applicant must provide the IPC with such information as may reasonably be required to enable it to conduct the Appropriate Assessment. This should include information on any mitigation measures that are proposed to minimise or avoid likely effects

A Habitats Regulations Assessment (HRA) has been carried out by the Applicant. **[EN070008/APP/6.5]**

The HRA concludes that the Proposed Development would not result there are no likely significant effects on the integrity of any European sites from the Proposed Development alone or in combination with any other plans or projects.

4.4: Alternatives

4.4.1

As in any planning case, the relevance or otherwise to the decision-making process of the existence (or alleged existence) of alternatives to the proposed development is in the first instance a matter of law, detailed guidance on which falls outside the scope of this NPS. From a policy perspective this NPS does not contain any general requirement to consider alternatives or to establish whether the proposed project represents the best option.

Alternatives have been considered during the evolution of the design for the Viking CCS Pipeline and this process is reported in Chapter 2: Design Evolution and Alternatives of the ES [EN070008/APP/6.2.2].

4.4.2 However

- applicants are obliged to include in their ES, as a matter of fact, information about the main alternatives they have studied. This should include an indication of the main reasons for the applicant's choice, taking into account the environmental, social and economic effects and including, where relevant, technical and commercial feasibility;
- in some circumstances there are specific legislative requirements, notably under the Habitats Directive, for the IPC to consider alternatives. These should also be identified in the ES by the applicant; and

Initially consideration was given to routing the pipeline offshore versus onshore. The decision was made to route the pipe onshore due to the presence of a number of environmentally sensitive areas and technical issue to overcome. Following this identification and assessment of land based potential pipeline corridors was conducted Selecting preferred pipeline corridor. This corridor was refined following feedback obtained during not statutory consultation. At each stage, the route for the pipeline and location for above ground installations has been based on stakeholder feedback, environmental, safety, planning and engineering factors. The number of corridor options was reduced to a single preferred corridor which was further consolidated through detailed design. The Applicant considers appropriate and proportionate alternatives have been considered during the design evolution stage in compliance with the requirements of the NPS and this

Paragraph Relevant Policy Text: Requirement of the Policy

 in some circumstances, the relevant energy NPSs may impose a policy requirement to consider alternatives (as this NPS does in Sections 5.3, 5.7 and 5.9).

process is set out within the ES Chapter 2: Design Evolution and Alternatives [EN070008/APP/6.2.2].

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- Where there is a policy or legal requirement to consider alternatives the applicant should describe 4.4.3 the alternatives considered in compliance with these requirements. Given the level and urgency of need for new energy infrastructure, the IPC should, subject to any relevant legal requirements (e.g. under the Habitats Directive) which indicate otherwise, be guided by the following principles when deciding what weight should be given to alternatives:
 - the consideration of alternatives in order to comply with policy requirements should be carried out in a proportionate manner;
 - the IPC should be guided in considering alternative proposals by whether there is a realistic prospect of the alternative delivering the same infrastructure capacity (including energy security and climate change benefits) in the same timescale as the proposed development;
 - where (as in the case of renewables) legislation imposes a specific quantitative target for particular technologies or (as in the case of nuclear) there is reason to suppose that the number of sites suitable for deployment of a technology on the scale and within the period of time envisaged by the relevant NPSs is constrained, the IPC should not reject an application for development on one site simply because fewer adverse impacts would result from developing similar infrastructure on another suitable site, and it should have regard as appropriate to the possibility that all suitable sites for energy infrastructure of the type proposed may be needed for future proposals:
 - alternatives not among the main alternatives studied by the applicant (as reflected in the ES) should only be considered to the extent that the IPC thinks they are both important and relevant to its decision:
 - as the IPC must decide an application in accordance with the relevant NPS (subject to the exceptions set out in the Planning Act 2008), if the IPC concludes that a decision to grant consent to a hypothetical alternative proposal would not be in accordance with the policies set out in the relevant NPS, the existence of that alternative is unlikely to be important and relevant to the IPC's decision:
 - alternative proposals which mean the necessary development could not proceed, for example because the alternative proposals are not commercially viable or alternative proposals for sites would not be physically suitable, can be excluded on the grounds that they are not important and relevant to the IPC's decision:
 - alternative proposals which are vaque or inchoate can be excluded on the grounds that they are not important and relevant to the IPC's decision; and
 - it is intended that potential alternatives to a proposed development should, wherever possible, be identified before an application is made to the IPC in respect of it (so as to allow appropriate consultation and the development of a suitable evidence base in relation to any alternatives.

4.5: Good Design

4.5.1 The visual appearance of a building is sometimes considered to be the most important factor in good. The design of the Proposed Development has evolved through a series of steps and design. But high quality and inclusive design goes far beyond aesthetic considerations. The functionality of an object — be it a building or other type of infrastructure — including fitness for purpose and sustainability, is equally important. Applying "good design" to energy projects should produce sustainable infrastructure sensitive to place, efficient in the use of natural resources and

design iterations. Design evolution has been informed a number of factors including selecting a safe route and location for the pipeline and facilities, minimising adverse effects on the environment, giving consideration to planning permissions and applications

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energy used in their construction and operation, matched by an appearance that demonstrates good for other development, engineering considerations, stakeholder feedback obtained aesthetic as far as possible. It is acknowledged, however that the nature of much energy infrastructure development will often limit the extent to which it can contribute to the enhancement of the quality of the area.

- 4.5.2 Good design is also a means by which many policy objectives in the NPS can be met, for example the impact sections show how good design, in terms of siting and use of appropriate technologies can help mitigate adverse impacts such as noise.
- 4.5.3 In the light of the above, and given the importance which the Planning Act 2008 places on good design and sustainability, the IPC needs to be satisfied that energy infrastructure developments are sustainable and, having regard to regulatory and other constraints, are as attractive, durable and adaptable (including taking account of natural hazards such as flooding) as they can be. In so doing, the IPC should satisfy itself that the applicant has taken into account both functionality (including fitness for purpose and sustainability) and aesthetics (including its contribution to the quality of the area in which it would be located) as far as possible. Whilst the applicant may not have any or very limited choice in the physical appearance of some energy infrastructure, there may be opportunities for the applicant to demonstrate good design in terms of siting relative to existing landscape character, landform and vegetation. Furthermore, the design and sensitive use of materials in any associated development such as electricity substations will assist in ensuring that such development contributes to the quality of the area.
- 4.5.4 For the IPC to consider the proposal for a project, applicants should be able to demonstrate in their application documents how the design process was conducted and how the proposed design evolved. Where a number of different designs were considered, applicants should set out the reasons why the favoured choice has been selected. In considering applications the IPC should take into account the ultimate purpose of the infrastructure and bear in mind the operational, safety and security requirements which the design has to satisfy.
- 4.5.5 Applicants and the IPC should consider taking independent professional advice on the design aspects of a proposal. In particular, Design Council CABE can be asked to provide design review for nationally significant infrastructure projects and applicants are encouraged to use this service.

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through consultation.

The Proposed Development is functional in nature and has been designed to include only the essential elements necessary to transport CO₂ safely and efficiently. Where possible brownfield land will be used for above ground installations.

Throughout the design process, the Applicant has developed a design for the Proposed Development that is safe and sustainable for the lifetime of the development.

The design has considered site context, existing features within and adjacent to the order limits, nearby sensitive receptors and assets, consultation responses and access considerations to develop a good design that balances the need to maximise the most efficient route with avoidance and mitigation of impacts and provision of environmental and other enhancements. Chapter 2: Design Evolution and Alternatives of the ES [EN070008/APP/6.2.2] details the design process undertaken.

The design development process included the identification of mitigation commitments, both for mitigation embedded in the design and also good practice mitigation. The route of the pipeline has been influenced by the desire to reduce potential likely effects on communities, for example, the route seeks to limit adverse impacts on habitats, historic receptors and residential buildings.

4.7: CCS and Carbon Capture Readiness

4.7.7 The most likely method for transporting the captured carbon dioxide is through pipelines. These will be located both onshore and offshore. There are currently no carbon dioxide pipelines in the UK and considerable future investment in pipelines will be required for the purpose of the demonstration programme. If CCS is deployed more widely, it is likely that these initial investments could form the basis of a wider carbon dioxide pipeline network, which is likely to require greater capacity pipelines. In considering applications the IPC should therefore take into account that the Government wants developers to bear in mind foreseeable future demand when considering the size and route of their investments and may therefore propose pipelines with a greater capacity than necessary for the project alone. Existing legislation already provides powers to require modification of pipelines where this would reduce the need for additional pipelines to be constructed in the future.

CCS is the process of capturing carbon dioxide (CO₂) from industrial activity, transporting it, and then storing it in underground storage sites. In the UK, all prospective carbon dioxide storage sites are located offshore, with a large storage potential available in the North Sea region.

The Proposed Development will deliver approximately 55.5 km of carbon transporting infrastructure with associated above ground development that will be fundamental in transporting CO₂ from emitters to secure offshore geological storage.

The Proposed Development aligns with the Government's support of CCS technology and need for a diverse mix of low carbon energy supplies.

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4.8: Climate change adapt	tation
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- 4.8.4 In certain circumstances, measures implemented to ensure a scheme can adapt to climate change may give rise to additional impacts, for example as a result of protecting against flood risk, there may be consequential impacts on coastal change (see Section 5.5).
- 4.8.5 New energy infrastructure will typically be a long-term investment and will need to remain operational over many decades, in the face of a changing climate. Consequently, applicants must consider the impacts of climate change when planning the location, design, build, operation and, where appropriate, decommissioning of new energy infrastructure. The ES should set out how the proposal will take account of the projected impacts of climate change. While not required by the EIA Directive, this information will be needed by the IPC.
- 4.8.6 The IPC should be satisfied that applicants for new energy infrastructure have taken into account the The design of the pipeline includes measures to make it resilient to climate change, and potential impacts of climate change using the latest UK Climate Projections available at the time the ES was prepared to ensure they have identified appropriate mitigation or adaptation measures. This should cover the estimated lifetime of the new infrastructure. Should a new set of UK Climate Projections become available after the preparation of the ES, the IPC should consider whether they need to request further information from the applicant.
- 4.8.7 Applicants should apply as a minimum, the emissions scenario that the Independent Committee on Climate Change suggests the world is currently most closely following – and the 10%, 50% and 90% estimate ranges. These results should be considered alongside relevant research which is based on the climate change projections.
- 4.8.8 The IPC should be satisfied that there are not features of the design of new energy infrastructure critical to its operation which may be seriously affected by more radical changes to the climate beyond that projected in the latest set of UK climate projections, taking account of the latest credible scientific evidence on, for example, sea level rise (for example by referring to additional maximum credible scenarios - i.e. from the Intergovernmental Panel on Climate Change or EA) and that necessary action can be taken to ensure the operation of the infrastructure over its estimated lifetime.
- 4.8.9 Where energy infrastructure has safety critical elements (for example parts of new fossil fuel power stations or some electricity sub-stations), the applicant should apply the high emissions scenario (high impact, low likelihood) to those elements. Although the likelihood of this scenario is thought to be low, it is appropriate to take a more risk-averse approach with elements of infrastructure which are critical to the safety of its operation.
- 4.8.10 If any adaptation measures give rise to consequential impacts (for example on flooding, water resources or coastal change) the IPC should consider the impact of the latter in relation to the application as a whole and the impacts guidance set out in Part 5 of this NPS.
- 4.8.11 Any adaptation measures should be based on the latest set of UK Climate Projections, the Government's latest UK Climate Change Risk Assessment, when available and in consultation with the FA.

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The effects of climate change and climate change adaptation has been considered throughout the design and selection process for the proposed route and when considering how it will be constructed and operated.

Chapter 15: Climate Change of the ES [EN070008/APP/6.2.15] includes a lifecycle GHG assessment to identify the impact of GHG emissions arising over the lifetime of the Proposed Development on the climate and a climate change resilience assessment to understand the resilience of the Proposed Development to projected future climate change impacts, including damage to the Proposed Development caused by accidents resulting from climate change.

the ES concludes that there are no significant impacts on climate change resulting from the laying of this pipeline. Generally, the use of pipelines offers a more climate friendly transportation method on emissions, as the alternative would consist of more road transport.

The Application is also supported by a FRA included in Appendix 11-5 to the ES [EN070008/APP/6.4.11.5]. The FRA demonstrates how risk (for each phase) is managed to ensure that the development remains safe and operational throughout its lifetime, taking climate change into account, without increasing flood risk elsewhere and where possible reducing flood risk overall. The FRA recommends appropriate mitigation measures including flood resilience techniques.

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Adaptation measures can be required to be implemented at the time of construction where necessary and appropriate to do so. However, where they are necessary to deal with the impact of climate change, and that measure would have an adverse effect on other aspects of the project and/or surrounding environment (for example coastal processes), the IPC may consider requiring the applicant to ensure that the adaptation measure could be implemented should the need arise, rather than at the outset of the development (for example increasing height of existing, or requiring new, sea walls).

4.10: Pollution control

- 4.10.1 Issues relating to discharges or emissions from a proposed project which affect air quality, water quality, land quality and the marine environment, or which include noise and vibration may be subject to separate regulation under the pollution control framework or other consenting and licensing regimes.
- 4.10.2 The planning and pollution control systems are separate but complementary. The planning system controls the development and use of land in the public interest. It plays a key role in protecting and improving the natural environment, public health and safety, and amenity, for example by attaching conditions to allow developments which would otherwise not be environmentally acceptable to proceed, and preventing harmful development which cannot be made acceptable even through conditions. Pollution control is concerned with preventing pollution through the use of measures to prohibit or limit the releases of substances to the environment from different sources to the lowest practicable level. It also ensures that ambient air and water quality meet standards that guard against impacts to the environment or human health.
- 4.10.3 In considering an application for development consent, the IPC should focus on whether the development itself is an acceptable use of the land, and on the impacts of that use, rather than the control of processes, emissions or discharges themselves. The IPC should work on the assumption that the relevant pollution control regime and other environmental regulatory regimes, including those on land drainage, water abstraction and biodiversity, will be properly applied and enforced by the relevant regulator. It should act to complement but not seek to duplicate them.
- 4.10.5 Many projects covered by this NPS will be subject to the Environmental Permitting (EP) regime, which also incorporates operational waste management requirements for certain activities. When a developer applies for an Environmental Permit, the relevant regulator (usually EA but sometimes the local authority) requires that the application demonstrates that processes are in place to meet all relevant EP requirements. In considering the impacts of the project, the IPC may wish to consult the regulator on any management plans that would be included in an Environmental Permit application.
- 4.10.6 Applicants are advised to make early contact with relevant regulators, including EA and the MMO, to discuss their requirements for environmental permits and other consents. This will help ensure that applications take account of all relevant environmental considerations and that the relevant regulators are able to provide timely advice and assurance to the IPC. Wherever possible, applicants are encouraged to submit applications for Environmental Permits and other necessary consents at the same time as applying to the IPC for development consent.

The Draft Construction Environmental Management Plan (CEMP) included in Appendix 3-1 of the ES [EN070008/APP/6.4.3.1] details the mitigation measures that would be implemented to control risk of a pollution incident. During detailed design this would be consolidated into the CEMP and applied by a construction contractor.

The project will comply with all required regulations under the pollution control framework or other consenting and licensing regimes. The Consultation Report [EN070008/APP/5.1] provides a list of meetings with relevant environmental stakeholders.

The effect of the Proposed Development on local Air Quality is assessed within Chapter 14: Air Quality of the ES [EN070008/APP/6.2.14]. Chapter 14 concludes that the existing air quality in the Study Area is of a good standard with pollutant concentrations within the objective values set for the protection of human health. The DCO Site Boundary lies within a rural area and the alignment avoids close proximity to urban areas and nature conservation areas. There are some dust and air quality sensitive receptors close to the route that could be adversely impacted by the construction phase. However, providing that all the mitigation measures as listed within the Draft CEMP in Appendix 3-1 of the ES [EN070008/APP/6.4.3.1] are adhered to, the potential magnitude of impacts on air quality will be lowered so that the residual significance will be negligible to minor adverse and so are not significant.

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- 4.10.7 The IPC should be satisfied that development consent can be granted taking full account of environmental impacts. Working in close cooperation with EA and/or the pollution control authority, and other relevant bodies, such as the MMO, Natural England, the Countryside Council for Wales, Drainage Boards, and water and sewerage undertakers, the IPC should be satisfied, before consenting any potentially polluting developments, that:
 - the relevant pollution control authority is satisfied that potential releases can be adequately regulated under the pollution control framework; and
 - the effects of existing sources of pollution in and around the site are not such that the cumulative
 effects of pollution when the proposed development is added would make that development
 unacceptable, particularly in relation to statutory environmental quality limits.

4.11: Safety

- 4.11.1 HSE is responsible for enforcing a range of occupational health and safety legislation some of which is relevant to the construction, operation and decommissioning of energy infrastructure. Applicants should consult with the Health and Safety Executive (HSE) on matters relating to safety.
- Some technologies, for example the use of salt caverns for underground gas storage, will be regulated by specific health and safety legislation. The application of these regulations is set out in the technology-specific NPSs where relevant.
- Some energy infrastructure will be subject to the Control of Major Accident Hazards (COMAH)

 4.11.3 Regulations 1999. These Regulations aim to prevent major accidents involving dangerous substances and limit the consequences to people and the environment of any that do occur.

 COMAH regulations apply throughout the life cycle of the facility, i.e. from the design and build stage through to decommissioning. They are enforced by the Competent Authority comprising HSE and the EA acting jointly in England and Wales (and by the HSE and Scottish Environment Protection Agency acting jointly in Scotland). The same principles apply here as for those set out in the previous section on pollution control and other environmental permitting regimes.
- 4.11.4 Applicants seeking to develop infrastructure subject to the COMAH regulations should make early contact with the Competent Authority. If a safety report is required it is important to discuss with the Competent Authority the type of information that should be provided at the design and development stage, and what form this should take. This will enable the Competent Authority to review as much information as possible before construction begins, in order to assess whether the inherent features of the design are sufficient to prevent, control and mitigate major accidents. The IPC should be satisfied that an assessment has been done where required and that the Competent Authority has assessed that it meets the safety objectives described above.

Safety is of highest priority, and the Applicant operates responsibly, securely and in accordance with applicable regulation across all their activities. The Applicant works to reduce risks and protect their staff, contractors and the communities within which their activities have the potential to cause impact through the rigorous application of safe operating practices.

The Applicant has extensive experience of managing major hazard potential facilities in accordance with the Control of Major Accidents and Hazards Regulations, both onshore and offshore. The Applicant applies best practices in the design, use and maintenance of their equipment, planning every stage of their operations with the highest levels of control in order to minimise safety risks.

The Applicants approach to safety is detailed in Chapter 3: Description of the Proposed Development [EN070008/APP/6.2.3], and Chapter 19: Major Accidents and Disasters of the ES [EN070008/APP/6.2.19].

The Applicant has engaged with the HSE during the pre-application stage and will continue to engage with the HSE with respect to compliance with health and safety legislation.

4.12: Hazardous Substances

4.12.1 All establishments wishing to hold stocks of certain hazardous substances above a threshold need Hazardous Substances consent. Applicants should consult the HSE at pre-application stage93 if the project is likely to need hazardous substances consent. Where hazardous substances consent is applied for, the IPC will consider whether to make an order directing that hazardous substances

The Applicant has engaged and will continue to engage with HSE with respect to compliance with hazardous substances legislation, this is show within the Consultation Report [EN070008/APP/5.1].

Part 5: Generic Impacts

Paragraph	Relevant Policy Text: Requirement of the Policy	Compliance Assessment
- drugrupii	consent shall be deemed to be granted alongside making an order granting development consent94. The IPC should consult HSE about this.	Where it is required, other consents have been shown in the Consents and Agreements Position Statement [EN070008/APP/7.2]. The Applicant knows of no reason why these
4.12.2	HSE will assess the risks based on the development consent application. Where HSE does not advise against the IPC granting the consent, it will also recommend whether the consent should be granted subject to any requirements.	will not be secured.
4.12.3	HSE sets a consultation distance around every site with hazardous substances consent and notifies the relevant local planning authorities. The applicant should therefore consult the local planning authority at preapplication stage to identify whether its proposed site is within the consultation distance of any site with hazardous substances consent and, if so, should consult the HSE for its advice on locating the particular development on that site.	
4.13: Health	1	
4.13.2	As described in the relevant sections of this NPS and in the technology specific NPSs, where the proposed project has an effect on human beings, the ES should assess these effects for each element of the project, identifying any adverse health impacts, and identifying measures to avoid, reduce or compensate for these impacts as appropriate. The impacts of more than one development may affect people simultaneously, so the applicant and the IPC should consider the cumulative impact on health.	The EIA Scoping Report in Appendix 5-1 of the ES [EN070008/APP/6.4.5.1] identified the key health impacts which comprise; the disruption of access to healthcare services and other social infrastructure, access to open space and nature, air quality, noise and neighbourhood amenity, accessibility and active travel, access to work and training, social cohesion, climate change and vulnerability of populations.
4.13.3	The direct impacts on health may include increased traffic, air or water pollution, dust, odour, hazardous waste and substances, noise, exposure to radiation, and increases in pest. New energy infrastructure may also affect the composition, size and proximity of the local population, and in doing so have indirect health impacts, for example if it in some way affects access to key public services, transport or the use of open space for recreation and physical activity.	Chapter 17: Health and Well-being of the ES [EN070008/APP/6.2.17] assesses the impact of the Proposed Development on issues of health and well-being. Chapter 17 includes an overview of the cumulative impacts on health and concludes that when mitigation measures are implemented there are no significant residual effects in the construction, operational or decommissioning phases. Where health effects are envisaged to be minor adverse, mitigation measures ensure that this effect is reduced to negligible.
4.13.4	Generally, those aspects of energy infrastructure which are most likely to have a significantly detrimental impact on health are subject to separate regulation (for example for air pollution) which will constitute effective mitigation of them, so that it is unlikely that health concerns will either constitute a reason to refused consents or require specific mitigation under the Planning Act 2008.	Chapter 17 includes and assessment of the effects of traffic, air or water pollution, dust, odour, hazardous waste and substances, noise and exposure to radiation. Measures to control noise are included within the Draft CEMP, in Appendix 3-1 of the ES
4.13.5	However, the IPC will want to take account of health concerns when setting requirements relating to a range of impacts such as noise.	[EN070008/APP/6.4.3.1].
4.14 : Comn	mon Law Nuisance and Statutory Nuisance	
4.14.2	It is very important that, at the application stage of an energy NSIP, possible sources of nuisance under section 79(1) of the 1990 Act and how they may be mitigated or limited are considered by the IPC so that appropriate requirements can be included in any subsequent order granting development consent. (See Section 5.6 on Dust, odour, artificial light etc. and Section 5.11 on Noise	To reduce the risk of nuisance or environmental incident, which includes noise, vibration and air quality, the Draft CEMP in Appendix 3-1 of the ES [EN070008/APP/6.4.3.1], sets out mitigation measures to be implemented by the contractor at compound sites.
	and vibration.)	The Application is supported with a Statutory Nuisance Statement [EN070008/APP/6.6] ir order to satisfy the requirements of APFP Regulation 5(2)(f) and paragraph 4.14.2 of EN-1. This document lays out both the likely significant and insignificant impacts of proposed works and provides mitigation.

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5.2: Air Quality and Emissions

- 5.2.1 Infrastructure development can have adverse effects on air quality. The construction, operation and decommissioning phases can involve emissions to air which could lead to adverse impacts on health, on protected species and habitats, or on the wider countryside. Impacts on protected species development. The operation and decommissioning stages of the Proposed Development and habitats are covered in Section 5.3. Air emissions include particulate matter (for example dust) up to a diameter of ten microns (PM10) as well as gases such as sulphur dioxide, carbon monoxide and nitrogen oxides (NOx). Levels for pollutants in ambient air are set out in the Air Quality Strategy which in turn embodies EU legal requirements. The Secretary of State for the Environment Food and source during construction. It has been identified that air quality changes could occur Rural Affairs is required to make available up to date information on air quality to any relevant interested party.
- 5.2.2 CO₂ emissions are a significant adverse impact from some types of energy infrastructure which cannot be totally avoided (even with full deployment of CCS technology). However, given the characteristics of these and other technologies, as noted in Part 3 of this NPS, and the range of non-appendices. planning policies aimed at decarbonising electricity generation such as EU ETS (see Section 2.2 above). Government has determined that CO₂ emissions are not reasons to prohibit the consenting of projects which use these technologies or to impose more restrictions on them in the planning policy framework than are set out in the energy NPSs (e.g. the CCR and, for coal, CCS requirements). Any ES on air emissions will include an assessment of CO₂ emissions, but the policies set out in Section 2, including the EU ETS, apply to these emissions. The IPC does not, therefore need to assess individual applications in terms of carbon emissions against carbon budgets and this section does not address CO₂ emissions or any Emissions Performance Standard that may apply to plant.
- 5.2.6 Where the project is likely to have adverse effects on air quality the applicant should undertake an assessment of the impacts of the proposed project as part of the Environmental Statement (ES).
- 5.2.7 The ES should describe:
 - any significant air emissions, their mitigation and any residual effects distinguishing between the project stages and taking account of any significant emissions from any road traffic generated by
 - the predicted absolute emission levels of the proposed project, after mitigation methods have been applied:
 - existing air quality levels and the relative change in air quality from existing levels; and
 - any potential eutrophication impacts

5.3: Biodiversity and Geological Conservation

5.3.3 Where the development is subject to EIA the applicant should ensure that the ES clearly sets out any effects on internationally, nationally and locally designated sites of ecological or geological conservation importance, on protected species and on habitats and other species identified as being of principal importance for the conservation of biodiversity. The applicant should provide environmental information proportionate to the infrastructure where EIA is not required to help the IPC consider thoroughly the potential effects of a proposed project.

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Air Quality has been taken into consideration in the EIA for the Proposed Development. An assessment of air quality has been undertaken for the construction phase of the were scoped out of the assessment.

The assessment included the baseline (existing) air quality conditions and emission through dust and changes in pollutant levels caused by emissions from plant machinery during construction. However, with the implementation of mitigation measures and controls, the likely effect on human health, amenity and ecological receptors during construction is concluded to be minor adverse which is not significant. This is demonstrated in Chapter 14: Air Quality of the ES [EN070008/APP/6.2.14] and its

The potential effects of the Proposed Development on biodiversity and ecology are assessed in Chapter 6: Ecology and Biodiversity of the ES [EN070008/APP/6.2.6]. The surveys that have informed the assessments are contained within the appendices to the ES.

The assessment of effects concluded that the Proposed Development would not result in any significant adverse effects for biodiversity and ecology with the implementation of mitigation outlined in the CEMP and the presence of an ecological clerk of works.

as SSSIs

Where a proposed development on land within or outside an SSSI is likely to have an adverse effect on an SSSI (either individually or in combination with other developments), development consent should not normally be granted. Where an adverse effect, after mitigation, on the site's notified

5.3.11

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5.3.4	The applicant should show how the project has taken advantage of opportunities to conserve and enhance biodiversity and geological conservation interests.	A Habitat Regulations Assessment [EN070008/APP/6.5] has also been prepared in support of the assessment due to the presence of European designated sites and is
5.3.5	The Government's biodiversity strategy is set out in 'Working with the grain of nature'. Its aim is to ensure: • a halting, and if possible a reversal, of declines in priority habitats and species, with wild species	included as an appendix to the ES. The Report to Inform the HRA Assessment [EN070008/APP/6.5] concludes that the Proposed Development would not have an ad-
	 and habitats as part of healthy, functioning ecosystems; and the general acceptance of biodiversity's essential role in enhancing the quality of life, with its conservation becoming a natural consideration in all relevant public, private and non-governmental decisions and policies. 	Chapter 9: Geology and Hydrogeology of the ES [EN070008/APP/6.2.9] presents the findings of the assessment of the likely impact on the geology and hydrology of the Proposed Development. The chapters outlines that there are no geological SSSI's, RIGS or local geological sites designated within the Order Limits. The assessment describes
5.3.6	In having regard to the aim of the Government's biodiversity strategy the IPC should take account of the context of the challenge of climate change: failure to address this challenge will result in significant adverse impacts to biodiversity. The policy set out in the following sections recognises the need to protect the most important biodiversity and geological conservation interests. The benefits of nationally significant low carbon energy infrastructure development may include benefits for biodiversity and geological conservation interests and these benefits may outweigh harm to these interests. The IPC may take account of any such net benefit in cases where it can be demonstrated	that activities such as dewatering would not result in significant adverse effects at European and nationally protected sites during construction activities such as dewater if the mitigation measures outlined in the Draft CEMP are implemented.
5.3.7	As a general principle, and subject to the specific policies below, development should aim to avoid significant harm to biodiversity and geological conservation interests, including through mitigation and consideration of reasonable alternatives (as set out in Section 4.4 above); where significant harm cannot be avoided, then appropriate compensation measures should be sought.	
5.3.8	In taking decisions, the IPC should ensure that appropriate weight is attached to designated sites of international, national and local importance; protected species; habitats and other species of principal importance for the conservation of biodiversity; and to biodiversity and geological interests within the wider environment.	
5.3.9	The most important sites for biodiversity are those identified through international conventions and European Directives. The Habitats Regulations provide statutory protection for these sites but do not provide statutory protection for potential Special Protection Areas (pSPAs) before they have been classified as a Special Protection Area. For the purposes of considering development proposals affecting them, as a matter of policy the Government wishes pSPAs to be considered in the same way as if they had already been classified. Listed Ramsar sites should, also as a matter of policy, receive the same protection	
5.3.10	Many SSSIs are also designated as sites of international importance and will be protected accordingly. Those that are not, or those features of SSSIs not covered by an international designation, should be given a high degree of protection. All National Nature Reserves are notified	

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special interest features is likely, an exception should only be made where the benefits (including need) of the development at this site101, clearly outweigh both the impacts that it is likely to have on the features of the site that make it of special scientific interest and any broader impacts on the national network of SSSIs. The IPC should use requirements and/or planning obligations to mitigate the harmful aspects of the development and, where possible, to ensure the conservation and enhancement of the site's biodiversity or geological interest.

- 5.3.13 Sites of regional and local biodiversity and geological interest, which include Regionally Important Geological Sites, Local Nature Reserves and Local Sites, have a fundamental role to play in meeting overall national biodiversity targets; contributing to the quality of life and the well-being of the community; and in supporting research and education. The IPC should give due consideration to such regional or local designations. However, given the need for new infrastructure, these designations should not be used in themselves to refuse development consent.
- 5.3.15 Development proposals provide many opportunities for building-in beneficial biodiversity or geological features as part of good design. When considering proposals, the IPC should maximise such opportunities in and around developments, using requirements or planning obligations where appropriate.
- 5.3.17 Other species and habitats have been identified as being of principal importance for the conservation of biodiversity in England and Wales and thereby requiring conservation action. The IPC should ensure that these species and habitats are protected from the adverse effects of development by using requirements or planning obligations. The IPC should refuse consent where harm to the habitats or species and their habitats would result, unless the benefits (including need) of the development outweigh that harm. In this context the IPC should give substantial weight to any such harm to the detriment of biodiversity features of national or regional importance which it considers may result from a proposed development.
- 5.3.18 The applicant should include appropriate mitigation measures as an integral part of the proposed development. In particular, the applicant should demonstrate that:
 - during construction, they will seek to ensure that activities will be confined to the minimum areas required for the works:
 - during construction and operation best practice will be followed to ensure that risk of disturbance or damage to species or habitats is minimised, including as a consequence of transport access arrangements;
 - · habitats will, where practicable, be restored after construction works have finished; and
 - opportunities will be taken to enhance existing habitats and, where practicable, to create new habitats of value within the site landscaping proposals.

5.6: Dust, odour, artificial light, smoke, steam and insect infestation

5.6.3 For energy NSIPs of the type covered by this NPS, some impact on amenity for local communities is. It has been identified that air quality changes could occur though dust and changes in likely to be unavoidable. The aim should be to keep impacts to a minimum, and at a level that is acceptable.

pollutant levels during construction works. Changes in air quality are not anticipated during the operation or decommissioning phases of the Proposed Development.

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5.6.4 The applicant should assess the potential for insect infestation and emissions of odour, dust, steam, smoke and artificial light to have a detrimental impact on amenity, as part of the Environmental Statement.

5.6.5

In particular, the assessment provided by the applicant should describe:

- the type, quantity and timing of emissions;
- aspects of the development which may give rise to emissions;
- premises or locations that may be affected by the emissions
- effects of the emission on identified premises or locations; and
- measures to be employed in preventing or mitigating the emissions.

5.6.6 The applicant is advised to consult the relevant local planning authority and, where appropriate, the EA about the scope and methodology of the assessment.

5.6.7

The IPC should satisfy itself that:

- an assessment of the potential for artificial light, dust, odour, smoke, steam and insect infestation to have a detrimental impact on amenity has been carried out; and
- that all reasonable steps have been taken, and will be taken, to minimise any such detrimental impacts.

5.6.11 Mitigation measures may include one or more of the following:

- **engineering**: prevention of a specific emission at the point of generation; control, containment and abatement of emissions if generated;
- lay-out: adequate distance between source and sensitive receptors; reduced transport or handling of material; and
- administrative: limiting operating times; restricting activities allowed on the site; implementing management plans.

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Chapter 14: Air Quality of the ES **[EN070008/APP/6.2.14]** concludes that with the mitigation measures, the Proposed Development will have no significant adverse effect on air quality during the construction, operation, and decommissioning.

The Construction Dust Methodology in Appendix 14-1 of the ES **[EN070008/APP/6.4.14.1]** provides further detail regarding the approach to mitigation. The Proposed Development is submitted with a Statutory Nuisance Statement **[EN070008/APP/6.6]** which concludes that with appropriate and embedded mitigation, any adverse impacts can be removed.

5.7: Flood Risk

5.7.4

Applications for energy projects of 1 hectare or greater in Flood Zone 1 in England or Zone A in Wales and all proposals for energy projects located in Flood Zones 2 and 3 in England or Zones B and C in Wales should be accompanied by a flood risk assessment (FRA). An FRA will also be required where an energy project less than 1 hectare may be subject to sources of flooding other than rivers and the sea (for example surface water), or where the EA, Internal Drainage Board or other body have indicated that there may be drainage problems. This should identify and assess the risks of all forms of flooding to and from the project and demonstrate how these flood risks will be managed, taking climate change into account.

effects of the Proposed Development on Water Resources and Flood Risk.

Assessments of groundwater and surface water quality and resource, fluvial geomorphology and flood risk have been carried out in order to identify the potential

significant effects associated with the construction, operation and decommissioning of the

Proposed Development on potentially sensitive receptors.

appendices (including Appendix 11-4: Flood Risk Assessment) assess the likely significant

Chapter 11 of the ES: Water Environment [EN070008/APP/6.2.11] and its associated

5.7.5 The minimum requirements for FRAs are that they should:

- be proportionate to the risk and appropriate to the scale, nature and location of the project;
- consider the risk of flooding arising from the project in addition to the risk of flooding to the project:
- take the impacts of climate change into account, clearly stating the development lifetime over which the assessment has been made:

The pipeline route was selected and designed to reduce the impact on flood risk, avoiding flood zone 2 and 3 areas where possible. However it has been necessary to locate the Immingham Facility and Theddlethorpe Facility in an area of Flood Zone 3 to be suitably located to emitters and the existing LOGGS pipeline respectively.

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- be undertaken by competent people, as early as possible in the process of preparing the proposal;
 - consider both the potential adverse and beneficial effects of flood risk management infrastructure, including raised defences, flow channels, flood storage areas and other artificial features, together with the consequences of their failure;
- consider the vulnerability of those using the site, including arrangements for safe access; consider and quantify the different types of flooding (whether from natural and human sources and including joint and cumulative effects) and identify flood risk reduction measures, so that assessments are fit for the purpose of the decisions being made;
- consider the effects of a range of flooding events including extreme events on people, property, the natural and historic environment and river and coastal processes;
- include the assessment of the remaining (known as 'residual') risk after risk reduction measures
 have been taken into account and demonstrate that this is acceptable for the particular project;
 consider how the ability of water to soak into the ground may change with development, along
 with how the proposed layout of the project may affect drainage systems
- consider if there is a need to be safe and remain operational during a worst case flood event over the development's lifetime; and
- be supported by appropriate data and information, including historical information on previous events.
- Applicants for projects which may be affected by, or may add to, flood risk should arrange preapplication discussions with the EA, and, where relevant, other bodies such as Internal Drainage
 Boards, sewerage undertakers, navigation authorities, highways authorities and reservoir owners
 and operators. Such discussions should identify the likelihood and possible extent and nature of the
 flood risk, help scope the FRA, and identify the information that will be required by the IPC to reach
 a decision on the application when it is submitted. The IPC should advise applicants to undertake
 these steps where they appear necessary, but have not yet been addressed.
- 5.7.8 If the EA has concerns about the proposal on flood risk grounds, the applicant should discuss these concerns with the EA and take all reasonable steps to agree ways in which the proposal might be amended, or additional information provided, which would satisfy the Environment Agency's concerns
- 5.7.9 In determining an application for development consent, the IPC should be satisfied that where relevant:
 - the application is supported by an appropriate FRA;
 - the Sequential Test has been applied as part of site selection
 - a sequential approach has been applied at the site level to minimise risk by directing the most vulnerable uses to areas of lowest flood risk
 - the proposal is in line with any relevant national and local flood risk management strategy114;
 priority has been given to the use of sustainable drainage systems (SuDs) (as required in the next paragraph on National Standards); and

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The Sequential Test included in the FRA was carried out to assess the flood risk for the Proposed Development and to direct it to areas of lowest probability of flooding (flood zone 1) where possible. Elements of the Proposed Development including the Immingham Facility, Theddlethorpe Facility and sections of the pipeline are located in Flood Zones 2 & 3. The Proposed Development is classed as 'Essential Infrastructure' which is considered to be acceptable in the Flood Zones 1 and 2 and also in Flood Zone 3 where the requirements of an Exception Test are met.

The main potential impacts relating to construction include:

- increased surface water runoff and changes to existing runoff rates through increases in impermeable areas.
- temporary impacts to local hydromorphology due to watercourse crossings (open cut pipeline crossing and temporary haul roads)
- impacts to water quality from the mobilisation of fine sediment to water features effecting water quality through run off or scour,
- mobilisation of oils, cement or other chemicals effecting water quality,
- changes to the existing flow regime of watercourses as a result of crossings; and potential increase in flood risk elsewhere due to available compensatory floodplain storage is being displaced.

The main potential impacts relating to operation include increased surface water run off through increases in impermeable areas.

With the incorporation of embedded design mitigation and additional mitigation, the significance of residual effects for the Proposed Development on the water environment are defined as minor adverse to negligible and therefore not considered to be significant.

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- in flood risk areas the project is appropriately flood resilient and resistant, including safe access and escape routes where required, and that any residual risk can be safely managed over the lifetime of the development
- For construction work which has drainage implications, approval for the project's drainage system will form part of the development consent issued by the IPC. The IPC will therefore need to be satisfied that the proposed drainage system complies with any National Standards published by Ministers under Paragraph 5(1) of Schedule 3 to the Flood and Water Management Act 2010. In addition, the development consent order, or any associated planning obligations, will need to make provision for the adoption and maintenance of any SuDS, including any necessary access rights to property. The IPC should be satisfied that the most appropriate body is being given the responsibility for maintaining any SuDS, taking into account the nature and security of the infrastructure on the proposed site. The responsible body could include, for example, the applicant, the landowner, the relevant local authority, or another body, such as an Internal Drainage Board.
- 5.7.11 If the EA continues to have concerns and objects to the grant of development consent on the grounds of flood risk, the IPC can grant consent, but would need to be satisfied before deciding whether or not to do so that all reasonable steps have been taken by the applicant and the EA to try to resolve the concerns.
- 5.7.12 The IPC should not consent development in Flood Zone 2 in England or Zone B in Wales unless it is satisfied that the sequential test requirements have been met. It should not consent development in Flood Zone 3 or Zone C unless it is satisfied that the Sequential and Exception Test requirements have been met. The technology-specific NPSs set out some exceptions to the application of the sequential test. However, when seeking development consent on a site allocated in a development plan through the application of the Sequential Test, informed by a strategic flood risk assessment, applicants need not apply the Sequential Test, but should apply the sequential approach to locating development within the site.
- 5.7.13 Preference should be given to locating projects in Flood Zone 1 in England or Zone A in Wales. If there is no reasonably available site in Flood Zone 1 or Zone A, then projects can be located in Flood Zone 2 or Zone B. If there is no reasonably available site in Flood Zones 1 or 2 or Zones A & B, then nationally significant energy infrastructure projects can be located in Flood Zone 3 or Zone C subject to the Exception Test. Consideration of alternative sites should take account of the policy on alternatives set out in Section 4.4.
- 5.7.14 If, following application of the sequential test, it is not possible, consistent with wider sustainability objectives, for the project to be located in zones of lower probability of flooding than Flood Zone 3 or Zone C, the Exception Test can be applied. The test provides a method of managing flood risk while still allowing necessary development to occur
- 5.7.15 The Exception Test is only appropriate for use where the sequential test alone cannot deliver an acceptable site, taking into account the need for energy infrastructure to remain operational during floods. It may also be appropriate to use it where as a result of the alternative site(s) at lower risk of flooding being subject to national designations such as landscape, heritage and nature conservation

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designations, for example Areas of Outstanding Natural Beauty (AONBs), Sites of Special Scientific Interest (SSSIs) and World Heritage Sites (WHS) it would not be appropriate to require the development to be located on the alternative site(s).

- 5.7.16 All three elements of the test will have to be passed for development to be consented. For the Exception Test to be passed:
 - it must be demonstrated that the project provides wider sustainability benefits to the community116 that outweigh flood risk;
 - the project should be on developable, previously developed land or, if it is not on previously
 developed land, that there are no reasonable alternative sites on developable previously
 developed land a FRA must demonstrate that the project will be safe, without increasing flood
 risk elsewhere subject to the exception below and, where possible, will reduce flood risk overall.
- 5.7.17 Exceptionally, where an increase in flood risk elsewhere cannot be avoided or wholly mitigated, the IPC may grant consent if it is satisfied that the increase in present and future flood risk can be mitigated to an acceptable level and taking account of the benefits of, including the need for, nationally significant energy infrastructure as set out in Part 3 above. In any such case the IPC should make clear how, in reaching its decision, it has weighed up the increased flood risk against the benefits of the project, taking account of the nature and degree of the risk, the future impacts on climate change, and advice provided by the EA and other relevant bodies.
- 5.7.21 The surface water drainage arrangements for any project should be such that the volumes and peak flow rates of surface water leaving the site are no greater than the rates prior to the proposed project, unless specific off-site arrangements are made and result in the same net effect.
- 5.7.22 It may be necessary to provide surface water storage and infiltration to limit and reduce both the peak rate of discharge from the site and the total volume discharged from the site. There may be circumstances where it is appropriate for infiltration facilities or attenuation storage to be provided outside the project site, if necessary through the use of a planning obligation.
- 5.7.23 The sequential approach should be applied to the layout and design of the project. More vulnerable uses should be located on parts of the site at lower probability and residual risk of flooding. Applicants should seek opportunities to use open space for multiple purposes such as amenity, wildlife habitat and flood storage uses. Opportunities should be taken to lower flood risk by reducing the built footprint of previously developed sites and using SuDS.

5.8: Historic Environment

- 5.8.4 There are heritage assets with archaeological interest that are not currently designated as scheduled monuments, but which are demonstrably of equivalent significance. These include:
 - those that have yet to be formally assessed for designation;
 - those that have been assessed as being designatable but which the Secretary of State has
 decided not to designate; and

The historic environment has been considered through the design process of the Proposed Development. Temporary and permanent likely significant effects arising from impacts during construction, operation and decommissioning of the Proposed Development have been considered and the full extent is detailed in Chapter 8: Historic Environment of the ES [EN070008/APP/6.2.8].

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- those that are incapable of being designated by virtue of being outside the scope of the Ancient Monuments and Archaeological Areas Act 1979
- 5.8.5 The absence of designation for such heritage assets does not indicate lower significance. If the evidence before the IPC indicates to it that a non designated heritage asset of the type described may be affected by the proposed development then the heritage asset should be considered subject to the same policy considerations as those that apply to designated heritage assets.
- 5.8.6 The IPC should also consider the impacts on other non-designated heritage assets, as identified either through the development plan making process (local listing) or through the IPC's decision making process on the basis of clear evidence that the assets have a heritage significance that merits consideration in its decisions, even though those assets are of lesser value than designated heritage assets.
- As part of the ES (see Section 4.2) the applicant should provide a description of the significance of the heritage assets affected by the proposed development and the contribution of their setting to that significance. The level of detail should be proportionate to the importance of the heritage assets and no more than is sufficient to understand the potential impact of the proposal on the significance of the heritage asset. As a minimum the applicant should have consulted the relevant Historic Environment Record (or, where the development is in English or Welsh waters, English Heritage or Cadw) and assessed the heritage assets themselves using expertise where necessary according to the proposed development's impact
- 5.8.9 Where a development site includes, or the available evidence suggests it has the potential to include, heritage assets with an archaeological interest, the applicant should carry out appropriate desk-based assessment and, where such desk-based research is insufficient to properly assess the interest, a field evaluation. Where proposed development will affect the setting of a heritage asset, representative visualisations may be necessary to explain the impact.
- 5.8.10 The applicant should ensure that the extent of the impact of the proposed development on the significance of any heritage assets affected can be adequately understood from the application and supporting documents.
- 5.8.11 In considering applications, the IPC should seek to identify and assess the particular significance of any heritage asset that may be affected by the proposed development, including by development affecting the setting of a heritage asset, taking account of:
 - evidence provided with the application:
 - any designation records
 - the Historic Environment Record, and similar sources of information:
 - the heritage assets themselves:
 - · the outcome of consultations with interested parties; and
 - where appropriate and when the need to understand the significance of the heritage asset demands it, expert advice

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The historic environment assessment has identified likely significant residual effects on non-designated buried archaeological remains at one site due to construction of the pipeline, at Section 5 – cropmark enclosures at Theddlethorpe.

The historic environment assessment has identified likely significant residual effects on three designated heritage assets, the grade II* listed Church of St Edmund in Riby, the grade II listed Ashleigh Farm at Theddlethorpe, and the grade II listed Manor House and non-designated former parkland at Barnoldby le Beck during the construction phase. Where impacts cannot be avoided, mitigation will take the form of archaeological investigation and recording, to be undertaken as advanced works. A detailed archaeological mitigation strategy will be developed and agreed during Examination. However, it is anticipated that the following mitigation approaches may be relevant.

Operation of the Theddlethorpe Facility would have significant residual effects on the setting of one designated heritage asset (the grade II listed Ashleigh Farm). This effect is assessed as Moderate adverse and would be permanent during the operational lifetime of the Proposed Development. Decommissioning of the Theddlethorpe Facility would reverse this effect and reinstate the existing baseline conditions. Residual effects on other built heritage assets due to operation and decommissioning of the Proposed Development are assessed as Minor or Negligible adverse: these temporary effects are not considered to be significant.

It is considered that the benefits of the Proposed Development to the public and the wider community outweigh any harm to designated and non-designated heritage assets. These benefits include that the Proposed Development will help the government to achieve its target for Net Zero by 2050, reduce greenhouse gas emissions, provide low carbon energy supplies, retain existing employment at local industry and generate new investment in the region.

It is assessed that the operation and decommissioning phases of the Proposed Development would not result in any additional significant effects on buried archaeological remains.

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5.8.17	Where loss of significance of any heritage asset is justified on the merits of the new development, the IPC should consider imposing a condition on the consent or requiring the applicant to enter into an obligation that will prevent the loss occurring until it is reasonably certain that the relevant part of the development is to proceed.	
5.8.18	When considering applications for development affecting the setting of a designated heritage asset, the IPC should treat favourably applications that preserve those elements of the setting that make a positive contribution to, or better reveal the significance of, the asset. When considering applications that do not do this, the IPC should weigh any negative effects against the wider benefits of the application. The greater the negative impact on the significance of the designated heritage asset, the greater the benefits that will be needed to justify approval.	
5.8.20	Where the loss of the whole or a material part of a heritage asset's significance is justified, the IPC should require the developer to record and advance understanding of the significance of the heritage asset before it is lost. The extent of the requirement should be proportionate to the nature and level of the asset's significance. Developers should be required to publish this evidence and deposit copies of the reports with the relevant Historic Environment Record. They should also be required to deposit the archive generated in a local museum or other public depository willing to receive it.	
5.8.21	Where appropriate, the IPC should impose requirements on a consent that such work is carried out in a timely manner in accordance with a written scheme of investigation that meets the requirements of this Section and has been agreed in writing with the relevant Local Authority (where the development is in English waters, the Marine Management Organisation and English Heritage, or where it is in Welsh waters, the MMO and Cadw)) and that the completion of the exercise is properly secured	
5.8.22	Where the IPC considers there to be a high probability that a development site may include as yet undiscovered heritage assets with archaeological interest, the IPC should consider requirements to ensure that appropriate procedures are in place for the identification and treatment of such assets discovered during construction.	
5.9: Landso	ape and Visual	
5.9.5	The applicant should carry out a landscape and visual assessment and report it in the ES. A number of guides have been produced to assist in addressing landscape issues. The landscape and visual assessment should include reference to any landscape character assessment and associated studies as a means of assessing landscape impacts relevant to the proposed project. The applicant's assessment should also take account of any relevant policies based on these assessments in local development documents in England and local development plans in Wales.	Chapter 7: Landscape and Visual of the ES [EN070008/APP/6.2.7] and its relevant appendices provide an assessment of the likely significant effects of the Proposed Development on landscape character and visual amenity. A Landscape and Visual Impact Assessment (LVIA) has been prepared to support the assessment of relevant impacts and is included in Chapter 7. As the proposed pipeline would be buried and not affect landscape character, operational phase effects associated
5.9.6	The applicant's assessment should include the effects during construction of the project and the effects of the completed development and its operation on landscape components and landscape character.	would be buried and not affect landscape character, operational phase effects associated with the pipeline are scoped out of the LVIA. The LVIA confirms that the pipeline passes through the Lincolnshire Wolds Area of Outstanding Natural Beauty (AONB) and passes close to an area identified as an Area of Great Landscape Value (AGLV).
5.9.7	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 effects, including on local amenity, and nature conservation.	It is confirmed by Chapter 7 and LVIA that the main impact on landscape takes place during the construction phase of the Proposed Development. The main potential impacts

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- 5.9.8 Landscape effects depend on the existing character of the local landscape, its current quality, how highly it is valued and its capacity to accommodate change. All of these factors need to be considered in judging the impact of a project on landscape. 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.
- 5.9.9 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 decisions. 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.
- 5.9.10 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 national considerations, and the impact of consenting or not consenting 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 moderated.
- 5.9.11 The IPC should ensure that any projects consented in these designated areas should be carried out to high environmental standards, including through the application of appropriate requirements where necessary.
- The duty to have regard to the purposes of nationally designated areas also applies when considering applications for projects outside the boundaries of these areas which may have impacts within them. The aim should be to avoid compromising the purposes of designation and such projects should be designed sensitively given the various siting, operational, and other relevant constraints. This should include projects in England which may have impacts on National Scenic Areas in Scotland.
- 5.9.13 The fact that a proposed project will be visible from within a designated area should not in itself be a reason for refusing consent.
- 5.9.14 Outside nationally designated areas, there are local landscapes that may be highly valued locally and protected by local designation. Where a local development document in England or a local development plan in Wales has policies based on landscape character assessment, these should be

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relating to construction include changes to views through the addition of detracting visual features associated with the construction process. This would result in short-term significant adverse effects at four representative viewpoints. Short term significant visual effects for the construction phase would be limited to highly sensitive viewpoints located in close proximity to the pipeline route.

Mitigation measures have been incorporated into the design to reduce. This includes siting and routing, construction management, and landscape and design measures, with the Proposed Development designed to reduce the impact on the landscape where practicable. Although the measures set out would assist in reducing the impacts at the identified locations, the reduction would be insufficient to reduce the impact rating and therefore effects to below significant levels.

With the incorporation of embedded design mitigation and additional mitigation, there would be significant effects on the Lincolnshire Wolds AONB during construction. Effects would reduce to not significant during operation and decommissioning. The remaining landscape receptors will experience not significant effects during all stages of the Proposed Development. Whilst there are temporary significant impacts, the landscape and visual impact of the Proposed Development can be considered outweighed by the clear demonstrable benefits of the proposed national significant infrastructure.

ES Chapter 7: Landscape and Visual **[EN070008/APP/6.2.7]** is supported by appendices including:

- Appendix 7-1: Representative Viewpoints: and
- Appendix 7-2: Visualisations

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	paid particular attention. However, local landscape designations should not be used in themselves to refuse consent, as this may unduly restrict acceptable development.		
5.9.15	The scale of such projects means that they will often be visible within many miles of the site of the proposed infrastructure. The IPC should judge whether any adverse impact on the landscape would be so damaging that it is not offset by the benefits (including need) of the project.		
5.9.16	In reaching a judgment, the IPC should consider whether any adverse impact is temporary, such as during construction, and/or whether any adverse impact on the landscape will be capable of being reversed in a timescale that the IPC considers reasonable.		
5.9.17	The IPC should consider whether the project has been designed carefully, taking account of environmental effects on the landscape and siting, operational and other relevant constraints, to minimise harm to the landscape, including by reasonable mitigation.		
5.9.18	All proposed energy infrastructure is likely to have visual effects for many receptors around proposed sites. The IPC will have to judge whether the visual effects on sensitive receptors, such as local residents, and other receptors, such as visitors to the local area, outweigh the benefits of the project. Coastal areas are particularly vulnerable to visual intrusion because of the potential high visibility of development on the foreshore, on the skyline and affecting views along stretches of undeveloped coast.		
5.9.19	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. This may assist the IPC in judging the weight it should give to the assessed visual impacts of the proposed development		
5.9.21	Reducing the scale of a project can help to mitigate the visual and landscape effects of a proposed project. However, reducing the scale or otherwise amending the design of a proposed energy infrastructure project may result in a significant operational constraint and reduction in function – for example, the electricity generation output. There may, however, be exceptional circumstances, where mitigation could have a very significant benefit and warrant a small reduction in function. In these circumstances, the IPC may decide that the benefits of the mitigation to reduce the landscape and/or visual effects outweigh the marginal loss of function.		
5.9.22	Within a defined site, adverse landscape and visual effects 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.		
5.9.23	Depending on the topography of the surrounding terrain and areas of population it may be appropriate to undertake landscaping off site. For example, filling in gaps in existing tree and hedge lines would mitigate the impact when viewed from a more distant vista.		
5.10 Land ι	.10 Land use including open space, green infrastructure & Green Belt		

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5.10.5	The ES (see Section 4.2) should identify existing and proposed land uses near the project, any effects of replacing an existing development or use of the site with the proposed project or preventing a development or use on a neighbouring site from continuing. Applicants should also assess any effects of precluding a new development or use proposed in the development plan.	The pipeline route has been designed to avoid built development and proposed major development allocations in adopted and emerging local plans. Existing land use of open space, sports and recreational facilities is not affected during the operational stage of the Proposed Development, due to the fact that the pipeline would be buried and operating impacts because of this are minimal.
5.10.6	Applicants will need to consult the local community on their proposals to build on open space, sports or recreational buildings and land. Taking account of the consultations, applicants should consider providing new or additional open space including green infrastructure, sport or recreation facilities, to substitute for any losses as a result of their proposal. Applicants should use any up-to-date local authority assessment or, if there is none, provide an independent assessment to show whether the existing open space, sports and recreational buildings and land is surplus to requirements	The majority of the Proposed Development is located in rural areas, Chapter 10: Agriculture and Soil of the ES [EN070008/APP/6.2.10] presents an assessment of the likely significant effects of the Proposed Development on agriculture and soils during construction and decommissioning, including consideration of impacts on soil resources and agricultural land.
5.10.7	During any pre-application discussions with the applicant the LPA should identify any concerns it has about the impacts of the application on land use, having regard to the development plan and relevant applications and including, where relevant, whether it agrees with any independent assessment that the land is surplus to requirements.	The loss of the vast majority of the grade 2 and 3a BMV agricultural land is temporary and reversible and the permanent loss of grade 2 and 3a BMV land falls significantly below the 20 ha threshold above which effects are considered to be significant. Although both BMV and non-BMV land would be directly impacted by the Proposed Development the majority of impacts will be temporary and for the duration of the construction phase only, as all land
5.10.8	Applicants should seek to minimise impacts on the best and most versatile agricultural land (defined as land in grades 1, 2 and 3a of the Agricultural Land Classification) and preferably use land in areas of poorer quality (grades 3b, 4 and 5) except where this would be inconsistent with other sustainability considerations. Applicants should also identify any effects and seek to minimise impacts on soil quality taking into account any mitigation measures proposed. For developments on previously developed land, applicants should ensure that they have considered the risk posed by land contamination.	of impacts will be temporary and for the duration of the construction phase only, as all land within the pipeline corridor, temporary compounds and temporary accesses will be reinstated immediately following construction to its original condition and land use. The residual impacts to agricultural land as a result of the temporary development are assessed within the ES as not significant.
5.10.9	Applicants should safeguard any mineral resources on the proposed site as far as possible, taking into account the long-term potential of the land use after any future decommissioning has taken place.	
5.10.10	The general policies controlling development in the countryside apply with equal force in Green Belts but there is, in addition, a general presumption against inappropriate development within them. Such development should not be approved except in very special circumstances. Applicants should therefore determine whether their proposal, or any part of it, is within an established Green Belt and if it is, whether their proposal may be inappropriate development within the meaning of Green Belt policy (see paragraph 5.10.17 below).	
5.10.11	However, infilling or redevelopment of major developed sites in the Green Belt, if identified as such by the local planning authority, may be suitable for energy infrastructure. It may help to secure jobs and prosperity without further prejudicing the Green Belt or offer the opportunity for environmental improvement. Applicants should refer to relevant criteria on such developments in Green Belts	
5.10.12	An applicant may be able to demonstrate that a particular type of energy infrastructure, such as an underground pipeline, which, in Green Belt policy terms, may be considered as an "engineering operation" rather than a building is not in the circumstances of the application inappropriate development. It may also be possible for an applicant to show that the physical characteristics of a	

designation

5.10.19

Overarching National Policy Statement for Energy (EN-1), 2011

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characteristics are such that it has limited or no impact on the fundamental purposes of Green Belt

Although in the case of much energy infrastructure there may be little that can be done to mitigate the direct effects of an energy project on the existing use of the proposed site (assuming that some

proposed overhead line development or wind farm are such that it has no adverse effects which conflict with the fundamental purposes of Green Belt designation. 5.10.13 Where the project conflicts with a proposal in a development plan, the IPC should take account of the stage which the development plan document in England or local development plan in Wales has reached in deciding what weight to give to the plan for the purposes of determining the planning significance of what is replaced, prevented or precluded. The closer the development plan document in England or local development plan in Wales is to being adopted by the LPA, the greater weight which can be attached to it. 5.10.14 The IPC should not grant consent for development on existing open space, sports and recreational buildings and land unless an assessment has been undertaken either by the local authority or independently, which has shown the open space or the buildings and land to be surplus to requirements or the IPC determines that the benefits of the project (including need), outweigh the potential loss of such facilities, taking into account any positive proposals made by the applicant to provide new, improved or compensatory land or facilities. The loss of playing fields should only be allowed where applicants can demonstrate that they will be replaced with facilities of equivalent or better quantity or quality in a suitable location. 5.10.15 The IPC should ensure that applicants do not site their scheme on the best and most versatile agricultural land without justification. It should give little weight to the loss of poorer quality agricultural land (in grades 3b, 4 and 5), except in areas (such as uplands) where particular agricultural practices may themselves contribute to the quality and character of the environment or the local economy. 5.10.16 In considering the impact on maintaining coastal recreation sites and features, the IPC should expect applicants to have taken advantage of opportunities to maintain and enhance access to the coast. In doing so the IPC should consider the implications for development of the creation of a continuous signed and managed route around the coast, as provided for in the Marine and Coastal Access Act 2009. 5.10.17 When located in the Green Belt, energy infrastructure projects are likely to comprise 'inappropriate development'. Inappropriate development is by definition harmful to the Green Belt and the general planning policy presumption against it applies with equal force in relation to major energy infrastructure projects. The IPC will need to assess whether there are very special circumstances to justify inappropriate development. Very special circumstances will not exist unless the harm by reason of inappropriateness, and any other harm, is outweighed by other considerations. In view of the presumption against inappropriate development, the IPC will attach substantial weight to the harm to the Green Belt when considering any application for such development while taking account, in relation to renewable and linear infrastructure, of the extent to which its physical

Relevant Policy Text: Requirement of the Policy	Compliance Assessment
at least of that use can still be retained post project construction) applicants should nevertheless seek to minimise these effects and the effects on existing or planned uses near the site by the application of good design principles, including the layout of the project.	
Where green infrastructure is affected, the IPC should consider imposing requirements to ensure the connectivity of the green infrastructure network is maintained in the vicinity of the development and that any necessary works are undertaken, where possible, to mitigate any adverse impact and, where appropriate, to improve that network and other areas of open space including appropriate access to new coastal access routes.	
The IPC should also consider whether mitigation of any adverse effects on green infrastructure and other forms of open space is adequately provided for by means of any planning obligations, for example exchange land and provide for appropriate management and maintenance agreements. Any exchange land should be at least as good in terms of size, usefulness, attractiveness and quality and, where possible, at least as accessible. Alternatively, where Sections 131 and 132 of the Planning Act 2008 apply, replacement land provided under those sections will need to conform to the requirements of those sections.	
Where a proposed development has an impact upon a Mineral Safeguarding Area (MSA), the IPC should ensure that appropriate mitigation measures have been put in place to safeguard mineral resources.	
Where a project has a sterilising effect on land use (for example in some cases under transmission lines) there may be scope for this to be mitigated through, for example, using or incorporating the land for nature conservation or wildlife corridors or for parking and storage in employment areas.	
Rights of way, National Trails and other rights of access to land are important recreational facilities for example for walkers, cyclists and horse riders. The IPC should expect applicants to take appropriate mitigation measures to address adverse effects on coastal access, National Trails and other rights of way. Where this is not the case the IPC should consider what appropriate mitigation requirements might be attached to any grant of development consent.	
	at least of that use can still be retained post project construction) applicants should nevertheless seek to minimise these effects and the effects on existing or planned uses near the site by the application of good design principles, including the layout of the project. Where green infrastructure is affected, the IPC should consider imposing requirements to ensure the connectivity of the green infrastructure network is maintained in the vicinity of the development and that any necessary works are undertaken, where possible, to mitigate any adverse impact and, where appropriate, to improve that network and other areas of open space including appropriate access to new coastal access routes. The IPC should also consider whether mitigation of any adverse effects on green infrastructure and other forms of open space is adequately provided for by means of any planning obligations, for example exchange land and provide for appropriate management and maintenance agreements. Any exchange land should be at least as good in terms of size, usefulness, attractiveness and quality and, where possible, at least as accessible. Alternatively, where Sections 131 and 132 of the Planning Act 2008 apply, replacement land provided under those sections will need to conform to the requirements of those sections. Where a proposed development has an impact upon a Mineral Safeguarding Area (MSA), the IPC should ensure that appropriate mitigation measures have been put in place to safeguard mineral resources. Where a project has a sterilising effect on land use (for example in some cases under transmission lines) there may be scope for this to be mitigated through, for example, using or incorporating the land for nature conservation or wildlife corridors or for parking and storage in employment areas. Rights of way, National Trails and other rights of access to land are important recreational facilities for example for walkers, cyclists and horse riders. The IPC should expect applicants to take appropriate mitigation measures to add

- Factors that will determine the likely noise impact include: 5.11.3
 - the inherent operational noise from the proposed development, and its characteristics;
 - the proximity of the proposed development to noise sensitive premises (including residential properties, schools and hospitals) and noise sensitive areas (including certain parks and open spaces);
 - the proximity of the proposed development to quiet places and other areas that are particularly valued for their acoustic environment or landscape quality; and
 - the proximity of the proposed development to designated sites where noise may have an adverse impact on protected species or other wildlife
- 5.11.4 Where noise impacts are likely to arise from the proposed development, the applicant should include the following in the noise assessment:

The outcome of the assessment of likely significant environmental effects arising from the Proposed Development on noise and vibration during the construction, operation and decommissioning stages are reported in Chapter 13: Noise and Vibration of the ES [EN070008/APP/6.2.13] and relevant appendices.

The Noise Policy Statement for England and other relevant national policies, regulations, guidance and standards have been considered in the environmental assessment of the potential noise and vibration impacts generated by the Proposed Development. A noise and vibration assessment [EN070008/APP/6.2.13] has informed the EIA.

Potential noise and vibration effects during the construction phase are likely to result from work activities and these will be temporary and reversible with no lasting residual effect.

Paragraph Relevant Policy Text: Requirement of the Policy

- a description of the noise generating aspects of the development proposal leading to noise impacts, including the identification of any distinctive tonal, impulsive or low frequency characteristics of the noise;
- identification of noise sensitive premises and noise sensitive areas that may be affected;
- the characteristics of the existing noise environment;
- a prediction of how the noise environment will change with the proposed development;
- in the shorter term such as during the construction period;
- in the longer term during the operating life of the infrastructure;
- at particular times of the day, evening and night as appropriate.
- an assessment of the effect of predicted changes in the noise environment on any noise sensitive premises and noise sensitive areas; and
- measures to be employed in mitigating noise.

The nature and extent of the noise assessment should be proportionate to the likely noise impact.

- 5.11.5 The noise impact of ancillary activities associated with the development, such as increased road and rail traffic movements, or other forms of transportation, should also be considered.
- 5.11.6 Operational noise, with respect to human receptors, should be assessed using the principles of the relevant British Standards and other guidance. Further information on assessment of particular noise sources may be contained in the technology-specific NPSs. In particular, for renewables (EN-3) and electricity networks (EN-5) there is assessment guidance for specific features of those technologies. For the prediction, assessment and management of construction noise, reference should be made to any relevant British Standards and other guidance which also give examples of mitigation strategies.
- The applicant should consult EA and Natural England (NE), or the Countryside Council for Wales (CCW), as necessary and in particular with regard to assessment of noise on protected species or other wildlife. The results of any noise surveys and predictions may inform the ecological assessment. The seasonality of potentially affected species in nearby sites may also need to be taken into account.
- The project should demonstrate good design through selection of the quietest cost-effective plant available; containment of noise within buildings wherever possible; optimisation of plant layout to minimise noise emissions; and, where possible, the use of landscaping, bunds or noise barriers to reduce noise transmission
- 5.11.9 The IPC should not grant development consent unless it is satisfied that the proposals will meet the following aims:
 - avoid significant adverse impacts on health and quality of life from noise;
 - mitigate and minimise other adverse impacts on health and quality of life from noise; and
 - where possible, contribute to improvements to health and quality of life through the effective management and control of noise.
- 5.11.10 When preparing the development consent order, the IPC should consider including measurable requirements or specifying the mitigation measures to be put in place to ensure that noise levels do not exceed any limits specified in the development consent.

Compliance Assessment

An assessment of these effects is included in the ES [EN070008/APP/6.2.13]. During the operational phase of the Project the Proposed Development would be installed below ground and would not produce any operational noise or vibration. No significant effects on sensitive receptors have been identified as a result of noise from construction traffic movements or operational noise associated with the Proposed Development

Paragraph Relevant Policy Text: Requirement of the Policy

Compliance Assessment

- 5.11.11 The IPC should consider whether mitigation measures are needed both for operational and construction noise over and above any which may form part of the project application. In doing so the IPC may wish to impose requirements. Any such requirements should take account of the guidance set out in Circular 11/95 (see Section 4.1) or any successor to it.
- 5.11.12 Mitigation measures may include one or more of the following:
 - engineering: reduction of noise at point of generation and containment of noise generated;
 - lay-out: adequate distance between source and noise-sensitive receptors; incorporating good design to minimise noise transmission through screening by natural barriers, or other buildings; and
 administrative: restricting activities allowed on the site; specifying acceptable noise limits; and taking into account seasonality of wildlife in nearby designated sites.

5.12: Socio-economic

- 5.12.2 Where the project is likely to have socio-economic impacts at local or regional levels, the applicant should undertake and include in their application an assessment of these impacts as part of the ES (see Section 4.2).
- 5.12.3 This assessment should consider all relevant socio-economic impacts, which may include:
 - the creation of jobs and training opportunities;
 - the provision of additional local services and improvements to local infrastructure, including the
 provision of educational and visitor facilities;
 - effects on tourism:
 - the impact of a changing influx of workers during the different construction, operation and
 decommissioning phases of the energy infrastructure. This could change the local population
 dynamics and could alter the demand for services and facilities in the settlements nearest to the
 construction work (including community facilities and physical infrastructure such as energy,
 water, transport and waste). There could also be effects on social cohesion depending on how
 populations and service provision change as a result of the development; and
 - cumulative effects if development consent were to be granted to for a number of projects
 within a region and these were developed in a similar timeframe, there could be some short-term
 negative effects, for example a potential shortage of construction workers to meet the needs of
 other industries and major projects within the region
- 5.12.4 Applicants should describe the existing socio-economic conditions in the areas surrounding the proposed development and should also refer to how the development's socio-economic impacts correlate with local planning policies.
- 5.12.6 The IPC should have regard to the potential socio-economic impacts of new energy infrastructure identified by the applicant and from any other sources that the IPC considers to be both relevant and important to its decision.
- 5.12.7 The IPC may conclude that limited weight is to be given to assertions of socio-economic impacts that are not supported by evidence (particularly in view of the need for energy infrastructure as set out in this NPS).

Chapter 16: Socio-Economics of the ES **[EN070008/APP/6.2.16]** presents an assessment of the likely significant effects of the Proposed Development on socio-economics during construction and decommissioning. The chapter includes considerations of impacts on the following:

- Employment and local economy;
- · Users of Public Rights of Way (PRoW);
- Community severance; and
- Private assets.

Chapter 16 acknowledges that socio-economic impacts are interrelated with other environmental effects and so should be read in conjunction with:

Chapter 7: Landscape and Visual:

Chapter 12: Traffic and Transport:

Chapter 13: Noise and Vibration; and

Chapter 14: Air Quality

Chapter 16 acknowledges that although the construction period is temporary the construction of the Proposed Development will require 197 full-time equivalent construction jobs on site per day over the period. The assessment considers the effects of whether these positions will be taken up by residents within the labour market catchment area of workers living outside the effect area. The Chapter concludes that there will be no potential significant adverse socio-economic effects during the construction or decommissioning phase of the Proposed Development and so no extra mitigation measures are presented as part of the DCO.

Overarching National Policy Statement for Energy (EN-1), 2011		
Paragraph	Relevant Policy Text: Requirement of the Policy	Compliance Assessment
5.12.8	The IPC should consider any relevant positive provisions the developer has made or is proposing to make to mitigate impacts (for example through planning obligations) and any legacy benefits that may arise as well as any options for phasing development in relation to the socio-economic impacts.	
5.12.9	The IPC should consider whether mitigation measures are necessary to mitigate any adverse socio- economic impacts of the development. For example, high quality design can improve the visual and environmental experience for visitors and the local community alike.	
5.13: Traffic	and transport	
5.13.2	The consideration and mitigation of transport impacts is an essential part of Government's wider policy objectives for sustainable development as set out in Section 2.2 of this NPS.	Chapter 12: Traffic and Transport of the ES [EN070008/APP/6.2.12] and its relevant appendices include an assessment of the likely significant effects of the Proposed Development on the environment in respect of traffic and transport during the construction
5.13.3	If a project is likely to have significant transport implications, the applicant's ES (see Section 4.2) should include a transport assessment, using the NATA/WebTAG methodology stipulated in Department for Transport guidance, or any successor to such methodology. Applicants should consult the Highways Agency and Highways Authorities as appropriate on the assessment and mitigation.	phase. The assessment of construction traffic includes consideration of the present day and future baseline conditions during construction; and the effects of construction traffic on the local road network, including the strategic road network (SRN) as a result of the Proposed Development in terms of the increase in overall vehicle numbers, including HGVs.
5.13.4	Where appropriate, the applicant should prepare a travel plan including demand management measures to mitigate transport impacts. The applicant should also provide details of proposed measures to improve access by public transport, walking and cycling, to reduce the need for parking associated with the proposal and to mitigate transport impacts.	A Transport Assessment has been prepared in Appendix 12-4 of the ES [EN070008/APP/6.4.12.4] to inform the submission. The traffic and transport assessment concludes that significant adverse effects will occur during construction along 5 routes. However mitigation measures have been introduced that are considered to be sufficient to reduce the impact for these routes to an acceptable level.
5.13.5	If additional transport infrastructure is proposed, applicants should discuss with network providers the possibility of co-funding by Government for any third-party benefits. Guidance has been issued in England which explains the circumstances where this may be possible, although the Government cannot guarantee in advance that funding will be available for any given uncommitted scheme at any specified time.	This includes the mitigation measures outlined in the Draft Construction Traffic ManagementPlan (CTMP) in Appendix 12-5 of the ES [EN070008/APP/6.4.12.5] and the ConstructionWorkers Travel Plan (CWTP) which will seek to control the construction vehicle numbers, with these mitigation measures in place.
5.13.6	A new energy NSIP may give rise to substantial impacts on the surrounding transport infrastructure and the IPC should therefore ensure that the applicant has sought to mitigate these impacts, including during the construction phase of the development. Where the proposed mitigation measures are insufficient to reduce the impact on the transport infrastructure to acceptable levels, the IPC should consider requirements to mitigate adverse impacts on transport networks arising from the development, as set out below. Applicants may also be willing to enter into planning obligations for funding infrastructure and otherwise mitigating adverse impacts.	
5.13.7	Provided that the applicant is willing to enter into planning obligations or requirements can be imposed to mitigate transport impacts identified in the NATA/WebTAG transport assessment, with attribution of costs calculated in accordance with the Department for Transport's guidance, then development consent should not be withheld, and appropriately limited weight should be applied to residual effects on the surrounding transport infrastructure.	

Paragraph Relevant Policy Text: Requirement of the Policy

Compliance Assessment

- 5.13.8 Where mitigation is needed, possible demand management measures must be considered and if feasible and operationally reasonable, required, before considering requirements for the provision of new inland transport infrastructure to deal with remaining transport impacts
- 5.13.11 The IPC may attach requirements to a consent where there is likely to be substantial HGV traffic
 - control numbers of HGV movements to and from the site in a specified period during its construction and possibly on the routing of such movements;
 - make sufficient provision for HGV parking, either on the site or at dedicated facilities elsewhere, to avoid 'overspill' parking on public roads, prolonged queuing on approach roads and uncontrolled on-street HGV parking in normal operating conditions; and
 - ensure satisfactory arrangements for reasonably foreseeable abnormal disruption, in consultation with network providers and the responsible police force.
- 5.13.12 If an applicant suggests that the costs of meeting any obligations or requirements would make the proposal economically unviable this should not in itself justify the relaxation by the IPC of any obligations or requirements needed to secure the mitigation.

5.14: Waste Management

- 5.14.2 Sustainable waste management is implemented through the "waste hierarchy", which sets out the priorities that must be applied when managing waste:
 - prevention
 - preparing for reuse
 - recycling
 - other recovery, including energy recovery; and
 - disposal.
- 5.14.4 All large infrastructure projects are likely to generate hazardous and non-hazardous waste. The EA's Environmental Permitting (EP) regime incorporates operational waste management requirements for certain activities. When an applicant applies to the EA for an Environmental Permit, the EA will require the application to demonstrate that processes are in place to meet all relevant EP requirements.
- 5.14.6 The applicant should set out the arrangements that are proposed for managing any waste produced and prepare a Site Waste Management Plan. The arrangements described and Management Plan should include information on the proposed waste recovery and disposal system for all waste generated by the development, and an assessment of the impact of the waste arising from development on the capacity of waste management facilities to deal with other waste arising in the area for at least five years of operation. The applicant should seek to minimise the volume of waste produced and the volume of waste sent for disposal unless it can be demonstrated that this is the best overall environmental outcome.
- 5.14.7 The IPC should consider the extent to which the applicant has proposed an effective system for managing hazardous and non-hazardous waste arising from the construction, operation and decommissioning of the proposed development. It should be satisfied that:

The Proposed Development will aim to prioritise waste prevention, followed by preparing for re-use, recycling and recovery and lastly disposal to landfill in accordance with the waste hierarchy as specified at paragraph 5.14.2. Mitigation measures will be considered and implemented where applicable during the design phases and subsequent construction work.

Chapter 18: Material and Waste of the ES and its relevant appendices [EN070008/APP/6.2.18] reports the findings of the assessment of the Proposed Development's impact on materials and waste which concluded that there are no significant effects anticipated in relation to materials and waste during the construction of the Proposed Development.

Mitigation measures that will be adopted during the construction phase are in accordance with IEMA Guidance and NPS EN-1 paragraph 5.14.2 and comprise the waste hierarchy which aims to prioritise waster prevention followed by preparing for re-use, recycling and recover and lastly disposal to landfill. The waste recovery target for the Proposed Development is at least 90% (by weight) recovery of non-hazardous construction and demolition waste. This requirement is embedded in the Draft CEMP and is above the national target set out by the Waste Framework Directive.

The Draft CEMP has been prepared as part of the ES in Appendix 3-1 **[EN070008/APP/6.4.3.1].** An Outline Site Waste Management Plan has also been developed for the Proposed Development and is included within ES Appendix 18-1 **[EN070008/APP/6.4.18.1]**

Paragraph Relevant Policy Text: Requirement of the Policy

- any such waste will be properly managed, both on-site and off-site;
- the waste from the proposed facility can be dealt with appropriately by the waste infrastructure
 which is, or is likely to be, available. Such waste arisings should not have an adverse effect on
 the capacity of existing waste management facilities to deal with other waste arisings in the
 area: and
- adequate steps have been taken to minimise the volume of waste arisings, and of the volume of waste arisings sent to disposal, except where that is the best overall environmental outcome.
- 5.14.8 Where necessary, the IPC should use requirements or obligations to ensure that appropriate measures for waste management are applied. The IPC may wish to include a condition on revision of waste management plans at reasonable intervals when giving consent.
- 5.14.9 Where the project will be subject to the EP regime, waste management arrangements during operations will be covered by the permit and the considerations set out in Section 4.10 will apply.

5.15: Water Quality and Resources

- 5.15.2 Where the project is likely to have effects on the water environment, the applicant should undertake an assessment of the existing status of, and impacts of the proposed project on, water quality, water resources and physical characteristics of the water environment as part of the ES or equivalent. (See Section 4.2.)
- 5.15.3 The ES should in particular describe:
 - the existing quality of waters affected by the proposed project and the impacts of the proposed project on water quality, noting any relevant existing discharges, proposed new discharges and proposed changes to discharges;
 - existing water resources affected by the proposed project and the impacts of the proposed project on water resources, noting any relevant existing abstraction rates, proposed new abstraction rates and proposed changes to abstraction rates (including any impact on or use of mains supplies and reference to Catchment Abstraction Management Strategies);
 - existing physical characteristics of the water environment (including quantity and dynamics of flow) affected by the proposed project and any impact of physical modifications to these characteristics; and
 - any impacts of the proposed project on water bodies or protected areas under the Water Framework Directive and source protection zones (SPZs) around potable groundwater abstractions
- 5.15.4 Activities that discharge to the water environment are subject to pollution control. The considerations set out in Section 4.10 on the interface between planning and pollution control therefore apply. These considerations will also apply in an analogous way to the abstraction licensing regime regulating activities that take water from the water environment, and to the control regimes relating to works to, and structures in, on, or under a controlled water.
- 5.15.5 The IPC will generally need to give impacts on the water environment more weight where a project would have an adverse effect on the achievement of the environmental objectives established under the Water Framework Directive.

Compliance Assessment

Initial assessments of groundwater and surface water quality and resource, fluvial geomorphology and flood risk have been carried out in order to identify the potential significant effects associated with the construction, operation and decommissioning of the Proposed Development on potentially sensitive receptors.

During the construction phase, there is a risk of pollution to surface water from activities involving polluting substances such as fuels, concrete and chemicals, along with disturbance of soil during earthworks. During construction, standard pollution prevention and construction best practice would be adopted to mitigate potential impacts upon the water environment where required and reasonably practicable. Such measures would be included in a Draft CEMP.

The pipeline route has been selected and designed to reduce impacts on flood risk, avoiding high flood risk areas where possible. The design of the above ground infrastructure would be appropriately designed, to ensure no adverse flood risk is generated in areas adjacent.

The Proposed Development is supported with a FRA in Appendix 11-5 of the ES [EN070008/APP/6.4.11.5].

Consultation with relevant partners has taken place with key stakeholders such as the Environment Agency, Natural England, Canals and Rivers Trust along with more. Mitigation measures and management plans are presented within the Draft CEMP in Appendix 3-1 of the ES [EN070008/APP/6.4.3.1].

Paragraph	Relevant Policy Text: Requirement of the Policy	Compliance Assessment
5.15.6	The IPC should satisfy itself that a proposal has regard to the River Basin Management Plans and meets the requirements of the Water Framework Directive (including Article 4.7) and its daughter directives, including those on priority substances and groundwater. The specific objectives for particular river basins are set out in River Basin Management Plans. The IPC should also consider the interactions of the proposed project with other plans such as Water Resources Management Plans and Shoreline/Estuary Management Plans	
5.15.7	The IPC should consider whether appropriate requirements should be attached to any development consent and/or planning obligations entered into to mitigate adverse effects on the water environment.	
5.15.8	The IPC should consider whether mitigation measures are needed over and above any which may form part of the project application. (See Sections 4.2 and 5.1.) A construction management plan may help codify mitigation at that stage.	

C.1 Table C2: Planning Policy Accordance Assessment: National Policy Statement EN-4, 2011

This table presents an accordance review of the Proposed Development against the National Policy Statement for Gas Supply Infrastructure and Gas and Oil Pipelines (EN-4), 2011.

National Policy Statement for Gas Supply Infrastructure and Gas and Oil Pipelines (EN-4), 2011

NPS Relevant Policy Text: Requirement of the Policy Paragraph

Compliance Assessment: How the Proposed Development addresses the requirement

Part 2: Assessment and Technology-Specific Information

2.2: Climate change adaption

- 2.2.2 As climate change is likely to increase risks to some of this infrastructure, from flooding or rising sea levels for example, applicants should in particular set out how the proposal would be resilient to:
 - increased risk of flooding;
 - effects of rising sea levels and increased risk of storm surge;
 - higher temperatures.
 - increased risk of earth movement or subsidence from increased risk of flooding and drought; and
 - · any other increased risks identified in the applicant's assessment.
- The IPC should expect that climate change resilience measures will form part of the relevant impact assessment in the Environment Statement (ES) accompanying an application. For example, future increased risk of flooding should be covered in the flood risk assessment.

Climate change adaption has been considered throughout the design and selection process for the proposed route. It is recognised that the Project will be delivered as part of the wider Viking CCS Project, which intends to capture and store carbon dioxide emissions from existing industrial sources in the Humber industrial cluster. This will contribute to mitigating adverse effects of climate change and contributing to net zero goals.

The design of the pipeline has considered measures to make it resilient to climate change, and Chapter 15: Climate Change of the ES **[EN070008/APP/6.2.15]** concludes that there are no significant impacts on climate change resulting from the laying of this pipeline.

The use of the pipeline offers a more climate friendly transportation method on emissions, as the alternative would consist of more road transport.

The Flood Risk Assessment carried out has been carried out for the Proposed Development and is presented in appendix 11-5 of the ES [EN070008/APP/ 6.4.11.5]. The FRA considerthe risk of flooding from various sources including tidal, fluvial and groundwater sources. The FRA concludes that with mitigation it will be possible to manage flood risks to and from the proposed development.

The climate change assessment also considers the implications of higher temperatures and increased earth movements and concludes that there would be no residual significant adverse effects to the Proposed Development.

2.3: Consideration of good design

- 2.3.1 Section 4.5 of EN-1 sets out the principles for good design that should be applied to all energy infrastructure.
- 2.3.2 For the reasons given there, applicants should demonstrate good design, in particular where mitigating the impacts relevant to the infrastructure.

The design of the Proposed Development has evolved through a series of steps and design iterations. Design evolution has been informed a number of factors including selecting a safe route and location for the pipeline and facilities, minimising adverse effects on the environment, giving consideration to planning permissions and applications for other development, engineering considerations, stakeholder feedback obtained through consultation.

National Policy Statement for Gas Supply Infrastructure and Gas and Oil Pipelines (EN-4), 2011

NPS Relevant Policy Text: Requirement of the Policy Paragraph

Compliance Assessment: How the Proposed Development addresses the requirement

The Proposed Development is functional in nature and has been designed to include only the essential elements necessary to transport CO_2 safely and efficiently. Where possible brownfield land will be sued for above ground installations.

Throughout the design process, the Applicant has developed a design for the Proposed Development that is safe and sustainable for the lifetime of the development.

The design has taken into account site context, existing features within and adjacent to the order limits, nearby sensitive receptors and assets, consultation responses and access considerations to develop a good design that balances the need to maximise the most efficient route with avoidance and mitigation of impacts and provision of environmental and other enhancements. Chapter 2: Design Evolution and Alternatives of the ES [EN070008/APP/6.2.2] details the design process undertaken.

The design development process included the identification of mitigation commitments, both for mitigation embedded in the design and also good practice mitigation. The route of the pipeline has been influenced by the desire to reduce potential likely effects on communities, for example, the route seeks to limit adverse impacts on habitats, historic receptors and residential buildings.

2.4: Hazardous substances

2.4 Section 4.12 of EN-1 sets out the regime for obtaining hazardous substances consent from the IPC where it is required. All establishments wishing to hold stocks of certain hazardous substances, which include oil and gas, above a threshold quantity must apply to the Hazardous Substances Authority (HSA) for hazardous substances consent. In the case of natural gas, the threshold is 15 tonnes. In relation to gas supply infrastructure, the Health and Safety Executive (HSE) will advise the IPC on the risks, taking into account the quantities of gas to be stored, the installation type and specification, and the local population.

The Pipeline Safety Regulations define a 'major accident hazard pipeline' as one which conveys a dangerous fluid, which has the potential to cause an accident'. The Pipeline will not transport oil or natural gas.

The applicant has engaged with and will continue to engage with HSE with respect to compliance with hazardous substance legislation as shown in the Consultation Report [EN070008/APP/5.1].

2.20: Gas and Oil Pipelines Impacts: Noise and Vibration

- 2.20.1 Section 5.11 of EN-1 sets out the generic considerations to be given to the impacts of noise and vibration. In addition there are specific noise and vibration considerations which apply to gas and oil pipelines during the preconstruction and construction phases. The applicant will need to identify all the noise and vibration sensitive receptors likely to be affected during these phases.
- 2.20.2 During the pre-construction phase there could be vibration effects from seismic surveys. During construction, tasks may include site clearance, soil movement, ground excavation, tunnelling, trenching, pipe laying and welding, and ground reinstatement. In addition, increased HGV traffic will be generated on local roads for the movement of materials. These types of noise and vibration impacts will need to be assessed.

Chapter 13: Noise and Vibration of the ES [EN070008/APP/6.2.13] reports the outcome of the assessment of likely significant environmental effects arising from the Proposed Development on noise and vibration during the construction, operation and decommissioning phases. Measures to control construction noise will be adopted where necessary, these measures represent the 'Best Practicable Means' (as defined by section 72 of the Control of Pollution Act 1974).

The Noise Policy Statement for England, along with relevant national policies, guidance and standards have been considered in the environmental

2.21.4

NPS Paragraph	Relevant Policy Text: Requirement of the Policy	Compliance Assessment: How the Proposed Development addresses the requirement
2.20.3	The commissioning of a new pipeline can involve extensive periods of drying after hydrotesting, using air compressors, and noise mitigation may be required for this type of activity	assessment of potential likely noise and vibrations effects generated by the Proposed Development.
2.20.4	A new gas pipeline may require an above ground installation such as a gas compression station on the route of the pipeline to boost transmission line pressure. A new oil pipeline may require pumping stations. These may be located in quiet rural areas, and therefore the control of noise from these facilities is likely to be an important consideration.	Potential noise and vibration effects during the construction phase are likely to result from work activities and these will be temporary and reversible with no lasting residual effect. During the operational phase of the Project the Proposed Development would be installed below ground and would not produce any operational noise or vibration.
2.20.5	The ES should include an assessment of noise and vibration effects (see Section 5.11 of EN-1) including the specific issues outlined above, where they are relevant.	Whilst the Proposed Development does, in the most part, comply with the objectives of Part 5.11 of EN-1 and Part 2.20 of EN-4, in some localised areas
2.20.6	The IPC should follow the principles for decision making set out in Section 5.11 of EN-1.	during construction and potentially decommissioning, activities will give rise to residual noise effects which would be in conflict with these sections for the
2.20.7	Noise mitigation measures for gas and oil pipelines, in particular their associated above-ground installations, include screening or enclosure of compressors and pumps. Other measures could include the use of sound attenuators on ventilation systems, acoustic lagging on pipework, multi-stage (inherently quiet) control valves, gas turbine exhaust silencers, and high efficiency low speed cooler fans, depending on the specific issues. Vibration mitigation measures could include the use of non-impact piling such as augur boring.	NPS'.
2.21: Gas	and Oil Pipelines Impacts: Biodiversity, Landscape and Visual	
2.21.1	Sections 4.3 and 5.9 of EN-1 sets out the general principles that should be applied in the assessment of biodiversity and landscape and visual impacts. Additional considerations apply during the construction of a pipeline (which, without mitigation, can affect both landscape and ecology). These comprise the effect upon specific landscape elements within and adjacent to the pipeline route, such as grasslands, field boundaries	The potential effects of the Proposed Development on biodiversity and ecology are assessed in Chapter 6: Ecology and Biodiversity of the ES [EN070008/APP/6.2.6].
	(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 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.	With the application of the committed mitigation measures, no significant adverse residual effects are anticipated during construction relating to ecology and biodiversity.
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	The Application is supported by a Report to Inform the HRA [EN070008/APP/6.5] . The assessment was progressed to the Appropriate Assessment stage where it was concluded that there would be noadverse effects from the Proposed Development on the integrity of Europeandesignated sites.
	 structures and indication points necessary to identify the pipeline route and provide it with service access. 	Chapter 7: Landscape and Visual of the ES [EN070008/APP/6.2.7] and its relevant appendices provide an assessment of the likely significant effects of
2.21.3	The ES should include an assessment of the biodiversity and landscape and visual effects of the proposed route and of the main alternative routes considered (see Section 5.9 of EN-1). 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.	the Proposed Development on landscape character and visual amenity. As the proposed pipeline would be buried and not affect landscape character during the operational phase effects associated with the pipeline were scoped out of the LVIA. The pipeline passes through the Lincolnshire Wolds Area of Outstanding Natural Beauty (AONB) and close to an Area of Great Landscape Value (AGLV).

The IPC should follow the principles for decision making set out in Sections 4.3 and 5.9 of EN-1.

National Policy Statement for Gas Supply Infrastructure and Gas and Oil Pipelines (EN-4), 2011

NPS Relevant Policy Text: Requirement of the Policy Paragraph

- 2.21.5 Mitigation measures to protect the landscape and ecology could include reducing the working width required for the installation of the pipeline in order to reduce the impact on the landscape where it will not be possible to fully reinstate the route.
- 2.21.6 In circumstances where the habitat to be crossed contains ancient woodland, trees subject to a Tree Preservation Order, or hedgerows subject to the Hedgerows Regulations 1997, the applicant should consider whether it would be feasible to use horizontal direct drilling under the ancient woodland or thrust bore under the protected tree or hedgerow and the IPC should consider requiring this, where not included in the proposal.

Compliance Assessment: How the Proposed Development addresses the requirement

The main potential impacts relating to construction include changes to views through the addition of detracting visual features associated with the construction process. This would result in short-term significant adverse effects at four representative viewpoints. Short term significant visual effects for the construction phase would be limited to highly sensitive viewpoints located in close proximity to the pipeline route.

Mitigation measures have been incorporated into the design to reduce any impact. This includes siting and routing, construction management, and landscape and design measures, with the Proposed Development designed to reduce the impact on the landscape where practicable. Although the measures set out would assist in reducing the impacts at the identified locations, the reduction would be insufficient to reduce the impact rating and therefore effects to below significant levels.

With the incorporation of embedded design mitigation and additional mitigation, there would be significant effects on the Lincolnshire Wolds AONB during construction. Effects would reduce to not significant during operation and decommissioning. The remaining landscape receptors will experience not significant effects during all stages of the Proposed Development. Whilst there are temporary significant impacts, the landscape and visual impact of the Proposed Development is considered to be outweighed by the clear demonstrable benefits of the proposed development to help reduce carbon dioxide emissions and helping to achieve targets for Net Zero by 2050.

There is no ancient woodland within the Order Limits. Veteran trees have been identified within the Order Limits at Barnoldby le Beck parkland as detailed in the Arboriculture Report in ES Appendix 6-10 **[EN070008/APP/6.4.6.10].** Whilst a small area of the parkland habitat will be lost, the veteran trees will be avoided. Mitigation measures will reduce any impacts on the veteran trees.

2.22: Gas and Oil Pipelines Impacts: Water Quality and Resources

- 2.22.1 Section 5.15 of EN-1 sets out generic policy on the protection of the water environment during the construction, operation and decommissioning of a project. Section 4.10 of EN-1 sets out policy on the pollution control framework. EN-1 emphasises the need for good design and planning to ensure the efficient use of water, including water recycling.
- 2.22.2 Constructing pipelines creates corridors of surface clearance and excavation that can potentially affect watercourses, aquifers, water abstraction and discharge points, areas prone to flooding and ecological receptors. Pipeline impacts could include inadequate or excessive drainage, interference with groundwater flow pathways, mobilisation of contaminants already in the ground, the introduction of new pollutants, flooding, disturbance to water ecology, pollution due to silt from construction and disturbance to species and their habitats. Impacts during construction should be avoided as far as possible through route selection or mitigated if unavoidable and ground should be reinstated after construction.

Chapter 11: Water Environment of the ES [EN070008/APP/6.2.11] details the main potential impacts relating to the water environment during construction and operation. A number of potential impact that could occur have been assessed. The main potential impacts relating to operation include increased surface water run off through increases in impermeable areas.

During the construction phase, there is a risk of pollution to surface water from activities involving polluting substances such as fuels, concrete and chemicals, along with disturbance of soil during earthworks. During construction, standard pollution prevention and construction best practice would be adopted to mitigate potential impacts upon the water environment

National Policy Statement for Gas Supply Infrastructure and Gas and Oil Pipelines (EN-4), 2011

NPS Relevant Policy Text: Requirement of the Policy Paragraph

- Compliance Assessment: How the Proposed Development addresses the requirement
 where required and reasonably practicable. Such measures would be
- 2.22.3 Where the project is likely to have effects on water resources or water quality, for example impacts on groundwater recharge or on existing surface water or groundwater abstraction points, or on associated ecological receptors, the applicant should provide an assessment of the impacts in line with Section 5.15 of EN-1 as part of the ES.
- Where the project is likely to give rise to effects on water quality, for example through siltation or spillages, discharges from maintenance activities or the discharge of disposals such as wastewater or solvents, the
- 2.22.5 The IPC should be satisfied that the impacts on water quality and resources are acceptable in accordance with Section 5.15 of EN-1. The IPC should liaise with the EA over the potential for the new development to result in loss or reduction of supply to any licensed abstraction or unlicensed groundwater abstraction, or any potential interference with current legitimate uses of groundwater or surface waters, taking account of the terms of any relevant environmental permits or any negative effect on a groundwater dependent ecosystem.
- 2.22.6 Mitigation measures to protect the water environment may include techniques for crossing rivers and managing surface water before and after construction, including restoring vegetation and using sustainable drainage systems to control run-off.
- 2.22.7 Mitigation measures to protect water quality may include:
 - the avoidance of vulnerable groundwater areas or appropriate use of above ground pipeline facilities;
 - use of the highest specification pipework and best practice in the storage and handling of pollutants to prevent spillage;
 - careful storage of excavated material away from watercourses and facilities for the disposal of sewage and waste:
 - use of sustainable drainage systems; and
 - careful reinstatement of riverbanks and reed beds

applicant should provide an assessment of the impacts.

2.23: Gas and Oil Pipelines Impacts: Soil and Geology

- 2.23.2 Applicants should assess the stability of the ground conditions associated with the pipeline route and incorporate the findings of that assessment in the ES (see Section 4.2 of EN-1) as appropriate. Desktop studies, which include known geology and previous borehole data, can form the basis of the applicant's assessment. The applicant may find it necessary to sink new boreholes along the preferred route to better understand the ground conditions present. The assessment should cover the options considered for installing the pipeline and weigh up the impacts of the means of installation. Where the applicant proposes to use horizontal directional drilling (HDD) as the means of installing a pipeline under a National or European Site and mitigating the impacts, the assessment should cover whether the geological conditions are suitable for HDD.
- 2.23.3 When considering any application where the pipeline goes under a designated area of geological or geomorphological interest, the applicant should submit details of alternative routes, which either bypass the designated area or reduce the length of pipeline through the designated area to the minimum possible, and the reasons why they were discounted.

where required and reasonably practicable. Such measures would be included in the Draft CEMP.

The assessment concludes that with the incorporation of embedded design mitigation and additional mitigation, the significance of residual effects for the Proposed Development on the water environment are defined as minor adverse to negligible and therefore not considered to be significant.

Chapter 9: Geology and Hydrology of the ES **[EN070008/APP/6.2.9]** provides a detailed assessment of the impacts on geology and hydrogeology as a result of the Proposed Development. The assessment concludes that the potential impacts which may occur during the construction phase are primarily associated with spillages and leaks of fuel/oil associated with plant and machinery, disturbance of contaminated soils and potential degradation of soil quality during handling and movement of soil or tracking of heavy plant as well as the potential dewatering to locally affected groundwater levels.

Once operational no significant effects are anticipated, with potential impacts limited to effects resulting from potential land contamination on site users and groundwater receptors.

The construction phase has the potential to result in loss or damage of soil resource, the identified potential impacts which may occur during the

National F	olicy Statement for Gas Supply Infrastructure and Gas and Oil Pipelines (EN-4), 2011	
NPS Paragraph	Relevant Policy Text: Requirement of the Policy	Compliance Assessment: How the Proposed Development addresses the requirement
2.23.5	The IPC should take into account the impact on and from geology and soils when considering a pipeline project. A proposal will be acceptable from the point of view of soil and geology if the applicant has proposed a route and other measures (if applicable) that either eliminates any adverse impacts on soil and geology or reduces them to an acceptable level and that the route chosen does not adversely affect the integrity of the pipeline, for example, by increasing materially the risk of fracture or impact on areas of high population. The HSE can advise on the suitability of the pipeline route and on the design of the pipeline.	construction phase are primarily associated with spillages and leaks of fuel/oil associated with plant/machinery, disturbance of contaminated soils and potential degradation of soil quality during handling and movement of soil or tracking of heavy plant, as well as the potential for dewatering to locally affect groundwater levels. Soil resources would be protected against damage and loss though mitigation comprising the adoption of industry standard methods put in place at construction phase.
2.23.6	Where the applicant has considered and discounted a route or routes on the ground that the soil is unstable and susceptible to landslip, the IPC should consult the HSE for their views on its suitability and its impact on the integrity of the pipeline.	The assessment included in the ES considers that these effects can be controlled through good practice and standard mitigation measures which are
2.23.7	Mitigation measures to minimise any adverse effects on soil and geology should include measures to ensure that residual impacts on the surface are minor, for example some differential vegetation growth. Mitigation measures should include appropriate treatment of soil (and in particular topsoil) during site construction and other infrastructure activity (and appropriate soil storage and reinstatement in line with the principles and practices outlined in the Code of Practice for the Sustainable Management of Soils on Construction Sites. The IPC should consider what appropriate conditions should be attached to any consent.	outlined within the Draft CEMP in Appendix 3-1 of the ES [EN070008/APP/6.4.3.1].
2.23.8	Where HDD is proposed, the applicant should provide an alternative plan for installing the pipeline in the event that HDD fails. Such alternative means could include open cut, micro-tunnelling and tunnelling.	

C.2 Table C3: Planning Policy Accordance Assessment: Revised Draft Overarching National Policy Statement for Energy (EN-1), March 2023

This table presents an accordance review of the Proposed Development against the Revised Draft Overarching National Policy Statement for Energy (En-1), March 2023.

Revised Draft Overarching	National Policy Statement for	or Energy (EN-1), March 2023
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Revised Dra	aft Overarching National Policy Statement for Energy (EN-1), March 2023	
Paragraph	Relevant Policy Text: Requirement of the Policy	Compliance Assessment: How the Proposed Development addresses the requirement
2 Governme	ent policy on energy and energy infrastructure development	
2.2.1	In June 2019 the UK became the first major economy to legislate for a 2050 net zero Greenhouse Gases ('GHG') emissions target through the Climate Change Act 2008 (2050 Target Amendment) Order 2019. In December 2020, the UK communicated its Nationally Determined Contributions to reduce GHG emissions by at least 68 per cent from 1990 levels by 2030. In April 2021, the governments legislated for the sixth carbon budget (CB6), which requires the UK to reduce GHG emissions by 78 per cent by 2035 compared to 1990 levels	As stated in the Needs Case [EN070008/APP/7.3] and summarised in the PDAS Chapter 3 [EN070008/APP/7.1] the Proposed Development will support the UK's goal to reach net zero by transporting CO₂ to geological stores under the North Sea. and reducing the amount of greenhouse gases being released to the atmosphere. The Proposed Development will help to decarbonise industry in the Immingham Industrial Area while maintaining employment and generating investment it the area.
2.3.4	Meeting these objectives necessitates a significant amount of energy infrastructure, both large and small-scale. This includes the infrastructure needed to convert primary sources of energy (e.g. wind) into energy carriers (e.g. electricity or hydrogen), and to store and transport these energy carriers into and around the country. It also includes the infrastructure needed to capture, transport and store carbon dioxide. The requirement for new energy infrastructure will present opportunities for the UK and contributes towards our ambition to support jobs in the UK's clean energy industry and local supply chains.	As detailed, within the Needs Case [EN070008/APP/7.3] and summarised within Chapter 3 of the PDAS [EN070008/APP/7.3], the Proposed Development is a major infrastructure project which is essential to the delivery of the Viking CCS Project, which once complete will transport dense phase CO ₂ to existing offshore stores. It is feasible that fossil fuel energy generating plant could make use of the Viking CCS Pipeline to provide a reliable source of low carbon energy in the future. The Proposed Development will assist in maintaining existing employment and generate new employment opportunities and investment in the area.
2.4.4	Government is developing business models to incentivise the deployment of Carbon Capture, Utilisation and Storage (CCUS) facilities and low carbon hydrogen production in the UK. The British Energy Security Strategy also committed to designing, by 2025, new business models for hydrogen transport and storage infrastructure.	The Proposed Development forms part of the Viking CCS Project which was awarded Track 2 status by the government in July 2023. The Viking CCS will receive government support and is an acknowledgement of the projects viability as set out in the Needs Case [EN070008/APP/7.3] and summarised within Chapter 3 of the PDAS [EN070008/APP/7.3]
2.4.5	We will put in place a commercial framework which will enable developers to finance the construction and operation of power CCUS and Industrial Carbon Capture (ICC) facilities and CO ₂ transport and storage networks, stimulating a pipeline of projects and building a UK supply chain.	
3 The need	for new nationally significant infrastructure projects	
3.2.5	The Secretary of State should assess all applications for development consent for the types of infrastructure covered by this NPS on the basis that the government has demonstrated that there is a need for those types of infrastructure which is urgent, as described for each of them in this Part.	A Needs Case [EN070008/APP/7.3] is submitted with the Application which presents the need for the Proposed Development. It is considered that there is an urgent need to provide facilities for the capture and storage of carbon dioxide to reduce greenhouse gas emissions, tackle climate change while also maintaining employment and reliable mix of
3.2.6	In addition, the Secretary of State has determined that substantial weight should be given to this need when considering applications for development consent under the Planning Act 2008.	energy supplies.

Revised Dra Paragraph	aft Overarching National Policy Statement for Energy (EN-1), March 2023 Relevant Policy Text: Requirement of the Policy	Compliance Assessment: How the Proposed Development addresses the requirement			
3.5.1 3.5.2	There is an urgent need for new carbon capture and storage (CCS) infrastructure to support the transition to a net zero economy. The Committee on Climate Change Committee states CCS is a necessity not an option. As well as its role in reducing emissions associated with generating electricity from natural gas (see paragraph	The NPS shows significant support for CCS projects and as outlined in the Need Case [EN070008/APP/7.3] , the Viking CCS has the potential to store 300 million tonnes of CO_2 collected from the Immingham Industrial Area which is the largest emitter of CO_2 in the UK.			
	3.3.49), CCS infrastructure will also be needed to capture and store carbon dioxide from hydrogen production from natural gas, industrial processes, the use of BECCS and from the air (DACCS). CCS infrastructure could be new or repurposed infrastructure.	Once operational the Proposed Development will provide the underground pipeline that will facilitate the transportation of CO_2 from Immingham to Theddlethorpe, from here the CO_2 will be further transported to former offshore gas reservoirs			
3.5.3	The UK's Net Zero Strategy and Industrial Decarbonisation Strategy reaffirm the importance of CCS in decarbonising energy intensive sectors such as chemicals, oil refining, and cement. The International Energy Agency further reinforce the need for CCS in the clean energy transition.				
3.5.5	The UK has one of the largest potential carbon dioxide (CO_2) storage capacities in Europe, with an estimated 78 billion tonnes of CO_2 storage capacity under the seabed of the UKCS.				
3.5.6	The deployment of new onshore CO ₂ pipelines over 16.093 kilometres in length can expand CCS networks and are within scope of this NPS.				
Part 4 Asse	Part 4 Assessment Principles				
Health					
4.3.4	As described in the relevant sections of this NPS and in the technology specific NPSs, where the proposed project has an effect on humans, the ES should assess these effects for each element of the project, identifying any potential adverse health impacts, and identifying measures to avoid, reduce or compensate for these impacts as appropriate.	Chapter 17: Health and Well-being of the ES [EN070008/APP/6.2.17] assesses the impact of the Proposed Development on issues of health and well-being. Chapter 17 includes an overview of the cumulative impacts on health and concludes that when mitigation measures are implemented there are no significant residual effects in the construction, operational or decommissioning phases. Where health effects are envisaged			
4.3.5	The impacts of more than one development may affect people simultaneously, so the applicant should consider the cumulative impact on health in the ES where appropriate.	to be minor adverse, mitigation measures ensure that this effect is reduced to negligible.			
4.3.6	Opportunities should be taken to mitigate indirect impacts, by promoting local improvements to encourage health and wellbeing, this includes potential impacts on vulnerable groups within society,	Chapter 17 includes and assessment of the effects of traffic, air or water pollution, dust, odour, hazardous waste and substances, noise and exposure to radiation.			
	i.e. those groups which may be differentially impacted by a development compared to wider society as a whole.	Measures to control noise are included within the Draft CEMP in Appendix 3-1 of the ES [EN070008/APP/6.4.3.1]			
4.3.7	Generally, those aspects of energy infrastructure which are most likely to have a significantly detrimental impact on health are subject to separate regulation (for example for air pollution) which will constitute effective mitigation of them, so that it is unlikely that health concerns will either by themselves constitute a reason to refuse consent or require specific mitigation under the Planning Act 2008.				
Environmen	ntal and Biodiversity Net Gain				
4.5.2	Biodiversity net gain is an essential component of environmental net gain. Projects in England should consider and seek to incorporate improvements in natural capital, ecosystem services and the benefits they deliver when planning how to deliver biodiversity net gain.	The potential effects of the Proposed Development on biodiversity and ecology are assessed in Chapter 6: Ecology and Biodiversity of the ES [EN070008/APP/6.2.6]. The potential effects on ecology during construction will be managed through the implementation of mitigation measures that will be set out within the CEMP.			

Paragraph Relevant Policy Text: Requirement of the Policy Compliance Assessment: How the Proposed Development addresses the requirement 4.5.4 Energy NSIP proposals, whether onshore or offshore, should seek opportunities to contribute to and Wherever possible, mitigation has been embedded to avoid sensitive ecological features. enhance the natural environment by providing net gains for biodiversity, or the wider environment for example through careful routeing to avoid habitats such as woodland and veteran where possible. trees. Where it is not possible to avoid adverse effects, additional mitigation is proposed. A Draft CEMP is provided in Appendix 3-1 of the ES [EN070008/APP/6.4.3.1] which aims to 4.5.5 address adverse effects upon designated sites and habitats. Where protected species will In England applicants for onshore elements of any development are encouraged to use the most current version of the Defra biodiversity metric to calculate their biodiversity baseline and present be affected, a licence from Natural England will be sought, and mitigation will be secured planned biodiversity net gain outcomes. This calculation data should be presented in full as part of as part of the licensing process. Measures to avoid significant adverse effects upon European designated sites are detailed within the report to inform HRA. These include their application. measures to prevent dust and particulates, pollution of aquatic environments and noise and visual disturbance and these measures are secured through the Draft CEMP 4.5.13 Applications for development consent should be accompanied by a statement demonstrating how opportunities for delivering wider environmental net gains have been considered, and where [EN070008/APP/6.4.3.1] and LEMP [EN07008/APP/6.8]. appropriate, incorporated into proposals as part of good design (including any relevant operational aspects) of the project. With the application of the committed mitigation measures, no significant adverse residual effects are anticipated during construction relating to ecology and biodiversity. The Applicant recognises the importance of BNG and has made a voluntary commitment to deliver up to a 10% net gain in biodiversity relating to the permanent habitat loss at the above ground facilities (the Immingham Facility, Block Valve Stations and Theddlethorpe Facility, including permanent accesses. A Biodiversity Net Gain Assessment [EN070008/APP/6.7.1] and Biodiversity Net Gain Strategy IEN070008/APP/6.7.11 has been prepared to inform the Application for DCO. To ensure the BNG is achieved a mitigation measure has been included within the Draft CEMP in Appendix 3-1 of the ES [EN070008/APP/6.4.3.1] to establish an aftercare period to monitor the habitat reinstatement/creation/mitigation measures/net gain assessment. Criteria for "good design" for energy infrastructure 4.6.2 Applying "good design" to energy projects should produce sustainable infrastructure sensitive to The design of the Proposed Development has evolved through a series of steps and place, including impacts on heritage, efficient in the use of natural resources, including land-use, and design iterations. Design evolution has been informed by environmental assessments, energy used in their construction and operation, matched by an appearance that demonstrates good engineering considerations, stakeholder feedback and through the consultation exercises aesthetic as far as possible. It is acknowledged, however that the nature of energy infrastructure undertaken. These have taken into account site context, existing features within and development will often limit the extent to which it can contribute to the enhancement of the quality of adjacent to the order limits, nearby sensitive receptors and assets, consultation responses the area. and access considerations to develop a good design that balances the need to maximise the most efficient route with avoidance and mitigation of impacts and provision of 4.6.7 Applicants must demonstrate in their application documents how the design process was conducted environmental and other enhancements. Chapter 2: Design Evolution and Alternatives of and how the proposed design evolved. Where a number of different designs were considered. the ES [EN070008/APP/6.2.2] details the design process undertaken. applicants should set out the reasons why the favoured choice has been selected. The design development process included the identification of mitigation commitments, both for mitigation embedded in the design and also good practice mitigation. The route of the pipeline has been influenced by the desire to reduce potential likely effects on communities, for example, the route seeks to limit adverse impacts on habitats, historic receptors and residential buildings. Carbon Capture and Storage (CCS) 4.8.4 Carbon capture technologies offer the opportunity to decarbonise the electricity system whilst The UK Government has committed to a legally binding target of achieving Net Zero by maintaining security of supply, providing reliable low carbon generation capacity. 2050. To meet this target, the UK needs to transition towards cleaner sources of energy,

while decarbonising existing infrastructure. This is where carbon capture technology is set

to play a crucial role.

Paragraph Relevant Policy Text: Requirement of the Policy

4.8.5 The government has made its ambitions for CCS clear – committing to providing funding to support the establishment of CCS in at least four industrial clusters by 2030 and supporting, using consumer subsidies, at least one privately financed gas CCS power station in the mid-2020s. 123 In October 2021, the government published its Net Zero Strategy which reaffirmed the importance of deploying CCUS to reaching our 2050 net zero target and also outlines our ambition to capture 20-30Mt of CO₂ per year by 2030.

- 4.8.16 As set out in Section 2.4 of EN-2, there will be noise and vibration impacts associated with the generating station. The carbon capture plant will also have noise and vibration impacts. Applications for development consent for generating stations with CCS should provide evidence that shows:
 - a) technically feasible plans for the CO₂ capture plant; and
 - an ES that addresses impacts arising from the project and documentation to ensure compliance with all other existing policy, including that any of the plant's capacity which is not to be fitted with carbon capture at the outset meets the requirements for Carbon Capture Readiness (CCR).
- 4.8.17 An Environmental Permit (EP) will also be required from the Environment Agency (EA) or Natural Resources Wales (NRW) which incorporates conditions for operation of the carbon capture and storage installation.
- 4.8.20 The chain of CCS has three links: capture of carbon, transport, and storage. Due to the approach of deploying CCS in clusters in the UK with shared transport and storage infrastructure, it is likely that development consent applications for power CCS projects may not include an application for consent for the full CCS chain (including the onward transportation and storage of CO₂).
- 4.8.21 However, development consent applications for power CCS projects should include details of how the captured CO₂ is intended to be transported and stored, how cumulative impacts will be assessed and whether any necessary consents, permits and licences have been obtained.
- Applicants gaining consent for CCS infrastructure will need a range of consents from different bodies. One method for transporting captured carbon dioxide is through pipelines. These will be located both onshore and offshore. Onshore pipelines over 16.093 kilometres in length classify as NSIPs and require a development consent order. There are currently no cross-country carbon dioxide pipelines in the UK and considerable investment in pipelines will be required for the wider deployment of CCS. This initial investment could form the basis of more extensive carbon dioxide pipeline networks, which are likely to require greater capacity pipelines.
- 4.8.28 In order to assure the Secretary of State that a proposed development is CCR, applicants must demonstrate that their proposal complies with guidance issued by the Secretary of State in November 2009 or any successor to it. The guidance requires:
 - that sufficient space is available on or near the site to accommodate carbon capture equipment in the future;
 - the technical feasibility of retrofitting their chosen carbon capture technology:
 - that a suitable area of deep geological storage offshore exists for the storage of captured CO₂ from the proposed combustion station:

Compliance Assessment: How the Proposed Development addresses the requirement

The Proposed Development contributes directly to the UK's transition to a low carbon economy. This is highlighted by the Government's need for CCS projects and the designation of the Humber region as a track 2 cluster, with the aim of decarbonising the region. As part of their commitments to tackling climate change, the UK government has set legally binding targets to become net-zero in all greenhouse gases by 2050. In addition, the Government has shown clear commitment to developing Carbon Capture Usage and Storage (CCUS) infrastructure.

The Humber industrial cluster represents a unique emissions density within the UK, with decarbonisation of the Humber Energy Intensive Industry Cluster being required to meet the UK Government's legally binding target of achieving Net Zero by 2050. The wider Humber region will require multiple CO₂ storage options to promote greater onshore capture infrastructure development and underpin robust storage risk management through diversity of storage options.

The Proposed Development would support sustainable growth by providing an opportunity for inward investment into the region and a future low-carbon economy. The innovative technology proposed through the DCO will help the UK Government achieve energy diversity and provide resources for local and regional businesses.

The Needs Case **[EN070008/APP/7.3]** expands on this and establishes the need for Proposed Development and the wider Viking CCS project.

Paragraph Relevant Policy Text: Requirement of the Policy

- Compliance Assessment: How the Proposed Development addresses the requirement
- $\bullet \qquad \text{the } \underline{\text{technical feasibility of transporting the captured CO_2 to the proposed storage area;} \\$
- the economic feasibility within the combustion station's lifetime of the full CCS chain, covering retrofitting, transport and storage.
- 4.8.31 Applicants should conduct a single economic assessment which encompasses retrofitting of capture equipment, CO₂ transport and the storage of CO₂. Applicants should provide evidence of reasonable scenarios, taking into account the cost of the capture technology and transport option chosen for the technical CCR assessments and the estimated costs of CO₂ storage, which make operational CCS economically feasible for the proposed development.
- 4.8.35 CCS infrastructure will need a range of consents from different bodies. The Secretary of State should have regard to advice from these bodies and consider specifically advice from the EA or NRW as to the technical feasibility of the proposed carbon capture technology.

Climate Change Adaptation

- 4.9.1 Climate change mitigation is essential to minimise the most dangerous impacts of climate change, however previous global GHG emissions have already committed us to some degree of continued climate change. If new energy infrastructure is not sufficiently resilient against the possible impacts of climate change, it will not be able to satisfy the energy needs as outlined in Part 3 of this NPS.
- 4.9.6 Integrated approaches, such as looking across the water cycle, considering coordinated management of water storage, supply, demand, wastewater, and flood risk can provide further benefits to address multiple infrastructure needs, as well as carbon sequestration benefits.
- 4.9.7 In addition to avoiding further GHG emissions when compared with more traditional adaptation approaches, nature-based solutions can also result in biodiversity benefits and net gain, as well as increasing absorption of carbon dioxide from the atmosphere (see also Section 5.11 on the role of green infrastructure and Section 4.5 on environmental and biodiversity net gain).
- 4.9.8 New energy infrastructure will typically be a long-term investment and will need to remain operational over many decades, in the face of a changing climate. Consequently, applicants must consider the direct (e.g. site flooding, limited water availability, storms, heatwave and wildfire threats to infrastructure and operations) and indirect (e.g. access roads or other critical dependencies impacted by flooding, storms, heatwaves or wildfires) impacts of climate change when planning the location, design, build, operation and, where appropriate, decommissioning of new energy infrastructure.
- 4.9.9 The ES should set out how the proposal will take account of the projected impacts of climate change, using government guidance and industry standard benchmarks such as the Climate Change Allowances for Flood Risk Assessments, Climate Impacts Tool, and British Standards for climate change adaptation, in accordance with the EIA Regulations. This information will be needed by the Secretary of State.
- 4.9.13 The Secretary of State should be satisfied that applicants for new energy infrastructure have taken into account the potential impacts of climate change using the latest UK Climate Projections and

The effects of climate change and climate change adaption has been considered throughout the design and selection process for the proposed route and when considering how it will be constructed and operated.

Chapter 2: Alternatives and Design Evolution of the ES **[EN070008/APP/6.2.2]** provides a detailed review of the design process involved in the Proposed Development. Chapter 15: Climate Change of the ES **[EN070008/APP/6.2.15]** presents an assessment of the likely significant effects of the Proposed Development on the climate and the impact of climate change of the Proposed Development and surrounding environment during construction, operation and decommissioning. Chapter 15 includes a lifecycle GHG Impact Assessment which summarises the key anticipated GHG emissions sources associated with the Proposed Development

The design of the pipeline has considered measures to make it resilient to climate change, and the ES concludes that there are no significant impacts on climate change resulting from the laying of this pipeline.

The Application is also supported by a FRA included in Appendix 11-5 of the ES **[EN070008/APP/6.4.11.5]**. The FRA demonstrates how risk (for each phase) is managed to ensure that the development remains safe and operational throughout its lifetime, taking climate change into account, without increasing flood risk elsewhere and where possible reducing flood risk overall. The FRA recommends appropriate mitigation measures including flood resilience techniques.

Revised Draft Overarching National Policy Statement for Energy (EN-1), March 2023 Paragraph Relevant Policy Text: Requirement of the Policy associated research and expert guidance (such as the EA's Climate Change Allowances for Flood Risk Assessments or the Welsh Government's Climate change allowances and flood consequence

including any decommissioning period.

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4.9.15 The Secretary of State should be satisfied that there are not features of the design of new energy infrastructure critical to its operation which may be seriously affected by more radical changes to the climate beyond that projected in the latest set of UK climate projections, taking account of the latest credible scientific evidence on, for example, sea level rise (for example by referring to additional maximum credible scenarios – i.e. from the Intergovernmental Panel on Climate Change or EA) and that necessary action can be taken to ensure the operation of the infrastructure over its estimated lifetime.

assessments) available at the time the ES was prepared to ensure they have identified appropriate mitigation or adaptation measures. This should cover the estimated lifetime of the new infrastructure,

Safety 4.12.3

Some energy infrastructure will be subject to the Control of Major Accident Hazards (COMAH) Regulations 2015. These Regulations aim to prevent major accidents involving dangerous substances and limit the consequences to people and the environment of any that do occur. COMAH regulations apply throughout the life cycle of the facility, i.e. from the design and build stage through to decommissioning. They are enforced by the Competent Authority comprising HSE or ONR (Office for Nuclear Regulation, for nuclear) and the EA acting jointly in England and by the HSE and NRW acting jointly in Wales, and the HSE and Scottish Environment Protection Agency (SEPA) acting jointly in Scotland.

- 4.12.5 Applicants should consult with the HSE on matters relating to safety
- 4.12.6 Applicants seeking to develop infrastructure subject to the COMAH regulations should make early contact with the Competent Authority.
- 4.12.8 The Secretary of State should be satisfied that a safety assessment has been done, where required, and that the Competent Authority has assessed that it meets the safety objectives described above.

Safety is of highest priority, and the Applicant operates responsibly, securely and in accordance with applicable regulation across all their activities. The Applicant works to reduce risks and protect their staff, contractors and the communities within which their activities have the potential to cause impact through the rigorous application of safe operating practices.

The Applicant has extensive experience of managing major hazard potential facilities in accordance with the Control of Major Accidents and Hazards Regulations, both onshore and offshore. The Applicant applies best practices in the design, use and maintenance of their equipment, planning every stage of their operations with the highest levels of control in order to minimise safety risks. Although the pipeline is not a COMAH, COMAH guidance has been referred to in development of the methodologies identification of hazards and assessment of major accidents.

The Applicants approach to safety is detailed in ES Chapter 3: Viking CCS Pipeline [EN070008/APP/6.2.3], and Chapter 19: Major Accidents and Disasters [EN070008/APP/6.2.19]. The Applicant has engaged and will continue to engage with HSE with respect to compliance with health and safety legislation, this is shown within the Consultation Report [EN070008/APP/5.1]

5 Generic Impacts Air Quality and Emissions

- 5.2.1 Energy infrastructure development can have adverse effects on air quality. The construction, operation and decommissioning phases can involve emissions to air which could lead to adverse impacts on health, on protected species and habitats, or on the wider countryside and species. Air emissions include particulate matter (for example dust) up to a diameter of ten microns (PM10) as well as gases such as sulphur dioxide, carbon monoxide and nitrogen oxides (NOx).
- 5.2.6 Proximity to emission sources can have significant impacts on sensitive receptor sites for air quality, such as education or healthcare sites, residential use or sensitive or protected ecosystems. Projects near a sensitive receptor site for air quality should only be proposed in exceptional circumstances if

Chapter 14: Air Quality of the ES **[EN070008/APP/6.2.14]** assess the impacts of the Proposed Development on local air quality during the construction phase, the impact on air quality during the operational and decommissioning phases were scoped out of the assessment as operational emissions considered harmful to human health and nature conservation sites are limited to those associated with infrequent maintenance vehicles and decommissioning emissions are assumed to be similar to and no worse than those associated with the construction phase.

5.3.3

Revised Draft Overarching National Policy Statement for Energy (EN-1), March 2023 Paragraph Relevant Policy Text: Requirement of the Policy no viable alternative site is available. In these instances, substantial mitigation of any expected emissions will be required. 5.2.7 Where the project is likely to have adverse effects on air quality the applicant should undertake an assessment of the impacts of the proposed project as part of the ES. The ES should describe: 5.2.8 existing air quality levels and the relative change in air quality from existing levels; any significant air emissions, their mitigation and any residual effects distinguishing between the project stages and taking account of any significant emissions from any road traffic generated by the project; the predicted absolute emission levels of the proposed project, after mitigation methods have been applied; and any potential eutrophication impacts. 5.2.11 The Secretary of State should consider whether mitigation measures are needed both for operational and construction emissions over and above any which may form part of the project application. A construction management plan may help codify mitigation at this stage. In doing so the Secretary of State should have regard to the Air Quality Strategy or any successor to it and should consider relevant advice within Local Air Quality Management guidance. 5.2.17 In all cases, the Secretary of State must take account of any relevant statutory air quality limits and statutory air quality objectives. If a project will lead to noncompliance with a statutory limit the Secretary of State should refuse consent. **Greenhouse Gas Emissions** 5.3.1

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The assessment concludes that, the existing air quality in the Study Area is of a good standard with pollutant concentrations within the objective values set for the protection of human health. The DCO Site Boundary lies largely within a rural area and the alignment avoids close proximity to urban areas and nature conservation areas. There are some dust and air quality sensitive receptors close to the route that could be adversely impacted by the construction phase. However, providing that all of the mitigation measures as listed within the Draft CEMP in Appendix 3-1 of the ES [EN070008/APP/6.4.3.1] are adhered to, the potential magnitude of impacts on air quality will be lowered so that the residual significance will be negligible to minor adverse.

- Significant levels of energy infrastructure development are vital to ensure the decarbonisation of the UK economy. The construction, operation and decommissioning of that energy infrastructure will in itself. lead to GHG emissions.
 - As discussed in Part 2, energy infrastructure plays a vital role in decarbonisation. While all steps should be taken to reduce and mitigate climate change impacts, it is accepted that there will be residual emissions from energy infrastructure, particularly during the economy wide transition to net zero, and potentially beyond.
- 5.3.4 All proposals for energy infrastructure projects should include a GHG assessment as part of their ES with the Proposed Development. (See Section 4.2). This should include:
 - A whole life GHG assessment showing construction, operational and decommissioning GHG impacts.
 - An explanation of the steps that have been taken to drive down the climate change impacts at each of those stages.
 - Measurement of embodied GHG impact from the construction stage.
 - How reduction in energy demand and consumption during operation has been prioritised in comparison with other measures.

The effects of climate change and climate change adaption has been considered throughout the design and selection process for the proposed route and when considering how it will be constructed and operated.

Chapter 15: Climate Change of the ES [EN070008/APP/6.2.15] presents an assessment of the likely significant effects of the Proposed Development on the climate and the impact of climate change of the Proposed Development and surrounding environment during construction, operation and decommissioning. Chapter 15 includes a lifecycle GHG Impact Assessment which summarises the key anticipated GHG emissions sources associated

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- How operational emissions have been reduced as much as possible through the application of best available technology for that type of technology
- Calculation of operational energy consumption and associated carbon emissions.
- Whether and how any residual GHG emissions will be (voluntarily) offset or removed using a recognised framework.
- Where there are residual emissions, the level of emissions and the impact of those on national and international efforts to limit climate change, both alone and where relevant in combination with other developments at a regional or national level, or sector level, if sectoral targets are developed.
- 5.3.5 A GHG assessment should be used to drive down GHG emissions at every stage of the proposed development and ensure that emissions are minimised as far as possible for the type of technology, taking into account the overall objectives of ensuring our supply of energy always remains secure, reliable and affordable, as we transition to net zero.
- 5.3.6 Applicants should look for opportunities within the proposed development to embed nature-based or technological solutions to mitigate or offset the emissions of construction and decommissioning.
- 5.3.10 The Secretary of State should give appropriate weight to projects that embed nature based or technological processes to mitigate or offset the emissions of construction and decommissioning within the proposed development. However, in light of the vital role energy infrastructure plays in the process of economy wide decarbonisation, the Secretary of State must accept that there are likely to be some residual emissions from construction and decommissioning of energy infrastructure.
- Operational GHG emissions are a significant adverse impact from some types of energy infrastructure which cannot be totally avoided (even with full deployment of CCS technology). Given the characteristics of these and other technologies, as noted in Part 3 of this NPS, and the range of non-planning policies that can be used to decarbonise electricity generation, such as the UK ETS (see Sections 2.4 and 2.5 above), government has determined that operational GHG emissions are not reasons to prohibit the consenting of energy projects or to impose more restrictions on them in the planning policy framework than are set out in the energy NPSs (e.g. the CCR requirements). Any carbon assessment will include an assessment of operational GHG emissions, but the policies set out in Part 2, including the UK ETS, can be applied to these emissions
- 5.3.12 Operational emissions will be addressed in a managed, economy-wide manner, to ensure consistency with carbon budgets, net zero and our international climate commitments. The Secretary of State does not, therefore need to assess individual applications for planning consent against operational carbon emissions and their contribution to carbon budgets, net zero and our international climate commitments.

Biodiversity and Geological Conservation

5.4.2 The government's policy for biodiversity in England is set out in the Environmental Improvement Plan, Biodiversity 2020, the National Pollinator Strategy and the UK Marine Strategy. The aim is to halt overall biodiversity loss, support healthy well-functioning ecosystems and establish coherent ecological networks, with more and better places for nature for the benefit of wildlife and people. This aim needs to be viewed in the context of the challenge presented by climate change. Healthy,

A Report to Inform the Habitats Regulations Assessment **[EN070008/APP/6.5]** has been included with the Application due to the presence of European protected sites. The HRA was progressed to the AppropriateAssessment Stage and concluded that the Proposed Development would not result insignificantly affect the integrity of European protected sites.

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naturally functioning ecosystems and coherent ecological networks will be more resilient and adaptable to climate change effects. Failure to address this challenge will result in significant adverse impact on biodiversity and the ecosystem services it provides.

- 5.4.4 The highest level of biodiversity protection is afforded to sites identified through international conventions. The Habitats Regulations set out sites for which an HRA will assess the implications of a plan or project, including Special Areas of Conservation and Special Protection Areas.
- 5.4.5 As a matter of policy, the following should be given the same protection as sites covered by the Habitats Regulations and an HRA will also be required:
 - a) potential Special Protection Areas and possible Special Areas of Conservation;
 - b) listed or proposed Ramsar sites: and
 - sites identified, or required, as compensatory measures for adverse effects on any of the other sites covered by this paragraph.
- 5.4.7 Many SSSIs are also designated as sites of international importance and will be protected accordingly. Those that are not, or those features of SSSIs not covered by an international designation, should be given a high degree of protection. Most National Nature Reserves are notified as SSSIs.
- 5.4.8 Development on land within or outside a SSSI, and which is likely to have an adverse effect on it (either individually or in combination with other developments), should not normally be permitted. The only exception is where the benefits (including need) of the development in the location proposed clearly outweigh both its likely impact on the features of the site that make it of special scientific interest, and any broader impacts on the national network of SSSIs.
- 5.4.12 Sites of regional and local biodiversity and geological interest, which include Regionally Important Geological Sites, Local Nature Reserves and Local Wildlife Sites, are areas of substantive nature conservation value and make an important contribution to ecological networks and nature's recovery. They can also provide wider benefits including public access (where agreed), climate mitigation and helping to tackle air pollution.
- 5.4.14 Irreplaceable habitats are habitats which would be technically very difficult (or take a very significant time) to restore, recreate or replace once destroyed, taking into account their age, uniqueness, species diversity or rarity.
- 5.4.16 Many individual wildlife species receive statutory protection under a range of legislative provisions. Other species and habitats have been identified as being of principal importance for the conservation of biodiversity in England and Wales, as well as for their continued benefit for climate mitigation and adaptation and thereby requiring conservation action.
- 5.4.17 Where the development is subject to EIA the applicant should ensure that the ES clearly sets out any effects on internationally, nationally, and locally designated sites of ecological or geological conservation importance (including those outside England), on protected species and on habitats and other species identified as being of principal importance for the conservation of biodiversity, including irreplaceable habitats.

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There are no geological SSSI's, RIGS or local geological sites designated within the Site Boundary.

Chapter 9: Geology and Hydrogeology of the ES **[EN070008/APP/6.2.9]** assesses the likely impact on the geology and hydrology of the Proposed Development and Chapter 6 of the ES, addresses the likely impact on ecology and biodiversity of the Proposed Development. These Chapters identify the baseline biodiversity value, sensitive receptors, and ground conditions within the Site Boundary. The impact of construction and operation has been considered.

Mitigation is embedded in the design for the Proposed Development and also in the measures included in the Draft CEMP [EN070008/APP/6.4.3.1] and Outline LandscapeEnvironmental Management Plan [EN070008/APP/6.8]

The assessment concludes that with the application of the committed mitigation measures, no significant adverse residual effects are anticipated during construction relating to ecology and biodiversity.

The Applicant recognises the importance of BNG and has made a voluntary commitment to deliver up to a 10% net gain in biodiversity relating to the permanent habitat loss at the above ground facilities (the Immingham Facility, Block Valve Stations and Theddlethorpe Facility, including permanent accesses. This is reported in the Initial Biodiversity Net Gain Assessment [EN070008/APP/6.7.1] and Draft Biodiversity Net Gain Strategy [EN070008/APP/6.7.2].

There is no ancient woodland within the Order Limits. Chapter 8: Ecology and Biodiversity of the ES [EN070008/APP/6.2.8] explains that veteran trees have been identified within the Order Limits at Barnoldby le Beck parkland (Arboriculture Report in ES Appendix 6-10 [EN070008/APP/6.4.6.10] for locations). Whilst a small area of the parkland habitat will be lost, the veteran trees will be avoided. Mitigation measures will reduce any impacts on the veteran trees.

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5.4.19	The applicant should show how the project has taken advantage of opportunities to conserve and enhance biodiversity and geological conservation interests.
5.4.21	As set out in Section 4.6, the design process should embed opportunities for nature inclusive design Energy infrastructure projects have the potential to deliver significant benefits and enhancements beyond Biodiversity Net Gain, which result in wider environmental gains (see Section 4.5 on Environmental and Biodiversity Net Gain). The scope of potential gains will be dependent on the type, scale, and location of each project.
5.4.22	The design of Energy NSIP proposals will need to consider the movement of mobile / migratory species such as birds, fish and marine and terrestrial mammals and their potential to interact with infrastructure. As energy infrastructure could occur anywhere within England and Wales, both inland and onshore and offshore, the potential to affect mobile and migratory species across the UK and more widely across Europe (transboundary effects) requires consideration, depending on the location of development.
5.4.25	The applicant should seek the advice of the appropriate SNCB and provide the Secretary of State with such information as the Secretary of State may reasonably require, to determine whether an Appropriate Assessment (AA) is required. Applicants can request and agree 'Evidence Plans' with SNCBs, which is a way to agree and record upfront the information the applicant needs to supply with its application, so that the HRA can be efficiently carried out. If an AA is required, the applicant must provide the Secretary of State with such information as may reasonably be required to enable the Secretary of State to conduct the AA. This should include information on any mitigation measures that are proposed to minimise or avoid likely significant effects.
5.4.32	Applicants should include measures to mitigate the direct and indirect effects of development on ancient woodland, veteran trees or other irreplaceable habitats during both construction and operational phase
5.4.33	Applicants should consider any reasonable opportunities to maximise the restoration, creation, and enhancement of wider biodiversity, and the protection and restoration of the ability of habitats to store or sequester carbon as set out under Section 4.5.
5.4.35	 Applicants should include appropriate avoidance, mitigation, compensation and enhancement measures as an integral part of the proposed development. In particular, the applicant should demonstrate that: during construction, they will seek to ensure that activities will be confined to the minimum areas required for the works the timing of construction has been planned to avoid or limit disturbance during construction and operation best practice will be followed to ensure that risk of disturbance or damage to species or habitats is minimised, including as a consequence of transport access arrangements habitats will, where practicable, be restored after construction works have finished

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- opportunities will be taken to enhance existing habitats rather than replace them, and
 where practicable, create new habitats of value within the site landscaping proposals.
 Where habitat creation is required as mitigation, compensation, or enhancement the
 location and quality will be of key importance. In this regard habitat creation should be
 focused on areas where the most ecological and ecosystems benefits can be realised.
- 5.4.36 Applicants should produce and implement a Biodiversity Management Strategy as part of their development proposals. This could include provision for biodiversity awareness training to employees and contractors so as to avoid unnecessary adverse impacts on biodiversity during the construction and operation stages.
- 5.4.41 The benefits of nationally significant low carbon energy infrastructure development may include benefits for biodiversity and geological conservation interests and these benefits may outweigh harm to these interests. The Secretary of State may take account of any such net benefit in cases where it can be demonstrated.
- As a general principle, and subject to the specific policies below, development should, in line with the mitigation hierarchy, aim to avoid significant harm to biodiversity and geological conservation interests, including through consideration of reasonable alternatives (as set out in Section 4.2 above). Where significant harm cannot be avoided, impacts should be mitigated and as a last resort, appropriate compensation measures should be sought.
- 5.4.43 If significant harm to biodiversity resulting from a development cannot be avoided (for example through locating on an alternative site with less harmful impacts), adequately mitigated, or, as a last resort, compensated for, then the Secretary of State will give significant weight to any residual harm and consent may be refused.
- 5.4.46 Development proposals provide many opportunities for building-in beneficial biodiversity or geological features as part of good design. The Secretary of State should give appropriate weight to environmental and biodiversity enhancements, although any weight given to gains provided to meet a legal requirement (for example under the Environment Act 2021) is likely to be limited.

Dust, Odour, Artificial Light, Smoke, Steam, and Insect Infestation

- 5.7.1 During the construction, operation and decommissioning of energy infrastructure there is potential for the release of a range of emissions such as odour, dust, steam, smoke, artificial light and infestation of insects. All have the potential to have a detrimental impact on amenity or cause a common law nuisance or statutory nuisance under Part III, Environmental Protection Act 1990. However, they are not regulated by the environmental permitting regime, so mitigation of these impacts will need to be included in the DCO.
- 5.7.5 The applicant should assess the potential for insect infestation and emissions of odour, dust, steam, smoke, and artificial light to have a detrimental impact on amenity, as part of the ES.
- 5.7.12 The Secretary of State should satisfy itself that:
 - an assessment of the potential for artificial light, dust, odour, smoke, steam and insect infestation to have a detrimental impact on amenity has been carried out

The design of the Proposed Development, as outlined in Chapter 2: Design Evolution and Alternatives of the ES [EN070008/APP/6.2.2] was developed to ensure that considerations were made to the use of materials, energy efficiency and minimisation of waste. Chapter 17: Health and Wellbeing [EN070008/APP/6.2.17] includes and assessment of the effects of traffic, air or water pollution, dust, odour, hazardous waste and substances, noise and exposure to radiation, with mitigation measures implemented to ensure any constructions effects are negligible. Mitigation measures are further expanded on within the Draft CEMP [EN070008/APP/6.4]. The Planning, Design and Access Statement [EN070008/APP/7.1] provides a full assessment of the layout, massing and access as required within Policy 32.

The design development process included the identification of mitigation commitments, both for mitigation embedded in the design and also good practice mitigation. The route of

Revised Dra	aft Overarching National Policy Statement for Energy (EN-1), March 2023	
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	 that all reasonable steps have been taken, and will be taken, to minimise any such detrimental impacts 	the pipeline has been influenced by the desire to reduce potential likely effects on communities, for example, the route seeks to limit adverse impacts on habitats, historic receptors and residential buildings.
5.7.15	In particular, the Secretary of State should consider whether to require the applicant to abide by a scheme of management and mitigation concerning insect infestation and emissions of odour, dust, steam, smoke, and artificial light from the development. The Secretary of State should consider the need for such a scheme to reduce any loss to amenity which might arise during the construction, operation and decommissioning of the development. A construction management plan may help codify mitigation at that stage.	The design of the Proposed Development has taken into account local, regional and national policy and guidance on how development should be designed. The proposed design of the development constitutes innovative technology and design, that will promote and contribute to high levels of sustainable development.
Flood Risk		
5.8.6	The aims of planning policy on development and flood risk are to ensure that flood risk from all sources of flooding is taken into account at all stages in the planning process to avoid inappropriate development in areas at risk of flooding, and to steer new development to areas with the lowest risk of flooding.	Chapter 11 of the ES: Water Environment [EN070008/APP/6.2.11] and its associated appendices (including Appendix 11-4: Flood Risk Assessment); assess the likely significant effects of the Proposed Development on Water Resources and Flood Risk.
5.8.7	Where new energy infrastructure is, exceptionally, necessary in flood risk areas (for example where there are no reasonably available sites in areas at lower risk), policy aims to make it safe for its lifetime without increasing flood risk elsewhere and, where possible, by reducing flood risk overall. It should also be designed and constructed to remain operational in times of flood.	Initial assessments of groundwater and surface water quality and resource, fluvial geomorphology and flood risk have been carried out in order to identify the potential significant effects associated with the construction, operation and decommissioning of the Proposed Development on potentially sensitive receptors.
5.8.9	If, following application of the Sequential Test, it is not possible, (taking into account wider sustainable development objectives), for the project to be located in areas of lower flood risk the Exception Test can be applied, as required by Annex 3 of the Planning Practice Guidance. The test provides a method of allowing necessary development to go ahead in situations where suitable sites at lower risk of flooding are not available.	The pipeline route was selected and designed to reduce the impact on flood risk, avoiding flood zone 2 and 3 areas where possible. However it has been necessary to locate the Immingham Facility and Theddlethorpe Facility in an area of Flood Zone 3 to be suitably located to emitters and the existing LOGGS pipeline respectively.
5.8.10	The Exception Test is only appropriate for use where the Sequential Test alone cannot deliver an acceptable site. It would only be appropriate to move onto the Exception Test when the Sequential Test has identified reasonably available, lower risk sites appropriate for the proposed development where, accounting for wider sustainable development objectives, application of relevant policies would provide a clear reason for refusing development in any alternative locations identified. Examples could include alternative site(s) that are subject to national designations such as landscape, heritage and nature conservation designations, for example Areas of Outstanding Natural Beauty (AONBs), SSSIs and World Heritage Sites (WHS) which would not usually be considered appropriate.	The Sequential Test included in the FRA was carried out to assess the flood risk for the Proposed Development and to direct it to areas of lowest probability of flooding (flood zone 1) where possible. Elements of the Proposed Development including the Immingham Facility, Theddlethorpe Facility and sections of the pipeline are located in Flood Zones 2 & 3. The Proposed Development is classed as 'Essential Infrastructure' which is considered to be acceptable in the Flood Zones 1 and 2 and also in Flood Zone 3 where the requirements of an Exception Test are met.
5.8.11	Both elements of the Exception Test will have to be satisfied for development to be consented. To pass the Exception Test it should be demonstrated that: • the project would provide wider sustainability benefits to the community that outweigh flood risk; and • the project will be safe for its lifetime taking account of the vulnerability of its users, without increasing flood risk elsewhere, and, where possible will reduce flood risk overall.	
5.8.12	Development should be designed to ensure there is no increase in flood risk elsewhere, accounting for the predicted impacts of climate change throughout the lifetime of the development. There should be no net loss of floodplain storage and any deflection or constriction of flood flow routes should be	

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safely managed within the site. Mitigation measures should make as much use as possible of natural flood management techniques.

- A site-specific flood risk assessment should be provided for all energy projects in Flood Zones 2 and 3 in England or Zones B and C in Wales. In Flood Zone 1 in England or Zone A in Wales, an assessment should accompany all proposals involving:
 - sites of 1 hectare or more
 - land which has been identified by the EA or NRW as having critical drainage problems
 - land identified (for example in a local authority strategic flood risk assessment) as being at increased flood risk in future
 - land that may be subject to other sources of flooding (for example surface water)
 - where the EA or NRW, Lead Local Flood Authority, Internal Drainage Board or other body have indicated that there may be drainage problems.
- 5.8.14 This assessment should identify and assess the risks of all forms of flooding to and from the project and demonstrate how these flood risks will be managed, taking climate change into account.
- 5.8.15 The minimum requirements for Flood Risk Assessments (FRA) are that they should:
 - be proportionate to the risk and appropriate to the scale, nature and location of the project;
 - consider the risk of flooding arising from the project in addition to the risk of flooding to the project;
 - take the impacts of climate change into account, across a range of climate scenarios, clearly stating the development lifetime over which the assessment has been made
 - be undertaken by competent people, as early as possible in the process of preparing the proposal;
 - consider both the potential adverse and beneficial effects of flood risk management infrastructure, including raised defences, flow channels, flood storage areas and other artificial features, together with the consequences of their failure and exceedance;
 - consider the vulnerability of those using the site, including arrangements for safe access and escape;
 - consider and quantify the different types of flooding (whether from natural and human sources and including joint and cumulative effects) and include information on flood likelihood, speed-of-onset, depth, velocity, hazard and duration;
 - identify and secure opportunities to reduce the causes and impacts of flooding overall, making as much use as possible of natural flood management techniques as part of an integrated approach to flood risk management:
 - consider the effects of a range of flooding events including extreme events on people, property, the natural and historic environment and river and coastal processes:
 - include the assessment of the remaining (known as 'residual') risk after risk reduction measures have been taken into account and demonstrate that these risks can be safely managed, ensuring people will not be exposed to hazardous flooding;
 - consider how the ability of water to soak into the ground may change with development, along with how the proposed layout of the project may affect drainage systems.
 - i. Describe the existing surface water drainage arrangements for the site

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- ii. Set out (approximately) the existing rates and volumes of surface water run-off generated by the site. Detail the proposals for restricting discharge rates
- iii. Set out proposals for managing and discharging surface water from the site using sustainable drainage systems and accounting for the predicted impacts of climate change. If sustainable drainage systems have been rejected, present clear evidence of why their inclusion would be inappropriate
- iv. Demonstrate how the hierarchy of drainage options has been followed.
- Explain and justify why the types of SuDS and method of discharge have been selected and why they are considered appropriate. Where cost is a reason for not including SuDS, provide information to enable comparison with the lifetime costs of a conventional public sewer connection
- vi. Explain how sustainable drainage systems have been integrated with other aspects of the development such as open space or green infrastructure, so as to ensure an efficient use of the site
- vii. Describe the multifunctional benefits the sustainable drainage system will provide
- viii. Set out which opportunities to reduce the causes and impacts of flooding have been identified and included as part of the proposed sustainable drainage system
- ix. Explain how run-off from the completed development will be prevented from causing an impact elsewhere
- x. Explain how the sustainable drainage system been designed to facilitate maintenance and, where relevant, adoption. Set out plans for ensuring an acceptable standard of operation and maintenance throughout the lifetime of the development
 - detail those measures that will be included to ensure the development will be safe and remain operational during a flooding event throughout the development's lifetime without increasing flood risk elsewhere:
 - identify and secure opportunities to reduce the causes and impacts of flooding overall during the period of construction; and
 - be supported by appropriate data and information, including historical information on previous events.
- 5.8.17 Development (including construction works) will need to account for any existing watercourses and flood and coastal erosion risk management structures or features, or any land likely to be needed for future structures or features so as to ensure:
 - Access, clearances and sufficient land are retained to enable their maintenance, repair, operation, and replacement, as necessary
 - Their standard of protection is not reduced
 - Their condition or structural integrity is not reduced

Historic Environment

The applicant should undertake an assessment of any likely significant heritage impacts of the proposed development as part of the EIA and describe these in the ES (see Section 4.2). This should include consideration of heritage assets above, at, and below the surface of the ground. Consideration will also need to be given to the possible impacts, including cumulative, on the wider historic environment. The assessment should include reference to any historic landscape or seascape character assessment and associated studies as a means of assessing impacts relevant to the proposed project.

Chapter 8: Historic Environment **[EN070008/APP/6.2.8]** assesses the effects during the construction, operation and decommissioning phase of development. Embedded mitigation measures have been incorporated into the design process of the Proposed Development and where required further mitigation measures are presented within the Draft CEMP in Appendix 3-1 of the ES **IEN070008/APP/6.4.3.11**.

5.9.8

Revised Draft Overarching National Policy Statement for Energy (EN-1), March 2023

Paragraph Relevant Policy Text: Requirement of the Policy

- As part of the ES the applicant should provide a description of the significance of the heritage assets affected by the proposed development, including any contribution made by their setting. The level of detail should be proportionate to the importance of the heritage assets and no more than is sufficient to understand the potential impact of the proposal on their significance. As a minimum, the applicant should have consulted the relevant Historic Environment Record (or, where the development is in English or Welsh waters, Historic England or Cadw) and assessed the heritage assets themselves using expertise where necessary according to the proposed development's impact.
- 5.9.11 Where a site on which development is proposed includes, or the available evidence suggests it has the potential to include, heritage assets with an archaeological interest, the applicant should carry out appropriate desk-based assessment and, where such desk-based research is insufficient to properly assess the interest, a field evaluation. Where proposed development will affect the setting of a heritage asset, accurate representative visualisations may be necessary to explain the impact.
- 5.9.12 The applicant should ensure that the extent of the impact of the proposed development on the significance of any heritage assets affected can be adequately understood from the application and supporting documents. Studies will be required on those heritage assets affected by noise, vibration, light and indirect impacts, the extent and detail of these studies will be proportionate to the significance of the heritage asset affected.
- 5.9.13 The applicant is encouraged, where opportunities exist, to prepare proposals which can make a positive contribution to the historic environment, and to consider how their scheme takes account of the significance of heritage assets affected. This can include, where possible:
 - enhancing, through a range of measures such a sensitive design, the significance of heritage assets or setting affected
 - considering where required the development of archive capacity which could deliver significant public benefits
 - considering how visual or noise impacts can affect heritage assets, and whether there
 may be opportunities to enhance access to, or interpretation, understanding and
 appreciation of, the heritage assets affected by the scheme
- 5.9.17 Where the loss of the whole or part of a heritage asset's significance is justified, the Secretary of State will require the applicant to record and advance understanding of the significance of the heritage asset before it is lost (wholly or in part). The extent of the requirement should be proportionate to the asset's importance and significance and the impact. The applicant should be required to publish this evidence and to deposit copies of the reports with the relevant Historic Environmental Record. They should also be required to deposit the archive generated in a local museum or other public repository willing to receive it.

Where appropriate, the Secretary of State will impose requirements on the Development Consent Order to ensure that the work is undertaken in a timely manner, in accordance with a written scheme of investigation that complies with the policy in this NPS and which has been agreed in writing with the relevant local authority, and to ensure that the completion of the exercise is properly secured.

Compliance Assessment: How the Proposed Development addresses the requirement

The pipeline route of the Proposed Development has been selected to reduce the impact on the historic environment by avoiding where practicable designated heritage assets. Non-designated and designated heritage assets have been included in the environmental impact assessment as identified within Part 5.8 and assessed against its value based on professional judgements informed by guidance and national policy.

The historic environment has been considered through the design process of the Proposed Development. Temporary and permanent likely significant effects arising from impacts during construction, operation and decommissioning of the Proposed Development have been considered and the full extent is detailed in Chapter 8: Historic Environment of the ES [EN070008/APP/6.2.8].

The historic environment assessment has identified likely significant residual effects on non-designated buried archaeological remains at one site due to construction of the pipeline, at Section 5 – cropmark enclosures at Theddlethorpe [622].

The historic environment assessment has identified likely significant residual effects on three designated heritage assets, the grade II* listed Church of St Edmund in Riby, the grade II listed Ashleigh Farm at Theddlethorpe, and the grade II listed Manor House and non-designated former parkland at Barnoldby le Beck due to construction of the pipeline. Where impacts cannot be avoided, mitigation will take the form of archaeological investigation and recording, to be undertaken as advanced works. A detailed archaeological mitigation strategy will be developed and agreed during Examination.

Operation of the Theddlethorpe Facility would have significant residual effects on the setting of one designated heritage asset (the grade II listed Ashleigh Farm). This effect is assessed as Moderate adverse and would be permanent during the operational lifetime of the Proposed Development. Decommissioning of the Theddlethorpe Facility would reverse this effect and reinstate the existing baseline conditions. Residual effects on other built heritage assets due to operation and decommissioning of the Proposed Development are assessed as Minor or Negligible adverse: these temporary effects are not considered to be significant.

It is assessed that the operation and decommissioning phases of the Proposed Development would not result in any additional significant effects on buried archaeological remains.

With regard to the harm to heritage assets caused by the Proposed Development, the assessment included in chapter 8 of the ES concludes that the residual effects of the Proposed Development will result in less than substantial harm to three designated heritage assets during construction (for a temporary period) and at one designated heritage assets during operation (a forty year period). The assessment concludes that there will also be less than substantial harm to non-designated heritage assets.

5.9.19	Where there is a high probability (based on an adequate assessment) that a development site may include, as yet undiscovered heritage assets with archaeological interest, the Secretary of State will consider requirements to ensure appropriate procedures are in place for the identification and treatment of such assets discovered during construction.
5.9.20	In determining applications, the Secretary of State should seek to identify and assess the particular significance of any heritage asset that may be affected by the proposed development, including by development affecting the setting of a heritage asset (including assets whose setting may be affected by the proposed development), taking account of: • relevant information provided with the application and, where applicable, relevant information submitted during the examination of the application • any designation records, including those on the National Heritage List for England • historic landscape character records • the relevant Historic Environment Record(s), and similar sources of information • representations made by interested parties during the examination process • expert advice, where appropriate, and when the need to understand the significance of the heritage asset demands it
5.9.21	The Secretary of State must also comply with the requirements on listed buildings, conservation areas and scheduled monuments, set out in Regulation 3 of the Infrastructure Planning (Decisions) Regulations 2010.
5.9.22	In considering the impact of a proposed development on any heritage assets, the Secretary of State should consider the particular nature of the significance of the heritage assets and the value that they hold for this and future generations. This understanding should be used to avoid or minimise conflict between their conservation and any aspect of the proposal.
5.9.23	The Secretary of State should consider the desirability of sustaining and, where appropriate, enhancing the significance of heritage assets, the contribution of their settings and the positive contribution that their conservation can make to sustainable communities, including to their quality of life, their economic vitality, and to the public's enjoyment of these assets.
5.9.24	The Secretary of State should also consider the desirability of the new development making a positive contribution to the character and local distinctiveness of the historic environment. The consideration of design should include scale, height, massing, alignment, materials, use and landscaping (for example, screen planting).
5.9.25	When considering the impact of a proposed development on the significance of a designated heritage asset, the Secretary of State should give great weight to the asset's conservation. The more important the asset, the greater the weight should be. This is irrespective of whether any potential harm amounts to substantial harm, total loss, or less than substantial harm to its significance.
5.9.26	The Secretary of State should give considerable importance and weight to the desirability of preserving all heritage assets. Any harm or loss of significance of a designated heritage asset (from

Compliance Assessment: How the Proposed Development addresses the requirement

It is considered that the benefits of the Proposed Development to the public outweigh the less than substantial harm caused to the heritage assets identified in the ES. The benefits to the public of the Proposed Development include providing carbon capture and storage facilities which will reduce CO2 emissions from industry in the Immingham Area. This will lead to a reduction in greenhouse gas emissions associated with global warming while also allowing existing employment and economic activity to be maintained while helping the government to meet legally binding targets to achieve Net Zero by 2050. The Proposed Development will also generate significant investment to the area.

Great weight should be given to these public benefits which will be advantageous locally, regionally and nationally. The benefits of the Proposed Development are considered to significantly outweigh the less than substantial harm to heritage assets reported in the ES.

Paragraph	Relevant Policy Text: Requirement of the Policy	Compliance Assessment: How the Proposed Development addresses the requirement
	its alteration or destruction, or from development within its setting) should require clear and convincing justification.	
5.9.27	Substantial harm to or loss of significance of a grade II Listed Building or a grade II Registered Park or Garden should be exceptional.	
5.9.28	Substantial harm to or loss of significance of assets of the highest significance, including Scheduled Monuments; Protected Wreck Sites; Registered Battlefields; grade I and II* Listed Buildings; grade I and II* Registered Parks and Gardens; and World Heritage Sites, should be wholly exceptional.	
5.9.29	Where the proposed development will lead to substantial harm to (or total loss of significance of) a designated heritage asset the Secretary of State should refuse consent unless it can be demonstrated that the substantial harm to, or loss of, significance is necessary to achieve substantial public benefits that outweigh that harm or loss, or all the following apply: • the nature of the heritage asset prevents all reasonable uses of the site • no viable use of the heritage asset itself can be found in the medium term through appropriate marketing that will enable its conservation • conservation by grant-funding or some form of not for profit, charitable or public ownership is demonstrably not possible • the harm or loss is outweighed by the benefit of bringing the site back into use	
5.9.30	Where the proposed development will lead to less than substantial harm to the significance of the designated heritage asset, this harm should be weighed against the public benefits of the proposal, including, where appropriate securing its optimum viable use.	
5.9.31	In weighing applications that directly or indirectly affect non-designated heritage assets, a balanced judgement will be required having regard to the scale of any harm or loss and the significance of the heritage asset.	
5.9.32	Not all elements of a Conservation Area or World Heritage Site will necessarily contribute to its significance. Loss of a building (or other element) which makes a positive contribution to the significance of the Conservation Area or World Heritage Site should be treated either as substantial harm or less than substantial harm under paragraph 5.9.29 or less than substantial harm under paragraph 5.9.30, as appropriate, considering the relative significance of the element affected and its contribution to the significance of the Conservation Area or World Heritage Site as a whole.	
). 3.34	When considering applications for development affecting the setting of a designated heritage asset, the Secretary of State should give appropriate weight to the desirability of preserving the setting such assets and treat favourably applications that preserve those elements of the setting that make a positive contribution to, or better reveal the significance of, the asset. When considering applications that do not do this, the Secretary of State should give great weight to any negative effects, when weighing them against the wider benefits of the application. The greater the negative impact on the significance of the designated heritage asset, the greater the benefits that will be needed to justify approval.	

Paragraph	Relevant Policy Text: Requirement of the Policy	С
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5.10.6	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.	T de e
5.10.7	That is the fall decape, providing reactification integration into a personal and appropriation	u
	National Parks, the Broads and AONBs have been confirmed by the government as having the highest status of protection in relation to landscape and natural beauty. Each of these designated areas has specific statutory purposes which help ensure their continued protection and which the Secretary of State should have regard to in their decisions.	a th e th
5.10.8	The duty to have regard to the purposes of nationally designated areas also applies when considering applications for projects outside the boundaries of these areas which may have impacts within them. The aim should be to avoid harming the purposes of designation or to minimise adverse impacts on designated areas, and such projects should be designed sensitively given the various siting, operational, and other relevant constraints. This should include projects in England which may have impacts on National Scenic Areas in Scotland or National Parks and AONBs in Wales, as well as projects in Wales which may have impacts on National Parks and AONBs in England.	T be th ce
5.10.15	The applicant should carry out a landscape and visual impact assessment and report it in the ES, including cumulative effects (see Section 4.2). Several guides have been produced to assist in addressing landscape issues.	ir m la in
5.10.16	The landscape and visual assessment should include reference to any landscape character assessment and associated studies as a means of assessing landscape impacts relevant to the proposed project. The applicant's assessment should also take account of any relevant policies based on these assessments in local development documents in England and local development plans in Wales.	ra W W
5.10.18	The applicant should consider landscape and visual matters in the early stages of siting and design, where site choices and design principles are being established. This will allow the applicant to demonstrate in the ES how both negative effects have been minimised and opportunities for creating positive benefits or enhancement have been recognised.	P vi d E
5.10.19	The assessment should include the effects on landscape components and character during construction and operation. For projects which may affect a National Park, The Broads or an Areas of Outstanding Natural Beauty the assessment should include effects on the natural beauty and special qualities of these areas'.	•
5.10.20	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 effects, including on local amenity, and nature conservation.	
5.10.24	In considering visual effects 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. This may assist the Secretary of State in judging the weight they should give to the assessed visual impacts of the proposed development.	

Compliance Assessment: How the Proposed Development addresses the requirement

The design of the Proposed Development has evolved through a series of steps and design iterations. Design evolution has been informed by environmental assessments, engineering considerations, stakeholder feedback and through the consultation exercises undertaken. These have taken into account site context, existing features within and adjacent to the order limits, nearby sensitive receptors and assets, consultation responses and access considerations to develop a good design that balances the need to maximise the most efficient route with avoidance and mitigation of impacts and provision of environmental and other enhancements. Chapter 2: Design Evolution and Alternatives of the ES [EN070008/APP/6.2.2] details the design process undertaken.

The design development process included the identification of mitigation commitments, both for mitigation embedded in the design and also good practice mitigation. The route of the pipeline has been influenced by the desire to reduce potential likely effects on communities, for example, the route seeks to limit adverse impacts on habitats, historic receptors and residential buildings.

Mitigation measures have been incorporated into the design to reduce impacts. This includes siting and routing, construction management, and landscape and design measures, with the Proposed Development designed to reduce the impact on the landscape where practicable. Although the measures set out would assist in reducing the impacts at the identified locations, the reduction would be insufficient to reduce the impact rating and therefore effects to below significant levels.

With the incorporation of embedded design mitigation and additional mitigation, there would be significant effects on the Lincolnshire Wolds AONB during construction. Effects would reduce to not significant during operation and decommissioning. The remaining landscape receptors will experience not significant effects during all stages of the Proposed Development. Whilst there are temporary significant impacts, the landscape and visual impact of the Proposed Development can be considered outweighed by the clear demonstrable benefits of the proposed national significant infrastructure. ES Chapter 7 is supported by appendices including:

- Appendix 7-1: Representative Viewpoints: and
- Appendix 7-2: Visualisations

Revised Dra	aft Overarching National Policy Statement for Energy (EN-1), March 2023	
Paragraph	Relevant Policy Text: Requirement of the Policy	Compliance Assessment: How the Proposed Development addresses the requirement
5.10.26	Within a defined site, adverse landscape and visual effects 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.	
5.10.27	Depending on the topography of the surrounding terrain and areas of population it may be appropriate to undertake landscaping off site. For example, filling in gaps in existing tree and hedge lines may mitigate the impact when viewed from a more distant vista.	
5.10.29	The Secretary of State should be satisfied that local authorities will have sufficient design content secured to ensure future consenting will meet landscape, visual and good design objectives.	
5.10.31	 When considering applications for development within National Parks, the Broads and Areas of Outstanding Natural Beauty the conservation and enhancement of the natural beauty of the landscape and countryside should be given substantial weight by the Secretary of State in deciding on applications for development consent in these areas. The Secretary of State may grant development consent in these areas in exceptional circumstances. Such 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 national considerations, and the impact of consenting or not consenting it upon the local economy; the cost of, and scope for, developing all or part of the development 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 4.2; and any detrimental effect on the environment, the landscape and recreational opportunities, and the extent to which that could be moderated. 	
5.10.32	The Secretary of State should ensure that any projects consented in these designated areas should be carried out to high environmental standards, including through the application of appropriate requirements where necessary.	
5.10.33	The duty to have regard to the purposes of nationally designated areas also applies when considering applications for projects outside the boundaries of these areas which may have impacts within them. The fact that a proposed project will be visible from within a designated area should not in itself be a reason for the Secretary of State to refuse consent.	
5.10.34	The scale of energy projects means that they will often be visible within many miles of the site of the proposed infrastructure. The Secretary of State should judge whether any adverse impact on the landscape would be so damaging that it is not offset by the benefits (including need) of the project.	
5.10.35	In reaching a judgment, the Secretary of State should consider whether any adverse impact is temporary, such as during construction, and/or whether any adverse impact on the landscape will be capable of being reversed in a timescale that the Secretary of State considers reasonable.	

Paragraph	Relevant Policy Text: Requirement of the Policy	Compliance Assessment: How the Proposed Development addresses the requirement
5.10.36	The Secretary of State should consider whether the project has been designed carefully, taking account of environmental effects on the landscape and siting, operational and other relevant constraints, to minimise harm to the landscape, including by appropriate mitigation.	
	The Secretary of State should consider whether requirements to the consent are needed requiring the incorporation of particular design details that are in keeping with the statutory and technical requirements for landscape and visual impacts.	
Land Use, I	ncluding Open Space, Green Infrastructure, and Green Belt	
5.11.8	The ES should identify existing and proposed land uses near the project, any effects of replacing an existing development or use of the site with the proposed project or preventing a development or use on a neighbouring site from continuing. Applicants should also assess any effects of precluding a new development or use proposed in the development plan. The assessment should be proportionate to the scale of the preferred scheme and its likely impacts on such receptors. For developments on previously developed land, the applicant should ensure that they have considered the risk posed by land contamination and how it is proposed to address this.	The majority of the Proposed Development is located in rural areas, Chapter 10: Agriculture and Soil of the ES [EN070008/APP/6.2.10] presents an assessment of the likely significant effects of the Proposed Development on agriculture and soils during construction and decommissioning, including consideration of impacts on soil resources and agricultural land. The Proposed Development will not result in the loss of Open Space and will not affect Green Belt Land.
5.11.12	Applicants should seek to minimise impacts on the best and most versatile agricultural land (defined as land in grades 1, 2 and 3a of the Agricultural Land Classification) and preferably use land in areas of poorer quality (grades 3b, 4 and 5).	The loss of the vast majority of the grade 2 and 3a BMV agricultural land is temporary and reversible and the permanent loss of grade 2 and 3a BMV land falls significantly below the 20 ha threshold above which effects are considered to be significant. Although both BMV
5.11.13	Applicants should also identify any effects and seek to minimise impacts on soil health and protect and improve soil quality taking into account any mitigation measures proposed.	and non-BMV land would be directly impacted by the Proposed Development the majority of impacts will be temporary and for the duration of the construction phase only, as all land within the pipeline corridor, temporary compounds and temporary accesses will be
5.11.14	Applicants are encouraged to develop and implement a Soil Management Plan which could help minimise potential land contamination. The sustainable reuse of soils needs to be carefully considered in line with good practice guidance where large quantities of soils are surplus to requirements or are affected by contamination.	reinstated immediately following construction to its original condition and land use. The residual impacts to agricultural land as a result of the temporary development are assessed within the ES as not significant. A soil management plan will be developed to protect soil for use following the excavation of trenches for the pipeline.
5.11.25	The Secretary of State should also consider whether any adverse effect on green infrastructure and other forms of open space is adequately mitigated or compensated by means of any planning obligations, for example exchange land and provide for appropriate management and maintenance agreements. Any exchange land should be at least as good in terms of size, usefulness,	With regards to Green Infrastructure, it will be necessary to remove some sections of hedgerow during the construction of the pipeline. The route for the pipeline avoids ancient woodland and veteran trees. Hedgerows removed during construction will be reinstated.
5.11.27	attractiveness and quality, and accessibility. Existing trees and woodlands should be retained wherever possible. The applicant should assess the impacts on, and loss of, all trees and woodlands within the project boundary and develop mitigation measures to minimise adverse impacts and any risk of net deforestation as a result of the	The route of the Pipeline passes through areas allocated as Mineral Safeguard Areas (MSA) in the North East Lincolnshire Council Local Plan (2018). The MSAs are located throughout the western part of the Borough and cover both rural and urban areas. The MSAs are a record of the areas where sand and gravel reserves are present.
connectivity, and improved woodland management. Where woodland loss is unavoidable, however it has not been possible compensation schemes will be required, and the long-term management and maintenance of newly some instances necessitate management.	The presence of MSAs were considered when selecting the route for the pipeline, however it has not been possible to avoid all of the areas. Avoiding the MSA would in some instances necessitate moving the pipeline closer to urban areas, residential properties or environmental receptors.	
5.11.28	Where a proposed development has an impact upon a Mineral Safeguarding Area (MSA), the Secretary of State should ensure that appropriate mitigation measures have been put in place to safeguard mineral resources.	There are no active mineral workings in North East Lincolnshire Council and a call for mineral sites during the preparation of the Local Plan did not yield any sites for allocation. Prior extraction of mineral is not considered to be feasible for the Proposed Development.

Paragraph Relevant Policy Text: Requirement of the Policy

Public Rights of way, National Trails, and other rights of access to land are important recreational facilities for example for walkers, cyclists and horse riders. The Secretary of State should expect applicants to take appropriate mitigation measures to address adverse effects on coastal access, National Trails, other rights of way and open access land and, where appropriate, to consider what opportunities there may be to improve or create new access. In considering revisions to an existing right of way, consideration should be given to the use, character, attractiveness, and convenience of the right of way.

Compliance Assessment: How the Proposed Development addresses the requirement

It is worthy of note that the pipeline would sterilise a narrow strip of land and mineral reserves in each MSA while the pipeline is constructed and operational. The mineral reserves could be extracted once the pipeline is no longer operational.

With regards to public rights of way, the applicant will put in place suitable diversions during the construction and operation of the Proposed Development.

Noise and Vibration

- Noise resulting from a proposed development can also have adverse impacts on wildlife and biodiversity. Noise effects of the proposed development on ecological receptors should be assessed by the Secretary of State in accordance with the Biodiversity and Geological Conservation section of this NPS at Section 5.4. This should consider underwater noise and vibration especially for marine developments. Underwater noise can be a significant issue in the marine environment, particularly in regard to energy production.
- 5.12.6 Where noise impacts are likely to arise from the proposed development, the applicant should include the following in the noise assessment:
 - a description of the noise generating aspects of the development proposal leading to noise impacts, including the identification of any distinctive tonal, impulsive, low frequency or temporal characteristics of the noise
 - identification of noise sensitive receptors and noise sensitive areas that may be affected
 - the characteristics of the existing noise environment
 - a prediction of how the noise environment will change with the proposed development
 - o in the shorter term, such as during the construction period
 - o in the longer term, during the operating life of the infrastructure
 - at particular times of the day, evening and night (and weekends) as appropriate, and at different times of year
 - an assessment of the effect of predicted changes in the noise environment on any noisesensitive receptors, including an assessment of any likely impact on health and well-being where appropriate, and noise-sensitive areas
 - if likely to cause disturbance, an assessment of the effect of underwater or subterranean noise
 - measures to be employed in mitigating the effects of noise using best available techniques to reduce noise impacts
- The nature and extent of the noise assessment should be proportionate to the likely noise impact.
- 5.12.8 Applicants should consider the noise impact of ancillary activities associated with the development, such as increased road and rail traffic movements, or other forms of transportation
- 5.12.9 Operational noise, with respect to human receptors, should be assessed using the principles of the relevant British Standards and other guidance. Further information on assessment of particular noise sources may be contained in the technology specific NPSs. In particular, for renewables (EN-3) and electricity networks (EN-5) there is assessment guidance for specific features of those technologies.

The outcome of the assessment of likely significant environmental effects arising from the Proposed Development on noise and vibration during the construction, operation and decommissioning stages are reported in Chapter 13: Noise and Vibration of the ES [EN070008/APP/6.2.13] and relevant appendices.

The Noise Policy Statement for England and other relevant national policies, regulations, guidance and standards have been considered in the environmental assessment of the potential noise and vibration impacts generated by the Proposed Development. A noise and vibration assessment [EN070008/APP/6.2.13] has informed the EIA.

Potential noise and vibration effects during the construction phase are likely to result from work activities and these will be temporary and reversible with no lasting residual effect. An assessment of these effects is included in the ES [EN070008/APP/6.2.13]. During the operational phase of the Project the Proposed Development would be installed below ground and would not produce any operational noise or vibration. No significant effects on sensitive receptors have been identified as a result of noise from construction traffic movements or operational noise associated with the Proposed Development

Mitigation methods proposed include the use of acoustic fencing, which blocks line-of sight from high noise generating plant to sensitive receptors and following a good communication strategy which would entail liaison with occupiers of sensitive receptors prior to construction works being undertaken to share detail of timings and duration of high noise generating activity. Chapter 13: Noise and Vibration [EN070008/APP/6.2.13] of the ES confirms that, subject to the implementation of mitigation measures there are anticipated to be no significant residual effects due to construction activities. These are therefore classed as not being significant. As all construction activities proposed are to be temporary, any resultant impact will also be temporary.

Paragraph Relevant Poli	cv Text:	Requirement	of the	Policy
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Compliance Assessment: How the Proposed Development addresses the requirement

For the prediction, assessment and management of construction noise, reference should be made to any relevant British Standards and other guidance which also give examples of mitigation strategies.

- Some noise impacts will be controlled through environmental permits and parallel tracking is encouraged where noise impacts determined by an environmental permit interface with planning issues (i.e. physical design and location of development). The applicant should consult EA and/or the SNCB, as necessary, and in particular regarding assessment of noise on protected species or other wildlife. The results of any noise surveys and predictions may inform the ecological assessment. The seasonality of potentially affected species in nearby sites may also need to be considered
- Applicants should submit a detailed impact assessment and mitigation plan as part of any development plan, including the use of noise mitigation and noise abatement technologies during construction and operation.
- The Secretary of State should consider whether mitigation measures are needed both for operational and construction noise over and above any which may form part of the project application. In doing so the Secretary of State may wish to impose mitigation measures. Any such mitigation measures should take account of the NPPF or any successor to it and planning practice guidance on noise.

Mitigation measures may include one or more of the following:

- engineering: reducing the noise generated at source and/or containing the noise generated
 - lay-out: where possible, optimising the distance between the source and noise sensitive receptors and/or incorporating good design to minimise noise transmission through the use of screening by natural or purpose-built barriers, or other buildings
 - administrative: using planning conditions/obligations to restrict activities allowed on the site at certain times and/or specifying permissible noise limits/ noise levels, differentiating as appropriate between different times of day, such as evenings and late at night, and taking into account seasonality of wildlife in nearby designated sites
 - insulation: mitigating the impact on areas likely to be affected by noise including through noise insulation when the impact is on a building.
- 5.12.15 The project should demonstrate good design through selection of the quietest or most acceptable cost-effective plant available; containment of noise within buildings wherever possible, taking into account any other adverse impacts that such containment might cause (e.g. on landscape and visual impacts; optimisation of plant layout to minimise noise emissions; and, where possible, the use of landscaping, bunds or noise barriers to reduce noise transmission).
- 5.12.16 A development must be undertaken in accordance with statutory requirements for noise. Due regard must be given to the relevant sections of the Noise Policy Statement for England261, the NPPF, and the government's associated planning guidance on noise. In Wales the relevant policy will be PPW and the TANs, as well as the Welsh Government's Noise and Soundscape Action Plan.

Paragraph Relevant Policy Text: Requirement of the Policy

5.12.17 The Secretary of State should not grant development consent unless they are satisfied that the proposals will meet the following aims, through the effective management and control of noise:

- avoid significant adverse impacts on health and quality of life from noise
- mitigate and minimise other adverse impacts on health and quality of life from noise
- where possible, contribute to improvements to health and quality of life through the
 effective management and control of noise

5.12.18 When preparing the development consent order, the Secretary of State should consider including measurable requirements or specifying the mitigation measures to be put in place to ensure that noise levels do not exceed any limits specified in the development consent. These requirements or mitigation measures may apply to the construction, operation, and decommissioning of the energy infrastructure development.

Compliance Assessment: How the Proposed Development addresses the requirement

Socio-Economics

- 5.13.2 Where the project is likely to have socio-economic impacts at local or regional levels, the applicant should undertake and include in their application an assessment of these impacts as part of the ES (see Section 4.2).
- 5.13.3 The applicant is strongly encouraged to engage with relevant local authorities during early stages of project development so that the applicant can gain a better understanding of local or regional issues and opportunities.
- 5.13.4 The applicant's assessment should consider all relevant socio-economic impacts, which may include:
 - the creation of jobs and training opportunities. Applicants may wish to provide information on the sustainability of the jobs created, including where they will help to develop the skills needed for the UK's transition to Net Zero:

 Chapter 16 acknowledges that although the construction period is temporary the construction of the Proposed Development will require 197 full-time equivalent construction jobs on site per day over the period. The assessment considers the
 - the contribution to the development of low-carbon industries at the local and regional level as well as nationally;
 - the provision of additional local services and improvements to local infrastructure, including the
 provision of educational and visitor facilities:
 - any indirect beneficial impacts for the region hosting the infrastructure, in particular in relation to use of local support services and supply chains;
 - · effects on tourism;
 - the impact of a changing influx of workers during the different construction, operation and
 decommissioning phases of the energy infrastructure. This could change the local population
 dynamics and could alter the demand for services and facilities in the settlements nearest to the
 construction work (including community facilities and physical infrastructure such as energy,
 water, transport and waste). There could also be effects on social cohesion depending on how
 populations and service provision change as a result of the development:
 - cumulative effects if development consent were to be granted to for a number of projects within
 a region and these were developed in a similar timeframe, there could be some short-term
 negative effects, for example a potential shortage of construction workers to meet the needs of
 other industries and major projects within the region.

Chapter 16: Socio-Economics of the ES **[EN070008/APP/6.2.16]** presents an assessment of the likely significant effects of the Proposed Development on socio-economics during construction and decommissioning. The chapter includes considerations of impacts on the following:

- · Employment and local economy;
- Users of Public Rights of Way (PRoW);
- Community severance; and
- Private assets.

Chapter 16 acknowledges that although the construction period is temporary the construction of the Proposed Development will require 197 full-time equivalent construction jobs on site per day over the period. The assessment considers the effects of whether these positions will be taken up by residents within the labour market catchment area of workers living outside the effect area. The Chapter concludes that there will be no potential significant adverse socio-economic effects during the construction or decommissioning phase of the Proposed Development and so no extra mitigation measures are presented as part of the DCO.

Paragraph	aft Overarching National Policy Statement for Energy (EN-1), March 2023 Relevant Policy Text: Requirement of the Policy	Compliance Assessment: How the Proposed Development addresses the requirement
5.13.8	The Secretary of State should consider whether mitigation measures are necessary to mitigate any adverse socio-economic impacts of the development. For example, high quality design can improve the visual and environmental experience for visitors and the local community alike.	
5.13.9	The Secretary of State should have regard to the potential socio-economic impacts of new energy infrastructure identified by the applicant and from any other sources that the Secretary of State considers to be both relevant and important to its decision.	
5.13.10	The Secretary of State may conclude that limited weight is to be given to assertions of socio- economic impacts that are not supported by evidence (particularly in view of the need for energy infrastructure as set out in this NPS).	
Traffic and	Transport	
5.14.5	If a project is likely to have significant transport implications, the applicant's ES (see Section 4.2) should include a transport appraisal. The DfT's Transport Analysis Guidance (TAG) and Welsh Governments WelTAG provides guidance on modelling and assessing the impacts of transport schemes.	Chapter 12: Traffic and Transport of the ES [EN070008/APP/6.2.12] and its relevant appendices include an assessment of the likely significant effects of the Proposed Development on the environment in respect of traffic and transport during the construction phase. The assessment of construction traffic includes consideration of the present day and future baseline conditions during construction; and the effects of construction traffic on
5.14.6	Applicants should consult National Highways and Highways Authorities as appropriate on the assessment and mitigation.	the local road network, including the strategic road network (SRN) as a result of the Proposed Development in terms of the increase in overall vehicle numbers, including HGVs.
5.14.7	The applicant should prepare a travel plan including demand management and monitoring measures to mitigate transport impacts. The applicant should also provide details of proposed measures to improve access by active, public and shared transport to: • reduce the need for parking associated with the proposal; • contribute to decarbonisation of the transport network; • reduce the need to travel; and • secure behavioural change and modal shift through an offer of genuine modal choice and to mitigate transport impacts	A Transport Assessment has been prepared in Appendix 12-4 of the ES [EN070008/APP/6.4.12.4] to inform the submission. The traffic and transport assessment concludes that significant adverse effects will occur during construction along 5 routes. However mitigation measures have been introduced that are considered to be sufficient to reduce the impact for these routes to an acceptable level. This includes the mitigation measures outlined in the Draft Construction Traffic Management Plan (CTMP) in Appendix 12-5 of the ES [EN070008/APP/6.4.12.5] and the Con-
5.14.8	The assessment should also consider any possible disruption to services and infrastructure (such as road, rail and airports).	
5.14.9	If additional transport infrastructure is needed or proposed, it should always include good quality walking, wheeling and cycle routes, and associated facilities (changing/storage etc) needed to enhance active transport provision.	Mitigation measures are outlined in the Draft Construction Traffic Management Plan (CTMP) in Appendix 12-5 of the ES [EN070008/APP/6.4.12.5] and the CWTP which seek to control the construction vehicle numbers, with these mitigation measures in place,
5.14.11	Where mitigation is needed, possible demand management measures must be considered. This could include identifying opportunities to: • reduce the need to travel by consolidating trips, • locate development in areas already accessible by active travel and public transport, • provide opportunities for shared mobility, • re-mode by shifting travel to a sustainable mode that is more beneficial to the network, • retime travel outside of the known peak times,	there are no further measures required to mitigate the effects of the Proposed Development.

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- reroute to use parts of the network that are less busy.
- If feasible and operationally reasonable, such mitigation should be required, before considering requirements for the provision of new inland transport infrastructure to deal with remaining transport impacts. All stages of the project should support and encourage a modal shift of freight from road to more environmentally sustainable alternatives, such as rail, cargo bike, maritime and inland waterways, as well as making appropriate provision for and infrastructure needed to support the use of alternative fuels including charging for electric vehicles.
- Regard should always be given to the needs of freight at all stages in the construction and operation of the development including the need to provide appropriate facilities for HGV drivers as appropriate.
- The Secretary of State may attach requirements to a consent where there is likely to be substantial 5.14.14 HGV traffic that:
 - control numbers of HGV movements to and from the site in a specified period during its construction and possibly on the routing of such movements
 - make sufficient provision for HGV parking, and associated high quality drive facilities either on the site or at dedicated facilities elsewhere, to support driver welfare, avoid 'overspill' parking on public roads, prolonged queuing on approach roads and uncontrolled on-street HGV parking in normal operating conditions
 - ensure satisfactory arrangements for reasonably foreseeable abnormal disruption, in consultation with network providers and the responsible police force.
- 5.14.15 The Secretary of State should have regard to the cost-effectiveness of demand management measures compared to new transport infrastructure, as well as the aim to secure more sustainable patterns of transport development when considering mitigation measures.
- A new energy NSIP may give rise to substantial impacts on the surrounding transport infrastructure and the Secretary of State should therefore ensure that the applicant has sought to mitigate these impacts, including during the construction phase of the development and by enhancing active, public and shared transport provision and accessibility
- 5.14.20 Development consent should not be withheld provided that the applicant is willing to enter into planning obligations for funding new infrastructure or requirements can be imposed to mitigate transport impacts. 269 In this situation the Secretary of State should apply appropriately limited weight to residual effects on the surrounding transport infrastructure.
- The Secretary of State should only consider refusing development on highways grounds if there would be an unacceptable impact on highway safety, residual cumulative impacts on the road network would be severe, or it does not show how consideration has been given to the provision of adequate active public or shared transport access and provision.

Resource and Waste Management

Paragraph Relevant Policy Text: Requirement of the Policy 5.15.1 Government policy on hazardous and non-hazardous waste is intended to protect human health and the environment by producing less waste and by using it as a resource wherever possible. Where

the environment by producing less waste and by using it as a resource wherever possible. Where this is not possible, waste management regulation ensures that waste is disposed of in a way that is least damaging to the environment and to human health.

- 5.15.2 Sustainable waste management is implemented through the waste hierarchy, which sets out the priorities that must be applied when managing waste. These are (in order):
 - prevention preparing for reuse
 - recycling
 - other recovery, including energy recovery
 - disposal
- Disposal of waste should only be considered where other waste management options are not available or where it is the best overall environmental outcome.
- All large infrastructure projects are likely to generate some hazardous and non-hazardous waste.

 The EA's EP regime incorporates operational waste management requirements for certain activities.

 When an applicant applies to the EA for an EP, the EA will require the application to demonstrate that processes are in place to meet all relevant EP requirements.
- 5.15.8 The applicant should set out the arrangements that are proposed for managing any waste produced and prepare a report that sets out the sustainable management of waste and use of resources throughout any relevant demolition, excavation and construction activities.
- 5.15.9 The arrangements described and a report setting out the sustainable management of waste and use of resources should include information on how re-use and recycling will be maximised in addition to the proposed waste recovery and disposal system for all waste generated by the development. They should also include an assessment of the impact of the waste arising from development on the capacity of waste management facilities to deal with other waste arising in the area for at least five years of operation.
- 5.15.10 The applicant is encouraged to refer to the 'Waste Prevention Programme for England' and 'Towards Zero Waste: Our Waste Strategy for Wales' and should seek to minimise the volume of waste produced and the volume of waste sent for disposal unless it can be demonstrated that this is the best overall environmental outcome.
- 5.15.12 The UK is committed to moving towards a more 'circular economy'. Where possible, applicants are encouraged to source materials from recycled or reused sources and use low carbon materials, sustainable sources and local suppliers. Construction best practices should be used to ensure that material is reused or recycled onsite where possible.
- 5.15.13 Applicants are also encouraged to use construction best practices in relation to storing materials in an adequate and protected place on site to prevent waste, for example, from damage or vandalism. The use of Building Information Management tools (or similar) to record the materials used in construction can help to reduce waste in future decommissioning of facilities, by identifying materials that can be recycled or reused.

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Chapter 18: Material and Waste of the ES [EN070008/APP/6.2.18] and its relevant appendices reports the findings of the assessment of the Proposed Development's impact on materials and waste.

The Proposed Development will aim to prioritise waste prevention, followed by preparing for re-use, recycling and recovery and lastly disposal to landfill in accordance with the waste hierarchy as specified at paragraph 5.14.2. Mitigation measures will be considered and implemented where applicable during the design phases and subsequent construction work.

Mitigation measures that will be adopted during the construction phase are in accordance with IEMA Guidance and NPS EN-1 paragraph 5.14.2 and comprise the waste hierarchy which aims to prioritise waster prevention followed by preparing for re-use, recycling and recover and lastly disposal to landfill. Targets for recycling are set out and secured in the Draft CEMP, this includes a target for at least 90% (by weight) recovery of non-hazardous C&D waste. This is above the 70% national target set out in the Waste Framework Directive and in line with Institute of Environmental Management and Assessment (IEMA) good practice

The construction of the Proposed Development would be subject to measures and procedures defined within the Construction Environmental Management Plan (CEMP), this would be produced prior to the commencement of construction by the Principal Contractor and would be based on and incorporate the contents of the Draft CEMP.

The Draft CEMP has been prepared as part of the ES and is included in Appendix 3-1 [EN070008/APP/6.4.3.1]. An Outline Site Waste Management Plan has also been developed for the Proposed Development and is included within Appendix 18-1 of the ES [EN070008/APP/6.4.18.1].

5.16.8

Paragraph	Relevant Policy Text: Requirement of the Policy	Compliance Assessment: How the Proposed Development addresses the requirement
5.15.14	The Secretary of State should consider the extent to which the applicant has proposed an effective system for managing hazardous and non-hazardous waste arising from the construction, operation and decommissioning of the proposed development.	
Water Qual	ity and Resources	
5.16.3	Where the project is likely to have effects on the water environment, the applicant should undertake an assessment of the existing status of, and impacts of the proposed project on, water quality, water resources and physical characteristics of the water environment, and how this might change due to the impact of climate change on rainfall patterns and consequently water availability across the water environment, as part of the ES or equivalent (see Section 4.2 and 4.9).	Initial assessments of groundwater and surface water quality and resource, fluvial geomorphology and flood risk have been carried out in order to identify the potential significant effects associated with the construction, operation and decommissioning of the Proposed Development on potentially sensitive receptors.
5.16.4	The applicant should make early contact with the relevant regulators, including the local authority, the Environment Agency and Marine Management Organisation, where appropriate, for relevant licensing and environmental permitting requirements.	During the construction phase, there is a risk of pollution to surface water from activities involving polluting substances such as fuels, concrete and chemicals, along with disturbance of soil during earthworks. During construction, standard pollution prevention and construction best practice would be adopted to mitigate potential impacts upon the
5.16.5	Where possible, applicants are encouraged to manage surface water during construction by treating surface water runoff from exposed topsoil prior to discharging and to limit the discharge of suspended solids e.g. from car parks or other areas of hard standing, during operation.	water environment where required and reasonably practicable. Such measures would be included in a draft CEMP.
5.16.6	Applicants are encouraged to consider protective measures to control the risk of pollution to groundwater beyond those outlined in River Basin Management Plans and Groundwater Protection Zones – this could include, for example, the use of protective barriers.	The pipeline route has been selected and designed to reduce impacts on flood risk, avoiding high flood risk areas where possible. The design of the above ground infrastructure would be appropriately designed, to ensure no adverse flood risk is generated in areas adjacent.
5.16.7	 The ES should in particular describe: the existing quality of waters affected by the proposed project and the impacts of the proposed project on water quality, noting any relevant existing discharges, proposed new discharges and proposed changes to discharges existing water resources affected by the proposed project and the impacts of the proposed project on water resources, noting any relevant existing abstraction rates, proposed new abstraction rates and proposed changes to abstraction rates (including any impact on or use of mains supplies and reference to Abstraction Licensing Strategies) and also demonstrate how proposals minimise the use of water resources and water consumption in the first instance existing physical characteristics of the water environment (including quantity and dynamics of flow) affected by the proposed project and any impact of physical modifications to these characteristics any impacts of the proposed project on water bodies or protected areas (including shellfish protected areas) under the Water Environment (Water Framework Directive) (England and Wales) Regulations 2017 and source protection zones (SPZs) around potable groundwater abstractions how climate change could impact any of the above in the future any cumulative effects 	The Proposed Development is supported with a FRA in Appendix 11-5 of the ES [EN070008/APP/6.4.11.5] Consultation with relevant partners has taken place with key stakeholders such as the Environment Agency, Natural England, Canals and Rivers Trust along with more. Mitigation measures and management plans are presented within the Draft CEMP in Appendix 3-1 of the ES [EN070008/APP/6.4.3.1].

The Secretary of State should consider whether mitigation measures are needed over and above any which may form part of the project application. A construction management plan may help codify mitigation at that stage.

Revised Dr	aft Overarching National Policy Statement for Energy (EN-1), March 2023	
Paragraph	Relevant Policy Text: Requirement of the Policy	Compliance Assessment: How the Proposed Development addresses the requirement
5.16.9	The risk of impacts on the water environment can be reduced through careful design to facilitate adherence to good pollution control practice. For example, designated areas for storage and unloading, with appropriate drainage facilities, should be clearly marked.	
5.16.10	The impact on local water resources can be minimised through planning and design for the efficient use of water, including water recycling. If a development needs new water infrastructure, significant supplies or impacts other water supplies, the applicant should consult with the local water company and the EA or NRW.	
5.16.11	Activities that discharge to the water environment are subject to pollution control. The considerations set out in Section 4.11 on the interface between planning and pollution control therefore apply. These considerations will also apply in an analogous way to the abstraction licensing regime regulating activities that take water from the water environment, and to the control regimes relating to works to, and structures in, on, or under controlled waters.	
5.16.12	The Secretary of State will need to give impacts on the water environment more weight where a project would have an adverse effect on the achievement of the environmental objectives established under the Water Environment (Water Framework Directive) (England and Wales) Regulations 2017	
5.16.13	The SoS must also consider duties under other legislation including duties under the Environment Act 2021 in relation to environmental targets and have regard to the policies set out in the Government's Environmental Improvement Plan.	
5.16.14	The Secretary of State should be satisfied that a proposal has regard to current River Basin Management Plans and meets the requirements of the Water Environment (Water Framework Directive) (England and Wales) Regulations 2017 (including regulation 19). The specific objectives for particular river basins are set out in River Basin Management Plans. The Secretary of State must refuse development consent where a project is likely to cause deterioration of a water body or its failure to achieve good status or good potential, unless the requirements set out in Regulation 19 are met. A project may be approved in the absence of a qualifying Overriding Public Interest test only if there is sufficient certainty that it will not cause deterioration or compromise the achievement of good status or good potential.	
5.16.15	The Secretary of State should also consider the interactions of the proposed project with other plans such as Water Resources Management Plans and Shoreline/Estuary Management Plans.	
5.16.16	The Secretary of State should consider proposals to mitigate adverse effects on the water environment and any enhancement measures put forward by the applicant and whether appropriate requirements should be attached to any development consent and/or planning obligations are necessary.	

C.3 Table C4: Planning Policy Accordance Assessment: Revised Draft National Policy Statement for Natural Gas Supply Infrastructure and Gas and Oil Pipelines (EN-4), March 2023.

This table presents an accordance review of the Proposed Development against the Revised Draft National Policy Statement for Gas Supply Infrastructure and Gas and Oil Pipelines (EN-4), March 2023.

Revised Draft: National Policy Statement for Gas Supply Infrastructure and Gas and Oil Pipelines (EN-4), March 2023

Paragraph Relevant Policy Text: Requirement of the Policy

Compliance Assessment: How the Proposed Development addresses the requirement

		requirement
Introduct	ion	
1.6.1	This NPS covers the following types of nationally significant natural gas and oil infrastructure: iv. Pipelines over 16.093km (10 miles) long which would otherwise require authorisation under s.1 of the Pipe-lines Act 1962 together with diversions to such pipelines regardless of length.	The Proposed Development comprises a onshore underground pipeline, approximately 55.5 km in length, required for the transportation of dense phase CO ₂ from Immingham to Theddlethorpe.
1.6.2	Pipelines which meet the Planning Act threshold at paragraph 1.6.1 (iv) could be carrying different types of gas, fuel or chemicals. This NPS only has effect for those nationally significant infrastructure pipelines which transport natural gas (see paragraph 1.6.4 to 1.6.6 for further information) or oil. However, information in this NPS may be useful in identifying impacts to be considered in applications for pipelines intended to transport other substances.	
1.6.7	Similarly, new CO2 pipelines will require consent from the Secretary of State where they meet the threshold at paragraph 1.6.1(iv).	
2. Genera	al Assessment and Technology Specific Information	

- 2.3.4 As climate change is likely to increase risks to some of this infrastructure, from flooding or rising sea levels for example, applicants should in particular set out how the proposal would be resilient to:
 - increased risk of flooding:
 - effects of rising sea levels and increased risk of storm surge:
 - higher temperatures:
 - increased risk of earth movement, coastal erosion, or subsidence from increased risk of flooding and drought; and
 - any other increased risks identified in the applicant's assessment.
- The resilience of the project to climate change should be assessed in the Environmental Statement 2.3.5 (ES) accompanying an application. For example, future increased risk of flooding should be covered in the flood risk assessment.

The effects of climate change and climate change adaptation has been considered throughout the design and selection process for the proposed route and when considering how it will be constructed and operated.

Chapter 15: Climate Change of the ES [EN070008/APP/6.2.15] includes a lifecycle GHG assessment to identify the impact of GHG emissions arising over the lifetime of the Proposed Development on the climate and a climate change resilience assessment to understand the resilience of the Proposed Development to projected future climate change impacts, including damage to the Proposed Development caused by accidents resulting from climate change.

The design of the pipeline includes measures to make it resilient to climate change, and the ES concludes that there are no significant impacts on climate change resulting from the laying of this pipeline. Generally, the use of pipelines offer a more climate friendly transportation method on emissions, as the alternative would consist of more road transport.

The Application is also supported by a FRA included in Appendix 11-5 to the ES [EN070008/APP/6.4.11.5]. The FRA demonstrates how risk (for each phase) is managed to ensure that the development remains safe and operational throughout its lifetime,

Paragraph	Relevant Policy Text: Requirement of the Policy	Compliance Assessment: How the Proposed Development addresses the requirement
		taking climate change into account, without increasing flood risk elsewhere and where possible reducing flood risk overall. The FRA recommends appropriate mitigation measures including flood resilience techniques
	and Oil Pipelines: Applicant Assessment uencing Site Selection	
2.21.1	When designing the route of new pipelines applicants should research relevant constraints including proximity of existing and planned residential properties, schools and hospitals, railway crossings, major road crossings, below surface usage and proximity to environmentally sensitive areas, main river and watercourse crossings.	Chapter 2: Design and Alternatives of the ES [EN070008/APP/6.2.2] details the design process that was undertaken and the alternatives that were considered. During the design consideration was given to various route corridors before selecting a preferred corridor and then refining the route. Various criteria were taken into account when designing the route as outlined in detail in the ES Chapter 2: Design and Alternatives of the ES [EN070008/APP/6.2.2].
Pipeline Sa	fety	
2.21.9	The principal legislation governing the safety of pipelines (the Pipelines Safety Regulations 1996) requires that pipelines are designed, constructed and operated so that the risks are as low as is reasonably practicable (ALARP).	Chapter 19: Major Accidents of the ES [EN070008/APP/6.2.19] outlines how the design of the Proposed Development will incorporate appropriate standards, proven design methods and control measures necessary to reduce the risks of such accidents to an acceptable level, i.e., ALARP, which is the standard expected by the Regulatory
2.21.10	The HSE enforces these Regulations, which place general duties on all pipeline operators and additional duties on the operators of major accident hazard pipelines.	Authorities (HSE and Environment Agency). This includes using heavy wall pipe for the entire length of the pipeline route. Reducing the probability of an incident occurring has been a key focus for the engineering design of the Proposed Development. Additionally, a
2.21.11	The additional duties require the pipeline operator to provide certain information to HSE at various stages in the lifecycle of a pipeline.	set of emergency plans and procedures will be developed and implemented should any incident occur, further controlling and mitigating the impact.
2.21.12	In determining compliance, HSE expects pipeline operators to apply relevant good practice as a minimum.	Safety is of highest priority, and the Applicant operates responsibly, securely and in accordance with applicable regulation across all their activities. The Applicant works to reduce risks and protect their staff, contractors and the communities within which their
2.21.13	In the pipeline industry there are well established standards, covering design, operation and maintenance of major accident hazard pipelines which can be used to demonstrate risks are ALARP.	activities have the potential to cause impact through the rigorous application of safe operating practices.
2.21.14	If a pipeline operator wishes to use other standards, recommendations, or guidance then this should be discussed with the HSE and may be acceptable to the HSE, provided that the pipeline operator can demonstrate that they achieve at least the equivalent levels of safety. A gap analysis should be undertaken to confirm this.	The Applicant has extensive experience of managing major hazard potential facilities in accordance with the Control of Major Accidents and Hazards Regulations, both onshore and offshore. The Applicant applies best practices in the design, use and maintenance of their equipment, planning every stage of their operations with the highest levels of control in order to minimise safety risks. Although the pipeline is not a COMAH, COMAH guidance has been referred to in development of the methodologies identification of hazards and assessment of major accidents
		The Applicants approach to safety is detailed in Chapter 3: Viking CCS Pipeline [EN070008/APP/6.2.3] and Chapter 19: Major Accidents and Disasters [EN070008/APP/6.2.19] of the ES.
		The Applicant has engaged and will continue to engage with HSE with respect to compliance with health and safety legislation, this is shown within the Consultation Report [EN070008/APP/5.1]

Paragraph	Relevant Policy Text: Requirement of the Policy	Compliance Assessment: How the Proposed Development addresses the requirement
Impacts: No	oise and Vibration	
2.21.15	Section 5.12 of EN-1 sets out the generic considerations in relation to the impacts of noise and vibration.	Chapter 13: Noise and Vibration of the ES [EN070008/APP/6.2.13] assesses the potential impact the Proposed Development will have on the noise and vibration during construction, operation and decommissioning phases.
2.21.16	In addition, there are specific noise and vibration considerations which apply to gas and oil pipelines during the pre-construction and construction phases.	The Noise Policy Statement for England and other relevant national policies, regulations, guidance and standards have been considered in the environmental assessment of the potential noise and vibration impacts generated by the Proposed Development. A noise
2.21.17	The applicant will need to identify all the noise and vibration sensitive receptors likely to be affected during these phases and consider any associated pipeline maintenance or protection that may be	and vibration assessment [EN070008/APP/6.2.13] has informed the EIA.
2.21.18	additionally required. During the pre-construction phase there could be vibration effects from seismic surveys. During	Potential noise and vibration effects during the construction phase are likely to result from work activities and these will be temporary and reversible with no lasting residual effect. An assessment of these effects is included in Chapter 13: Noise and Vibration of the ES
2.21.10	construction, tasks may include site clearance, soil movement, ground excavation, tunnelling, trenching, pipe laying and welding, and ground reinstatement.	[EN070008/APP/6.2.13]. During the operational phase of the Project the Proposed Development would be installed below ground and would not produce any operational noise or vibration. No significant effects on sensitive receptors have been identified as a
2.21.19	In addition, increased HGV traffic may be generated on local roads by the movement of materials. These types of noise and vibration impacts will need to be assessed.	result of noise from construction traffic movements or operational noise associated with the Proposed Development
2.21.20	The commissioning of a new pipeline can involve extensive periods of drying after hydrotesting, using air compressors, and noise mitigation may be required for this type of activity.	Mitigation methods proposed include the use of acoustic fencing, which blocks line-of sight from high noise generating plant to sensitive receptors and following a good
2.21.21	A new gas pipeline may require an above ground installation such as a gas compression station on the route of the pipeline to boost transmission line pressure; these should be outside of protected landscapes wherever possible.	communication strategy which would entail liaison with occupiers of sensitive receptors prior to construction works being undertaken to share detail of timings and duration of high noise generating activity. Chapter 13: Noise and Vibration of the ES [EN070008/APP/6.2.13] confirms that, subject to the implementation of mitigation
2.21.22	A new oil pipeline may require pumping stations. These may be located in quiet rural areas, and therefore the control of noise from these facilities is likely to be an important consideration.	measures there are anticipated to be no significant residual effects due to construction activities. These are therefore classed as not being significant. As all construction activities proposed are to be temporary, any resultant impact will also be temporary.
Biodiversity	y, Landscape and Visual	
2.21.23	Sections 5.4 and 5.10 of EN-1 set out the general principles that should be applied in the assessment of biodiversity and landscape and visual impacts.	Chapter 7: Landscape and Visual Impacts of the ES [EN070008/APP/6.2.7] assesses the impact the Proposed Development will have on the existing landscape.
2.21.24	Additional considerations apply during the construction of a pipeline (which, without mitigation, can affect both landscape, visual amenity and ecology).	The design of the Proposed Development has evolved through a series of steps and design iterations. Design evolution has been informed by environmental assessments, engineering considerations, stakeholder feedback and through the consultation exercises
2.21.25	These comprise the effects upon specific landscape elements within and adjacent to the pipeline route, such as grasslands, field boundaries (hedgerows, hedge banks, drystone walls, fences), trees, woodlands, and watercourses.	undertaken. These have taken into account site context, existing features within and adjacent to the order limits, nearby sensitive receptors and assets, consultation responses and access considerations to develop a good design that balances the need to maximise the most efficient route with avoidance and mitigation of impacts and provision
2.21.26	There will also be temporary visual and landscape impacts caused by the need to access the working corridor and to remove flora and soil.	of environmental and other enhancements. Chapter 2: Design Evolution and Alternatives of the ES [EN070008/APP/6.2.2] details the design process undertaken.
2.21.27		The design development process included the identification of mitigation commitments, both for mitigation embedded in the design and also good practice mitigation. The route of

Revised Draft: National Policy Statement for Gas Supply Infrastructure and Gas and Oil Pipelines (EN-4), March 2023 Paragraph Relevant Policy Text: Requirement of the Policy Compliance Assessment: How the Proposed Development addresses the requirement The working width of the pipeline will vary depending on the surrounding terrain. Temporary impacts the pipeline has been influenced by the desire to reduce potential likely effects on could include large excavations where deep pits are needed for boring beneath rivers, roads, and communities, for example, the route seeks to limit adverse impacts on habitats, historic sensitive features. receptors and residential buildings. 2.21.28 Mitigation measures have been incorporated into the design to reduce. This includes siting and routing, construction management, and landscape and design measures, with The considerations in this section also apply to any pipeline maintenance or protection that may be the Proposed Development designed to reduce the impact on the landscape where additionally required and associated impacts. practicable. Although the measures set out would assist in reducing the impacts at the 2.21.29 Long term impacts upon the landscape for pipelines are likely to be limited, as once operational the identified locations, the reduction would be insufficient to reduce the impact rating and main infrastructure is usually buried. They are likely to include: therefore effects to below significant levels. limitations on the ability to replant landscape features such as hedgerows or deep-rooted With the incorporation of embedded design mitigation and additional mitigation, there trees over or adjacent to the pipeline; and would be significant effects on the Lincolnshire Wolds AONB during construction. Effects structures and indication points necessary to identify the pipeline route and provide it with would reduce to not significant during operation and decommissioning. The remaining service access. landscape receptors will experience not significant effects during all stages of the 2.21.30 Proposed Development. Whilst there are temporary significant impacts, the landscape The ES must include an assessment of the biodiversity and landscape and visual effects of the and visual impact of the Proposed Development can be considered outweighed by the proposed route and of the main alternative routes considered (see Section 5.10 of EN-1). clear demonstrable benefits of the proposed national significant infrastructure. 2.21.31 ES Chapter 7: Landscape and Visual [EN070008/APP/6.2.7] is supported by appendices The application should also include proposals for reinstatement of the pipeline route as close to its includina: original state as possible and take into account any requirements for agreements with the landowner to access areas for aftercare and management work. 2.21.32 Appendix 7-1: Representative Viewpoints: and Where it is unlikely to be possible to restore landscape to its original state, the applicant should set Appendix 7-2: Visualisations out measures to avoid, mitigate, or employ other landscape measures to compensate for, any adverse effect on the landscape. 2.21.33 Requirements to be included within the Marine Licence (detailed in Section 2.21.4 of EN-3) should also be duly considered for infrastructures within coastal and marine zones.

Water Quality and Resources

- 2.21.37 Constructing pipelines creates corridors of surface clearance and excavation that can potentially affect watercourses, aguifers, water abstraction and discharge points, areas prone to flooding and ecological receptors. Pipeline impacts could include:
 - inadequate or excessive drainage;
 - interference with groundwater flow pathways;
 - mobilisation of contaminants already in the ground;
 - the introduction of new pollutants;
 - flooding:
 - disturbance to water ecology:
 - pollution due to silt from construction; and
 - disturbance to species and their habitats.
- 2.21.38 Impacts during construction should be avoided as far as possible through route selection or mitigated if unavoidable and ground should be reinstated after construction.

Chapter 11: Water Environment of the ES [EN070008/APP/6.2.11] assesses the Proposed Development impact on the water environment.

- the route was selected and designed to reduce the impact on flood risk through avoiding high flood risk areas where possible
- where watercourse crossings are unavoidable locations will be selected to make the crossing as close to perpendicular as possible
- crossings will be designed to maintain downstream flows and to allow unobstructed passage for aquatic organisms and mammals using river corridors

During the construction phase, there is a risk of pollution to surface water from activities involving polluting substances such as fuels, concrete and chemicals, along with disturbance of soil during earthworks. During construction, standard pollution prevention and construction best practice would be adopted to mitigate potential impacts upon the water environment where required and reasonably practicable. Such measures would be included in a Draft CEMP.

Paragraph	Relevant Policy Text: Requirement of the Policy	Compliance Assessment: How the Proposed Development addresses the
2.21.39	The abstraction and disposal of large volumes of water through hydrostatic testing of pipelines	The pipeline route has been calcated and designed to reduce impacts on flood risk
	during commissioning may also impact on water quality. Abstraction and discharges are regulated by the EA, under an abstraction licence and EP respectively.	The pipeline route has been selected and designed to reduce impacts on flood risk, avoiding high flood risk areas where possible. The design of the above ground infrastructure would be appropriately designed, to ensure no adverse flood risk is
2.21.40	Where the project is likely to have effects on water resources or water quality, for example impacts on groundwater recharge or on existing surface water or groundwater abstraction points, or on	generated in areas adjacent.
	associated ecological receptors, the applicant should provide an assessment of the impacts in line with Section 5.16 of EN-1 as part of the ES.	The Proposed Development is supported with a FRA in Appendix 11-5 of the ES [EN070008/APP/6.4.11.5].
2.21.41	Where the project is likely to give rise to effects on water quality, for example through siltation or spillages, discharges from maintenance activities or the discharge of disposals such as wastewater or solvents, the applicant should provide an assessment of the impacts.	Consultation with relevant partners has taken place with key stakeholders such as the Environment Agency, Natural England, Canals and Rivers Trust along with more. Mitigation measures and management plans are presented within the Draft CEMP in Appendix 3-1 of the ES [EN070008/APP/6.4.3.1].
Soil and Ge	ology	
2.21.42	New pipelines will be installed in a variety of geological conditions. It will be important for applicants to understand the soil types and the nature of the underlying strata. Underground cavities and unstable ground conditions may present particular risks to pipeline projects. Impacts could include sterilisation of mineral resources or loss of soil quality.	The construction phase has the potential to result in loss or damage of soil resource, the identified potential impacts which may occur during the construction phase are primarily associated with spillages and leaks of fuel/oil associated with plant/machinery, disturbance of contaminated soils and potential degradation of soil quality during handle and movement of soil or tracking of heavy plant, as well as the potential for dewatering
2.21.43	Applicants must assess the stability of the ground conditions associated with the pipeline route and incorporate the findings of that assessment in the ES (see Section 4.2 of EN-1) as appropriate.	locally affect groundwater levels.
2.21.44	Desktop studies, which include known geology and previous borehole data, can form the basis of the applicant's assessment.	Once operational no significant effects are anticipated, with potential impacts limited to effects resulting from potential land contamination on site users and groundwater receptors.
2.21.45	The applicant may find it necessary to sink new boreholes along the preferred route to better understand the ground conditions present.	These soil resources would be protected against damage and loss though mitigation comprising the adoption of industry standard methods put in place at construction phase
0.04.40	The consequent should according to the conflict of the conflic	Chapter 9: Geology and Hydrogeology of the ES [EN070008/APP/6.2.9] provides a
2.21.46	The assessment should cover the options considered for installing the pipeline and weigh up the impacts of the means of installation.	detailed assessment of the impacts on geology and hydrogeology as a result of the Proposed Development. The assessment concludes that the potential impacts which moccur during the construction phase are primarily associated with spillages and leaks o
2.21.47	Where the applicant proposes to use horizontal directional drilling (HDD) as the means of installing a pipeline under a National or International Site and mitigating the impacts, the assessment should cover whether the geological conditions are suitable for HDD.	
2.21.48	When considering any application where the pipeline goes under a designated area of geological or geomorphological interest, the applicant should submit details of alternative routes, which either bypass the designated area or reduce the length of pipeline through the designated area to the	mitigation measures which are outlined within the Draft CEMP in Appendix 3-1 of the E [EN070008/APP/6.4.3.1].
	minimum possible, and the reasons why they were discounted	During the operational phase potential impacts are limited to effects resulting from potential land contamination on site users and groundwater receptors Required mitigat will be confirmed by means of risk assessments based on ground investigation data (when available) and may include removal of contaminant sources and installation of g protection measures on the buildings. Overall, the mitigation required to address the potential impacts is standard practice.

Paragraph	Relevant Policy Text: Requirement of the Policy	Compliance Assessment: How the Proposed Development addresses the requirement
Natural Gas Site Selecti	s and Oil Pipelines: Mitigation Requirements on	
2.22.1	Where it is not considered practicable to select a route that avoids below surface usage, applicants must demonstrate in the ES that mitigating measures will be put in place to avoid adverse effects both on other below ground works and on the pipeline.	The ES details the impacts of the development on a topic basis within each chapter and within each chapter is the proposed design mitigation commitments that will be delivered as part of the Proposed Development. Proposed mitigation measures are also set out within the Draft CEMP in Appendix 3-1 of the ES [EN070008/APP/6.4.3.1].
Noise and	/ibration	
2.22.3	Noise mitigation measure applicants should consider for gas and oil pipelines, in particular their associated above-ground installations, include screening or enclosure of compressors and pumps.	Chapter 13: Noise and Vibration of the ES [EN070008/APP/6.2.13] assess the potential impact the Proposed Development will have on the noise and vibration during construction, operation and decommissioning phases.
2.22.5	Vibration mitigation measures could include the use of non-impact piling such as augur boring.	The Noise Policy Statement for England and other relevant national policies, regulations, guidance and standards have been considered in the environmental assessment of the potential noise and vibration impacts generated by the Proposed Development. A noise and vibration assessment [EN070008/APP/6.2.13] has informed the EIA.
		Potential noise and vibration effects during the construction phase are likely to result from work activities and these will be temporary and reversible with no lasting residual effect. An assessment of these effects is included in the ES [EN070008/APP/6.2.13]. During the operational phase of the Project the Proposed Development would be installed below ground and would not produce any operational noise or vibration. No significant effects or sensitive receptors have been identified as a result of noise from construction traffic movements or operational noise associated with the Proposed Development
		Mitigation methods proposed include the use of acoustic fencing, which blocks line-of sight from high noise generating plant to sensitive receptors and following a good communication strategy which would entail liaison with occupiers of sensitive receptors prior to construction works being undertaken to share detail of timings and duration of high noise generating activity. Chapter 13: Noise and Vibration [EN070008/APP/6.2.13] of the ES confirms that, subject to the implementation of mitigation measures there are anticipated to be no significant residual effects due to construction activities. These are therefore classed as not being significant. As all construction activities proposed are to be temporary, any resultant impact will also be temporary.
Biodiversit	y, Landscape and Visual	
2.22.6	Mitigation measures to protect the landscape, visual amenity and ecology could include reducing the working width required for the installation of the pipeline to reduce the impact on the landscape where it will not be possible to fully reinstate the route.	assessed in Chapter 6: Ecology and Biodiversity of the ES [EN070008/APP/6.2.6].
2.22.7	In circumstances where the habitat to be crossed contains ancient woodland, ancient or veteran trees, trees subject to a Tree Preservation Order, or hedgerows subject to the Hedgerows Regulations 1997, the applicant should consider whether it would be feasible to use HDD under the	The potential effects on ecology during construction will be managed through the implementation of mitigation measures that will be set out within the Draft CEMP.
		The design of the Proposed Development has evolved through a series of steps and design iterations. Design evolution has been informed by environmental assessments,

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ancient woodland or thrust bore under the protected tree or hedgerow and the Secretary of State should consider requiring this, where not included in the proposal.

engineering considerations, stakeholder feedback and through the consultation exercises undertaken. These have taken into account site context, existing features within and adjacent to the order limits, nearby sensitive receptors and assets, consultation responses and access considerations to develop a good design that balances the need to maximise the most efficient route with avoidance and mitigation of impacts and provision of environmental and other enhancements. Chapter 2: Design Evolution and Alternatives of the ES [EN070008/APP/6.2.2] details the design process undertaken.

The design development process included the identification of mitigation commitments, both for mitigation embedded in the design and also good practice mitigation. The route of the pipeline has been influenced by the desire to reduce potential likely effects on communities, for example, the route seeks to limit adverse impacts on habitats, historic receptors and residential buildings.

Mitigation measures have been incorporated into the design to reduce. This includes siting and routing, construction management, and landscape and design measures, with the Proposed Development designed to reduce the impact on the landscape where practicable. Although the measures set out would assist in reducing the impacts at the identified locations, the reduction would be insufficient to reduce the impact rating and therefore effects to below significant levels.

With the incorporation of embedded design mitigation and additional mitigation, there would be significant effects on the Lincolnshire Wolds AONB during construction. Effects would reduce to not significant during operation and decommissioning. The remaining landscape receptors will experience not significant effects during all stages of the Proposed Development. Whilst there are temporary significant impacts, the landscape and visual impact of the Proposed Development can be considered outweighed by the clear demonstrable benefits of the proposed national significant infrastructure. ES Chapter 7: Landscape and Visual [EN070008/APP/6.2.7] is supported by appendices including:

- Appendix 7-1: Representative Viewpoints: and
- Appendix 7-2: Visualisations

Water Quality and Resources

- 2.22.8 Mitigation measures to protect the water environment could include techniques for crossing rivers and managing surface water before and after construction, including restoring vegetation and using sustainable drainage systems to control run-off.
- 2.22.9 Design measures which are typically taken to protect water quality include:
 - the avoidance of vulnerable groundwater areas or appropriate use of above ground pipeline facilities;
 - use of the highest specification pipework and best practice in the storage and handling of pollutants to prevent spillage;

Chapter 11: Water Environment of the ES [EN070008/APP/6.2.11] assesses the Proposed Development impact on the water environment.

- the route was selected and designed to reduce the impact on flood risk through avoiding high flood risk areas where possible
- where watercourse crossings are unavoidable locations will be selected to make the crossing as close to perpendicular as possible
- crossings will be designed to maintain downstream flows and to allow unobstructed passage for aquatic organisms and mammals using river corridors

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- careful storage of excavated material away from watercourses and facilities for the disposal of sewage and waste;
- use of sustainable drainage systems; and
- careful reinstatement of riverbanks and reed beds.

During the construction phase, there is a risk of pollution to surface water from activities involving polluting substances such as fuels, concrete and chemicals, along with disturbance of soil during earthworks. During construction, standard pollution prevention and construction best practice would be adopted to mitigate potential impacts upon the water environment where required and reasonably practicable. Such measures would be included in a Draft CEMP in Appendix 3-1 of the ES [EN070008/APP/6.4.3.1].

The pipeline route has been selected and designed to reduce impacts on flood risk. avoiding high flood risk areas where possible. The design of the above ground infrastructure would be appropriately designed, to ensure no adverse flood risk is generated in areas adjacent.

The Proposed Development is supported with a FRA in Appendix 11-5 of the ES [EN070008/APP/6.4.11.5]. Consultation with relevant partners has taken place with key stakeholders such as the Environment Agency, Natural England, Canals and Rivers Trust along with more. Mitigation measures and management plans are presented within the Draft CEMP in Appendix 3-1 of the ES [EN070008/APP/6.4.3.1]

Soil and Geology

- 2.22.10 Mitigation measures to minimise any adverse effects on soil and geology should include measures to ensure that residual impacts on the surface are minor, for example some differential vegetation growth.
- 2.22.11 Mitigation measures should include appropriate treatment of soil (and in particular topsoil) during site and movement of soil or tracking of heavy plant, as well as the potential for dewatering to construction and other infrastructure activity (and appropriate soil storage and reinstatement in line with the principles and practices outlined in the Code of Practice for the Sustainable Management of Soils on Construction Sites and the Agricultural Land Classification which provides guidelines on soil handling and restoration criteria and land quality.
- Where HDD is proposed, the applicant should provide an alternative plan for installing the pipeline in 2.22.12 the event that HDD fails. Such alternative means could include open cut, micro-tunnelling and tunnelling.

The construction phase has the potential to result in loss or damage of soil resource, the identified potential impacts which may occur during the construction phase are primarily associated with spillages and leaks of fuel/oil associated with plant/machinery, disturbance of contaminated soils and potential degradation of soil quality during handling locally affect groundwater levels.

Once operational no significant effects are anticipated, with potential impacts limited to effects resulting from potential land contamination on site users and groundwater receptors.

These soil resources would be protected against damage and loss though mitigation comprising the adoption of industry standard methods put in place at construction phase.

Chapter 9: Geology and Hydrogeology of the ES [EN070008/APP/6,2.9] provides a detailed assessment of the impacts on geology and hydrogeology as a result of the Proposed Development. The assessment concludes that the potential impacts which may occur during the construction phase are primarily associated with spillages and leaks of fuel/oil associated with plant and machinery, disturbance of contaminated soils and potential degradation of soil quality during handling and movement of soil or tracking of heavy plant as well as the potential dewatering to locally affected groundwater levels. It is considered that all of these effects can be controlled through good practice and standard mitigation measures which are outlined within the Draft CEMP of the ES [EN070008/APP/6.4.3.1].

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During the operational phase potential impacts are limited to effects resulting from potential land contamination on site users and groundwater receptors Required mitigation will be confirmed by means of risk assessments based on ground investigation data (when available) and may include removal of contaminant sources and installation of gas protection measures on the buildings. Overall, the mitigation required to address the potential impacts is standard practice.

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C.4 Table A5: Planning Policy Accordance Assessment: National Planning Policy Framework (NPPF, September 2023)

This section presents s a policy accordance assessment against the NPPF. Not all policies within the NPPF are relevant to the Proposed Development and have therefore been omitted. The policies included are considered of significance and relevant to the determination of the Proposed Development. NPPF. 2023

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Chapter 2: Achieving Sustainable Development

- The purpose of the planning system is to contribute to the achievement of sustainable development. At a very high level, the objective of sustainable development can be summarised as meeting the needs of the present without compromising the ability of future generations to meet their own needs4. At a similarly high level, members of the United Nations – including the United Kingdom – have agreed to pursue the 17 Global Goals for Sustainable Development in the period to 2030. These address social progress, economic well-being and environmental protection.
- 8 Achieving sustainable development means that the planning system has three overarching objectives. which are interdependent and need to be pursued in mutually supportive ways (so that opportunities can be taken to secure net gains across each of the different objectives):
 - an economic objective to help build a strong, responsive and competitive economy, by ensuring that sufficient land of the right types is available in the right places and at the right time to support growth, innovation and improved productivity; and by identifying and coordinating the provision of infrastructure:
 - a social objective to support strong, vibrant and healthy communities, by ensuring that a sufficient number and range of homes can be provided to meet the needs of present and future generations; and by fostering well-designed, beautiful and safe places, with accessible services and open spaces that reflect current and future needs and support communities' health, social and cultural well-being: and
 - an environmental objective to protect and enhance our natural, built and historic environment; including making effective use of land, improving biodiversity, using natural resources prudently, minimising waste and pollution, and mitigating and adapting to climate change, including moving to decarbonising the industrial sector. Through this employment opportunities will be a low carbon economy.
- 9 These objectives should be delivered through the preparation and implementation of plans and the application of the policies in this Framework; they are not criteria against which every decision can or should be judged. Planning policies and decisions should play an active role in guiding development towards sustainable solutions, but in doing so should take local circumstances into account, to reflect the character, needs and opportunities of each area.
- 10 So that sustainable development is pursued in a positive way, at the heart of the Framework is a presumption in favour of sustainable development (paragraph 11).
- Plans and decisions should apply a presumption in favour of sustainable development. For plan-making 11 this means that:

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As part of their commitments to tackling climate change, the UK government has set legally binding targets to become net-zero in all greenhouse gases by 2050. In addition, the Government has shown clear commitment to developing Carbon Capture Usage and Storage (CCUS) infrastructure.

The Humber industrial cluster represents a unique emissions density within the UK, with decarbonisation of the Humber Energy Intensive Industry Cluster being required to meet the UK Government's legally binding target of achieving Net Zero by 2050. The wider Humber region will require multiple CO₂ storage options to promote greater onshore capture infrastructure development and underpin robust storage risk management through diversity of storage options.

The Proposed Development would support sustainable growth by providing an opportunity for inward investment into the region and a future low-carbon economy. The innovative technology proposed through the DCO will help the UK Government achieve energy diversity and provide resources for local and regional businesses.

The Proposed Development also supports sustainable development and environmental objectives by supporting the UK's transition to Net Zero by providing the infrastructure to contribute towards decarbonisation of the UK. It will also promote use of this technology, contributing to the delivery of similar developments and generated, positively contributing to the socio-economic wellbeing of the surrounding

Paragraph Relevant Policy Text: Requirement of the Policy

- a. all plans should promote a sustainable pattern of development that seeks to: meet the development needs of their area; align growth and infrastructure; improve the environment; mitigate climate change (including by making effective use of land in urban areas) and adapt to its effects;
- b. strategic policies should, as a minimum, provide for objectively assessed needs for housing and other uses, as well as any needs that cannot be met within neighbouring areas, unless:
 - the application of policies in this Framework that protect areas or assets of particular importance provides a strong reason for restricting the overall scale, type or distribution of development in the plan area; or
 - any adverse impacts of doing so would significantly and demonstrably outweigh the benefits, when assessed against the policies in this Framework taken as a whole.

For decision-taking this means:

- a. approving development proposals that accord with an up-to-date development plan without delay:
- b. where there are no relevant development plan policies, or the policies which are most important for determining the application are out-of-date, granting permission unless:
 - the application of policies in this Framework that protect areas or assets of particular importance provides a clear reason for refusing the development proposed; or
- any adverse impacts of doing so would significantly and demonstrably outweigh the benefits, when assessed against the policies in this Framework taken as a whole.
- The presumption in favour of sustainable development does not change the statutory status of the 12 development plan as the starting point for decision-making. Where a planning application conflicts with an up-to-date development plan (including any neighbourhood plans that form part of the development plan). permission should not usually be granted. Local planning authorities may take decisions that depart from an up-to-date development plan, but only if material considerations in a particular case indicate that the plan should not be followed.

Chapter 6: Building a strong, competitive economy

81 Planning policies and decisions should help create the conditions in which businesses can invest, expand and adapt. Significant weight should be placed on the need to support economic growth and productivity, taking into account both local business needs and wider opportunities for development. The approach taken Project will provide for the integration of new energy infrastructure and energy should allow each area to build on its strengths, counter any weaknesses and address the challenges of the diversity into the regional economy, enhancing sustainable growth on a local, regional future. This is particularly important where Britain can be a global leader in driving innovation, and in areas with high levels of productivity, which should be able to capitalise on their performance and potential.

82 Planning policies should:

- a. set out a clear economic vision and strategy which positively and proactively encourages sustainable economic growth, having regard to Local Industrial Strategies and other local policies for economic development and regeneration;
- b. set criteria, or identify strategic sites, for local and inward investment to match the strategy and to meet anticipated needs over the plan period;
- seek to address potential barriers to investment, such as inadequate infrastructure, services or housing, or a poor environment; and
- be flexible enough to accommodate needs not anticipated in the plan, allow for new and flexible working practices (such as live-work accommodation), and to enable a rapid response to changes in economic circumstances.

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The Proposed Development will support sustainable economic growth and make an important contribution towards the UK Government's environmental objectives. The and national level. The Humber Industrial Cluster Plan is a plan designated through the UK Government to contribute towards achieving Net Zero.

The Application is supported by a Needs Case [EN070008/APP/7.3] which provides a detailed analysis of the environmental, economic and social benefits of delivering the Proposed Development, and how it will accord with wider Governments goals for energy infrastructure.

The Proposed Development is considered to accord with the NPPF's policies related to building a strong, competitive economy.

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- Planning policies and decisions should recognise and address the specific locational requirements of different sectors. This includes making provision for clusters or networks of knowledge and data-driven, creative or high technology industries; and for storage and distribution operations at a variety of scales and in suitably accessible locations.
- 84 Planning policies and decisions should enable:
 - a. the sustainable growth and expansion of all types of business in rural areas, both through conversion of existing buildings and well-designed new buildings:
 - b. the development and diversification of agricultural and other land-based rural businesses;
 - sustainable rural tourism and leisure developments which respect the character of the countryside;
 and
 - the retention and development of accessible local services and community facilities, such as local shops, meeting places, sports venues, open space, cultural buildings, public houses and places of worship.
 - Planning policies and decisions should recognise that sites to meet local business and community needs in rural areas may have to be found adjacent to or beyond existing settlements, and in locations that are not well served by public transport. In these circumstances it will be important to ensure that development is sensitive to its surroundings, does not have an unacceptable impact on local roads and exploits any opportunities to make a location more sustainable (for example by improving the scope for access on foot, by cycling or by public transport). The use of previously developed land, and sites that are physically well-related to existing settlements, should be encouraged where suitable opportunities exist.

Chapter 8: Promoting Healthy and safe communities

- Planning policies and decisions should aim to achieve healthy, inclusive, and safe places which:

 a) promote social interaction, including opportunities for meetings between people who might not otherwise come into contact with each other for example through mixed-use developments, strong neighbourhood centres, street layouts that allow for easy pedestrian and cycle connections within and between neighbourhoods, and active street frontages:
 - b) are safe and accessible, so that crime and disorder, and the fear of crime, do not undermine the quality of life or community cohesion for example through the use of attractive, well-designed, clear and legible pedestrian and cycle routes, and high quality public space, which encourage the active and continual use of public areas; and
 - c) enable and support healthy lifestyles, especially where this would address identified local health and well-being needs for example through the provision of safe and accessible green infrastructure, sports facilities, local shops, access to healthier food, allotments and layouts that encourage walking and cycling. Plan positively for the provision of local services to enhance the sustainability of communities and residential environments;
- To provide the social, recreational and cultural facilities and services the community needs, planning policies and decisions should:
 - a) plan positively for the provision and use of shared spaces, community facilities (such as local shops, meeting places, sports venues, open space, cultural buildings, public houses and places of worship) and other local services to enhance the sustainability of communities and residential environments;

Chapter 17: Health and Wellbeing of the ES [EN070008/APP/6.2.17] assesses the likely significant effects of the Proposed Development on Human Health during construction, operation and decommissioning. The assessment includes consideration of impacts to the following:

- Access to healthcare services and other social infrastructure;
- Air quality, noise, and neighbourhood amenity:
- Accessibility and active travel;
- Access to work and training; and
- Social cohesion and neighbourhoods.
- •

Chapter 17: Health and Well-being of the ES **[EN070008/APP/6.2.17]** assesses the impact of the Proposed Development on issues of health and well-being. Chapter 17 includes an overview of the cumulative impacts on health and concludes that when mitigation measures are implemented there are no significant residual effects in the construction, operational or decommissioning phases. Where health effects are envisaged to be minor adverse, mitigation measures ensure that this effect is reduced to negligible.

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being for all sections of the community:

b) take into account and support the delivery of local strategies to improve health, social and cultural well-

c) guard against the unnecessary loss of valued facilities and services, particularly where this would reduce the community's ability to meet its day-to-day needs.

Chapter 9: Promoting sustainable transport

Transport issues should be considered from the earliest stages of plan-making and development proposals, The Proposed Development will transport CO₂ by pipeline which is considered more so that:

- the potential impacts of development on transport networks can be addressed;
- opportunities from existing or proposed transport infrastructure, and changing transport technology and usage, are realised – for example in relation to the scale, location or density of development that can be accommodated:
- c. opportunities to promote walking, cycling and public transport use are identified and pursued;
- d. the environmental impacts of traffic and transport infrastructure can be identified, assessed and taken into account – including appropriate opportunities for avoiding and mitigating any adverse effects, and for net environmental gains; and
- e. patterns of movement, streets, parking and other transport considerations are integral to the design of schemes, and contribute to making high quality places.

The Proposed Development will transport CO₂ by pipeline which is considered more sustainable then transporting by road haulage. Chapter 12: Traffic and Transport of

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the ES [EN070008/APP/6.2.12] and its relevant appendices include an assessment of the likely significant effects of the Proposed Development on the environment in respect of traffic and transport during the construction phase. The assessment of construction traffic includes consideration of the present day and future baseline conditions during construction; and the effects of construction traffic on the local road network, including the strategic road network (SRN) as a result of the Proposed Development in terms of the increase in overall vehicle numbers, including HGVs.

Mitigation measures are outlined in the Draft Construction Traffic Management Plan (CTMP) in Appendix 12-5 of the ES **[EN070008/APP/6.4.12.5]** and the CWTP which seek to control the construction vehicle numbers, with these mitigation measures in place, there are no further measures required to mitigate the effects of the Proposed Development.

Based on the potential for significant effects generated by the Project on traffic and transport, it is likely that mitigation will be required to reduce the potential impacts. Mitigation by Design and Project Specific Mitigation including travel planning and HGV management will be incorporated into a Draft Construction Traffic Management Plan (CTMP) to be submitted with the Application.

Chapter 11: Making effective use of land

120 Planning policies and decisions should:

b) recognise that some undeveloped land can perform many functions, such as for wildlife, recreation, flood risk mitigation, cooling/shading, carbon storage or food production;

 c) give substantial weight to the value of using suitable brownfield land within settlements for homes and other identified needs, and support appropriate opportunities to remediate despoiled, degraded, derelict, contaminated or unstable land;

d) promote and support the development of under-utilised land and buildings, especially if this would help to meet identified needs for housing where land supply is constrained and available sites could be used more effectively (for example converting space above shops, and building on or above service yards, car parks, lock-ups and railway infrastructure).

Where possible the design for the Proposed Development has sought to make use of Brownfield Land for the Immingham Facilities and Theddlethorpe Facilities.

The route for the pipeline has been carefully selected to avoid sensitive receptors and to minimise the footprint of the Proposed Development. Where necessary landscape planting has been included to screen above ground installations.

Chapter 12: Achieving well-designed places

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Plans should, at the most appropriate level, set out a clear design vision and expectations, so that applicants have as much certainty as possible about what is likely to be acceptable. Design policies should be developed with local communities so they reflect local aspirations, and are grounded in an

The design of the Proposed Development has taken into account local, regional and national policy and guidance on how development should be designed. The proposed

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understanding and evaluation of each area's defining characteristics. Neighbourhood planning groups can play an important role in identifying the special qualities of each area and explaining how this should be reflected in development, both through their own plans and by engaging in the production of design policy, guidance and codes by local planning authorities and developers.

- 132 Design quality should be considered throughout the evolution and assessment of individual proposals. Early engineering considerations, stakeholder feedback and through the consultation discussion between applicants, the local planning authority and local community about the design and style of emerging schemes is important for clarifying expectations and reconciling local and commercial interests. Applicants should work closely with those affected by their proposals to evolve designs that take account of the views of the community. Applications that can demonstrate early, proactive and effective engagement with the community should be looked on more favourably than those that cannot.
- 134 Development that is not well designed should be refused, especially where it fails to reflect local design policies and government guidance on design, taking into account any local design guidance and supplementary planning documents such as design guides and codes. Conversely, significant weight should be given to:
 - a. development which reflects local design policies and government guidance on design, taking into account any local design guidance and supplementary planning documents such as design guides and codes: and/or
 - b) outstanding or innovative designs which promote high levels of sustainability, or help raise the standard of design more generally in an area, so long as they fit in with the overall form and layout of their surroundings.

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design of the development constitutes innovative technology and design, that will promote and contribute to high levels of sustainable development.

The design of the Proposed Development has evolved through a series of steps and design iterations. Design evolution has been informed by environmental assessments. exercises undertaken. These have taken into account site context, existing features within and adjacent to the order limits, nearby sensitive receptors and assets. consultation responses and access considerations to develop a good design that balances the need to maximise the most efficient route with avoidance and mitigation of impacts and provision of environmental and other enhancements. Chapter 2: Design Evolution and Alternatives of the ES [EN070008/APP/6.2.2] details the design process undertaken.

The design development process included the identification of mitigation commitments, both for mitigation embedded in the design and also good practice mitigation. The route of the pipeline has been influenced by the desire to reduce potential likely effects on communities, for example, the route seeks to limit adverse impacts on habitats, historic receptors and residential buildings.

Chapter 14: Meeting the challenge of climate change, flooding and coastal change

- 152 The planning system should support the transition to a low carbon future in a changing climate, taking full account of flood risk and coastal change. It should help to: shape places in ways that contribute to radical reductions in greenhouse gas emissions, minimise vulnerability and improve resilience; encourage the reuse of existing resources, including the conversion of existing buildings; and support renewable and low carbon energy and associated infrastructure.
- 153 Plans should take a proactive approach to mitigating and adapting to climate change, taking into account the long-term implications for flood risk, coastal change, water supply, biodiversity and landscapes, and the risk of overheating from rising temperatures53. Policies should support appropriate measures to ensure the future resilience of communities and infrastructure to climate change impacts, such as providing space for physical protection measures, or making provision for the possible future relocation of vulnerable development and infrastructure.
- 154 New development should be planned for in ways that:
 - avoid increased vulnerability to the range of impacts arising from climate change. When new development is brought forward in areas which are vulnerable, care should be taken to ensure that risks can be managed through suitable adaptation measures, including through the planning of green infrastructure; and
 - can help to reduce greenhouse gas emissions, such as through its location, orientation and design. Any local requirements for the sustainability of buildings should reflect the Government's policy for national technical standards.

The Proposed Development directly contributes to the UK's transition to a low carbon future. This is highlighted with the Government allocated the Humber as track 2. cluster project to decarbonise the region and meet Net Zero targets.

The Application is supported by a Needs Case for Proposed Development [EN070008/APP/7.3] which provides a detailed analysis of the environmental, economic and social benefits of delivering the Proposed development on a local, regional and national scale, and how it will accord with the wider UK Government ambitions for the energy sector.

Chapter 11: Water Environment of the ES [EN070008/APP/6.2.11] and relevant appendices make assessment of the possible significant effects of the Proposed Development on water resources and flood risk.

The majority of the Proposed Development is located in low flood risk areas although there are some areas of high and medium risk associated with watercourses. A Flood Risk Assessment is included within Appendix 11-5 of the ES

[EN070008/APP/6.4.11.5]. Construction flood mitigation measures have been described within the Draft CEMP [EN070008/APP/6.4.11.5] and mitigation with regards to facilities remaining operational during times of flood has been considered within the FRA.

The Proposed Development is considered to accord with the NPPF's policies on meeting the challenge of climate change, flooding, and coastal change.

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Paragraph Relevant Policy Text: Requirement of the Policy

Compliance Assessment

To help increase the use and supply of renewable and low carbon energy and heat, plans should:

- a. provide a positive strategy for energy from these sources, that maximises the potential for suitable development, while ensuring that adverse impacts are addressed satisfactorily (including cumulative landscape and visual impacts);
- b. consider identifying suitable areas for renewable and low carbon energy sources, and supporting infrastructure, where this would help secure their development; and
- c. identify opportunities for development to draw its energy supply from decentralised, renewable or low carbon energy supply systems and for collocating potential heat customers and suppliers.
- When determining planning applications for renewable and low carbon development, local planning authorities should:
 - a) not require applicants to demonstrate the overall need for renewable or low carbon energy, and recognise that even small-scale projects provide a valuable contribution to cutting greenhouse gas emissions; and
 - approve the application if its impacts are (or can be made) acceptable. Once suitable areas for renewable and low carbon energy have been identified in plans, local planning authorities should expect subsequent applications for commercial scale projects outside these areas to demonstrate that the proposed location meets the criteria used in identifying suitable areas.
- Inappropriate development in areas at risk of flooding should be avoided by directing development away from areas at highest risk (whether existing or future). Where development is necessary in such areas, the development should be made safe for its lifetime without increasing flood risk elsewhere.
- Strategic policies should be informed by a strategic flood risk assessment, and should manage flood risk from all sources. They should consider cumulative impacts in, or affecting, local areas susceptible to flooding, and take account of advice from the Environment Agency and other relevant flood risk management authorities, such as lead local flood authorities and internal drainage boards.
- All plans should apply a sequential, risk-based approach to the location of development taking into account all sources of flood risk and the current and future impacts of climate change so as to avoid, where possible, flood risk to people and property. They should do this, and manage any residual risk, by:
 - a) applying the sequential test and then, if necessary, the exception test as set out below;
 - safeguarding land from development that is required, or likely to be required, for current or future flood management:
 - using opportunities provided by new development and improvements in green and other
 infrastructure to reduce the causes and impacts of flooding, (making as much use as possible of
 natural flood management techniques as part of an integrated approach to flood risk
 management): and
 - d) where climate change is expected to increase flood risk so that some existing development may not be sustainable in the long-term, seeking opportunities to relocate development, including housing, to more sustainable locations.
- When determining any planning applications, local planning authorities should ensure that flood risk is not increased elsewhere. Where appropriate, applications should be supported by a site-specific flood-risk assessment55. Development should only be allowed in areas at risk of flooding where, in the light of this assessment (and the sequential and exception tests, as applicable) it can be demonstrated that: a) within

Paragraph Relevant Policy Text: Requirement of the Policy

the site, the most vulnerable development is located in areas of lowest flood risk, unless there are overriding reasons to prefer a different location; b) the development is appropriately flood resistant and resilient such that, in the event of a flood, it could be quickly brought back into use without significant refurbishment; c) it incorporates sustainable drainage systems, unless there is clear evidence that this would be inappropriate: d) any residual risk can be safely managed; and e) safe access and escape routes are included where appropriate, as part of an agreed emergency plan

- 169 Major developments should incorporate sustainable drainage systems unless there is clear evidence that this would be inappropriate. The systems used should:
 - a) take account of advice from the lead local flood authority:
 - have appropriate proposed minimum operational standards;
 - have maintenance arrangements in place to ensure an acceptable standard of operation for the lifetime of the development: and
 - d) where possible, provide multifunctional benefits

Chapter 15: Conserving and enhancing the natural environment

- 174 Planning policies and decisions should contribute to and enhance the natural and local environment by:
 - a. 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);
 - recognising the intrinsic character and beauty of the countryside, and the wider benefits from natural capital and ecosystem services – including the economic and other benefits of the best and implementation of mitigation measures that will be set out within the draft CEMP. most versatile agricultural land, and of trees and woodland;
 - maintaining the character of the undeveloped coast, while improving public access to it where
 - minimising impacts on and providing net gains for biodiversity, including by establishing coherent ecological networks that are more resilient to current and future pressures:
 - preventing new and existing development from contributing to, being put at unacceptable risk from or being adversely affected by, unacceptable levels of soil, air, water or noise pollution or land instability. Development should, wherever possible, help to improve local environmental conditions such as air and water quality, taking into account relevant information such as river basin management plans; and
 - remediating and mitigating despoiled, degraded, derelict, contaminated and unstable land, where appropriate.
- 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. The conservation and enhancement of wildlife and cultural heritage are also important considerations in these areas, and should be given great weight in National Parks and the Broads. The scale and extent of development within all these designated areas should be limited, while development within their setting should be sensitively located and designed to avoid or minimise adverse impacts on the designated areas.
- 177 When considering applications for development within National Parks, the Broads and Areas of Outstanding Natural Beauty, permission should be refused for major development other than in exceptional circumstances, and where it can be demonstrated that the development is in the public interest. Consideration of such applications should include an assessment of:

Compliance Assessment

The potential effects of the Proposed Development on biodiversity and ecology are assessed in Chapter 6: Ecology and Biodiversity of the ES [EN070008/APP/6.2.6].

The potential effects on ecology during construction will be managed through the

In relation to any likely significant effects, a Report to Inform the Habitats Regulations Assessment [EN070008/APP/6.5] has also been included. The HRA was carried out to assess the potential impact of the Proposed Development on European sites designated fornature conservation. The HRA was progressed to the Appropriate Assessment stagewhen it was confirmed that the Proposed Development would not adversely affect the integrity of European protected sites in the study area. Chapter 7: Landscape and Visual impact of the ES [EN070008/APP/6.2.7] provides a detailed assessment of the impacts of the Proposed Development on the landscape.

Chapter 9: Geology and Hydrogeology of the ES [EN070008/APP/6.2.9] provides a detailed assessment of the impacts of the Proposed Development on geology and hydrogeology. The assessment concludes that the potential impacts which may occur during the construction phase are primarily associated with spillages and leaks of fuel/oil associated with plant and machinery, disturbance of contaminated soils and potential degradation of soil quality during handling and movement of soil or tracking of heavy plant as well as the potential dewatering to locally affected groundwater levels. It is considered that all of these effects can be controlled through good practice and standard mitigation measures which are outlined within the Draft CEMP in Appendix 3-1 of the ES [EN070008/APP/6.4.3.1].

During the operational phase potential impacts are limited to effects resulting from potential land contamination on site users and groundwater receptors Required mitigation will be confirmed by means of risk assessments based on ground

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Paragraph Relevant Policy Text: Requirement of the Policy

- the need for the development, including in terms of any national considerations, and the impact of permitting it, or refusing it, upon the local economy;
- the cost of, and scope for, developing outside the designated area, or meeting the need for it in some other way: and
- any detrimental effect on the environment, the landscape and recreational opportunities, and the
 extent to which that could be moderated.
- To protect and enhance biodiversity and geodiversity, plans should:
 - a. Identify, map and safeguard components of local wildlife-rich habitats and wider ecological networks, including the hierarchy of international, national and locally designated sites of importance for biodiversity; wildlife corridors and stepping stones that connect them; and areas identified by national and local partnerships for habitat management, enhancement, restoration or creation; and
 - promote the conservation, restoration and enhancement of priority habitats, ecological networks and the protection and recovery of priority species; and identify and pursue opportunities for securing measurable net gains for biodiversity.
- The following should be given the same protection as habitats sites:
 - a. potential Special Protection Areas and possible Special Areas of Conservation;
 - b. listed or proposed Ramsar sites; and
 - sites identified, or required, as compensatory measures for adverse effects on habitats sites, potential Special Protection Areas, possible Special Areas of Conservation, and listed or proposed Ramsar sites.
- The presumption in favour of sustainable development does not apply where the plan or project is likely to have a significant effect on a habitats site (either alone or in combination with other plans or projects), unless an appropriate assessment has concluded that the plan or project will not adversely affect the integrity of the habitats site.
- 183 Planning policies and decisions should ensure that:
 - a site is suitable for its proposed use taking account of ground conditions and any risks arising
 from land instability and contamination. This includes risks arising from natural hazards or former
 activities such as mining, and any proposals for mitigation including land remediation (as well as
 potential impacts on the natural environment arising from that remediation);
 - after remediation, as a minimum, land should not be capable of being determined as contaminated land under Part IIA of the Environmental Protection Act 1990; and
 - adequate site investigation information, prepared by a competent person, is available to inform these assessments.
 - Planning policies and decisions should also ensure that new development is appropriate for its location taking into account the likely effects (including cumulative effects) of pollution on health, living conditions and the natural environment, as well as the potential sensitivity of the site or the wider area to impacts that could arise from the development. In doing so they should:
 - a. mitigate and reduce to a minimum potential adverse impacts resulting from noise from new development – and avoid noise giving rise to significant adverse impacts on health and the quality of life:

Compliance Assessment

investigation data (when available) and may include removal of contaminant sources and installation of gas protection measures on the buildings. Overall, the mitigation required to address the potential impacts is standard practice.

Chapter 14: Air Quality of the ES **[EN070008/APP/6.2.14]** provides a detailed assessment of the impacts of the Proposed Development on local air quality during the construction phase of the development. The impact on air quality during the operational and decommissioning phases were scoped out of the assessment as the operational emissions considered harmful to human health and nature conservation sites are limited to those associated with infrequent maintenance vehicles and the decommissioning emissions are assumed to be similar to and no worse than those associated with the construction phase.

The majority of the Proposed Development is located in rural areas, Chapter 10: Agriculture and Soil of the ES [EN070008/APP/6.2.10] presents an assessment of the likely significant effects of the Proposed Development on agriculture and soils during construction and decommissioning, including consideration of impacts on soil resources and agricultural land.

The loss of the vast majority of the grade 2 and 3a BMV agricultural land is temporary and reversible and the permanent loss of grade 2 and 3a BMV land falls significantly below the 20 ha threshold above which effects are considered to be significant. Although both BMV and non-BMV land would be directly impacted by the Proposed Development the majority of impacts will be temporary and for the duration of the construction phase only, as all land within the pipeline corridor, temporary compounds and temporary accesses will be reinstated immediately following construction to its original condition and land use. The residual impacts to agricultural land as a result of the temporary development are assessed within the ES as not significant.

NPPF, 2023

Paragraph Relevant Policy Text: Requirement of the Policy

- 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, intrinsically dark landscapes and nature conservation.
- Planning policies and decisions should sustain and contribute towards compliance with relevant limit values or national objectives for pollutants, taking into account the presence of Air Quality Management Areas and Clean Air Zones, and the cumulative impacts from individual sites in local areas. Opportunities to improve air quality or mitigate impacts should be identified, such as through traffic and travel management, and green infrastructure provision and enhancement. So far as possible these opportunities should be considered at the plan-making stage, to ensure a strategic approach and limit the need for issues to be reconsidered when determining individual applications. Planning decisions should ensure that any new development in Air Quality Management Areas and Clean Air Zones is consistent with the local air quality action plan.
- Planning policies and decisions should ensure that new development can be integrated effectively with existing businesses and community facilities (such as places of worship, pubs, music venues and sports clubs). Existing businesses and facilities should not have unreasonable restrictions placed on them as a result of development permitted after they were established. Where the operation of an existing business or community facility could have a significant adverse effect on new development (including changes of use) in its vicinity, the applicant (or 'agent of change') should be required to provide suitable mitigation before the development has been completed.
- The focus of planning policies and decisions should be on whether proposed development is an acceptable use of land, rather than the control of processes or emissions (where these are subject to separate pollution control regimes). Planning decisions should assume that these regimes will operate effectively. Equally, where a planning decision has been made on a particular development, the planning issues should not be revisited through the permitting regimes operated by pollution control authorities

Chapter 16: Conserving and enhancing the historic environment

- Heritage assets range from sites and buildings of local historic value to those of the highest significance, such as World Heritage Sites which are internationally recognised to be of Outstanding Universal Value. These assets are an irreplaceable resource, and should be conserved in a manner appropriate to their significance, so that they can be enjoyed for their contribution to the quality of life of existing and future generations.
- In determining applications, local planning authorities should require an applicant to describe the significance of any heritage assets affected, including any contribution made by their setting. The level of detail should be proportionate to the assets' importance and no more than is sufficient to understand the potential impact of the proposal on their significance. As a minimum the relevant historic environment record should have been consulted and the heritage assets assessed using appropriate expertise where necessary. Where a site on which development is proposed includes, or has the potential to include, heritage assets with archaeological interest, local planning authorities should require developers to submit an appropriate desk-based assessment and, where necessary, a field evaluation.

The design of the Proposed Development has avoided physical impacts to designated heritage assets as a key consideration during the routeing and siting work undertaken to inform the selection of the most preferred pipeline route. Further mitigation by

The construction of the Project has the potential to result in permanent impacts to archaeological remains dating to early prehistoric, Roman, Early Medieval, medieval, post-medieval and modern periods.

design will be built into the Project to minimise impacts to heritage assets and their setting, as far as possible, with particular consideration given to the listed buildings

located within the Scoping Boundary.

Chapter 8: Historic Environment of the ES **[EN070008/APP/6.2.8]** contains an assessment of the Proposed Developments likely impacts on the historic environment.

Paragraph Relevant Policy Text: Requirement of the Policy

Local planning authorities should identify and assess the particular significance of any heritage asset that may be affected by a proposal (including by development affecting the setting of a heritage asset) taking account of the available evidence and any necessary expertise. They should take this into account when considering the impact of a proposal on a heritage asset, to avoid or minimise any conflict between the heritage asset's conservation and any aspect of the proposal.

- Where there is evidence of deliberate neglect of, or damage to, a heritage asset, the deteriorated state of the heritage asset should not be taken into account in any decision.
- 197 In determining applications, local planning authorities should take account of:
 - a. the desirability of sustaining and enhancing the significance of heritage assets and putting them to viable uses consistent with their conservation:
 - b. the positive contribution that conservation of heritage assets can make to sustainable communities the draft CEMP. including their economic vitality; and
 - the desirability of new development making a positive contribution to local character and distinctiveness.
- When considering the impact of a proposed development on the significance of a designated heritage asset, great weight should be given to the asset's conservation (and the more important the asset, the greater the weight should be). This is irrespective of whether any potential harm amounts to substantial harm, total loss or less than substantial harm to its significance.
- Any harm to, or loss of, the significance of a designated heritage asset (from its alteration or destruction, or from development within its setting), should require clear and convincing justification. Substantial harm to or loss of:
 - a. grade II listed buildings, or grade II registered parks or gardens, should be exceptional;
 - assets of the highest significance, notably scheduled monuments, protected wreck sites, registered battlefields, grade I and II* listed buildings, grade I and II* registered parks and gardens, and World Heritage Sites, should be wholly exceptional
- Where a proposed development will lead to substantial harm to (or total loss of significance of) a designated heritage asset, local planning authorities should refuse consent, unless it can be demonstrated that the substantial harm or total loss is necessary to achieve substantial public benefits that outweigh that harm or loss, or all of the following apply:
 - a. the nature of the heritage asset prevents all reasonable uses of the site; and
 - b. no viable use of the heritage asset itself can be found in the medium term through appropriate marketing that will enable its conservation; and
 - c. conservation by grant-funding or some form of not for profit, charitable or public ownership is demonstrably not possible; and
 - d. the harm or loss is outweighed by the benefit of bringing the site back into use.
- Where a development proposal will lead to less than substantial harm to the significance of a designated heritage asset, this harm should be weighed against the public benefits of the proposal including, where appropriate, securing its optimum viable use.

Compliance Assessment

The pipeline route of the Proposed Development has been selected to reduce the impact on the historic environment by avoiding where practicable designated heritage assets.

Non-designated and designated heritage assets have been included in the environmental impact assessment as identified within Part 5.8 and assessed against its value based on professional judgements informed by guidance and national policy.

Chapter 8: Historic Environment [EN070008/APP/6.2.8] and Chapter 7: Landscape and Visual Impact [EN070008/APP/6.2.7] of the ES assess the effects during the construction, operation and decommissioning phase of development. Embedded mitigation measures have been incorporated into the design process of the Proposed Development and where required further mitigation measures are presented within the draft CEMP.

The historic environment has been considered through the design process of the Proposed Development. Temporary and permanent likely significant effects arising from impacts during construction, operation and decommissioning of the Proposed Development have been considered and the full extent is detailed in Chapter 8: Historic Environment of the ES [EN070008/APP/6.2.8].

The historic environment assessment has identified likely significant residual effects on non-designated buried archaeological remains at one site due to construction of the pipeline, at Section 5 – cropmark enclosures at Theddlethorpe [622]. The historic environment assessment has identified likely significant residual effects on three designated heritage assets, the grade II* listed Church of St Edmund in Riby, the grade II listed Ashleigh Farm at Theddlethorpe, and the grade II listed Manor House and non-designated former parkland at Barnoldby le Beck due to construction of the pipeline.

Where impacts cannot be avoided, mitigation will take the form of archaeological investigation and recording, to be undertaken as advanced works. A detailed archaeological mitigation strategy will be developed and agreed during Examination; however, it is anticipated that the following mitigation approaches may be relevant: Surface artefact collection / test pitting / metal detection where required in advance of archaeological excavation and recording.

Topographic survey of earthworks to allow reinstatement works post-construction; Archaeological excavation and recording in areas where significant archaeological remains have been recorded/identified, including by archaeological Strip, Map and Sample;

NPPF, 2023

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Paragraph Relevant Policy Text: Requirement of the Policy

The effect of an application on the significance of a non-designated heritage asset should be taken into account in determining the application. In weighing applications that directly or indirectly affect non-designated heritage assets, a balanced judgement will be required having regard to the scale of any harm or loss and the significance of the heritage asset.

- Local planning authorities should require developers to record and advance understanding of the significance of any heritage assets to be lost (wholly or in part) in a manner proportionate to their importance and the impact, and to make this evidence (and any archive generated) publicly accessible. However, the ability to record evidence of our past should not be a factor in deciding whether such loss should be permitted.
- Not all elements of a Conservation Area or World Heritage Site will necessarily contribute to its significance. Loss of a building (or other element) which makes a positive contribution to the significance of the Conservation Area or World Heritage Site should be treated either as substantial harm under paragraph 201 or less than substantial harm under paragraph 202, as appropriate, taking into account the relative significance of the element affected and its contribution to the significance of the Conservation Area or World Heritage Site as a whole.
 - Local planning authorities should assess whether the benefits of a proposal for enabling development, which would otherwise conflict with planning policies but which would secure the future conservation of a heritage asset, outweigh the disbenefits of departing from those policies.

Chapter 17: Facilitating the sustainable use of minerals

- It is essential that there is a sufficient supply of minerals to provide the infrastructure, buildings, energy and goods that the country needs. Since minerals are a finite natural resource, and can only be worked where they are found, best use needs to be made of them to secure their long-term conservation.
- Local planning authorities should not normally permit other development proposals in Mineral Safeguarding Areas if it might constrain potential future use for mineral working.
- 215 Minerals planning authorities should:
 - a. when planning for on-shore oil and gas development, clearly distinguish between, and plan
 positively for, the three phases of development (exploration, appraisal and production), whilst
 ensuring appropriate monitoring and site restoration is provided for:
 - encourage underground gas and carbon storage and associated infrastructure if local geological circumstances indicate its feasibility;

Compliance Assessment

The route of the Pipeline passes through areas allocated as Mineral Safeguard Areas (MSA) in the North East Lincolnshire Council Local Plan (2018). The MSAs are located throughout the western part of the Borough and cover both rural and urban areas. The MSAs are a record of the areas where sand and gravel reserves are present.

The presence of MSAs were considered when selecting the route for the pipeline, however it has not been possible to avoid all of the areas. Avoiding the MSA would in some instances necessitate moving the pipeline closer to urban areas, residential properties or environmental receptors.

There are no active mineral workings in North East Lincolnshire Council and a call for mineral sites during the preparation of the Local Plan did not yield any sites for allocation. Prior extraction of mineral is not considered to be feasible for the Proposed Development.

It is worthy of note that the pipeline would sterilise a narrow strip of land and mineral reserves in each MSA while the pipeline is constructed and operational. The mineral reserves could be extracted once the pipeline is no longer operational.

The Proposed Development form part of Carbon Capture and Storage project for which there is support in 215b of the NPPF.

Appendix D – Local Planning Policy Accordance Table.

Introduction

This Appendix to the Planning Design and Access Statement presents the relevant local planning policies to the Proposed Development and commentary around whether the Proposed Development accords with each policy. As the Proposed Development is linear in nature it is located within North Lincolnshire Council, North East Lincolnshire Council, West Lindsey District Council, East Lindsey District Council and Lincolnshire County Council.

The relevant planning policies of the following documents have been considered:

- North Lincolnshire Core Strategy (NLCS) 2006-2026, adopted June 2011;
- North East Lincolnshire Local Plan (NELLP) 2013 2032, adopted 22 March 2018
- Central Lincolnshire Local Plan (CLLP) (April, 2023) (covering West Lindsey);
- East Lindsey Local Plan (ELLP) adopted 18 July 2018;
- Lincolnshire Minerals and Waste Local Plan including the Core Strategy and Development Management Policies Plan adopted June 2016 and the Site Locations Plan adopted December 2017.

Appendix D - Planning Policy Compliance Assessment: Local Planning Policy

Introduction

This appendix provides a detailed assessment of the Proposed Developments compliance with the policies and objectives of the policies in the adopted Local Development Plan documents.

This policy accordance assessment includes the Local Development Plans for each of the Local Planning Authorities the Proposed Development passes through:

- Lincolnshire County Council: Lincolnshire Minerals and Waste Local Plan, Core Strategy (adopted 2016).
- North East Lincolnshire Council: Local Plan 2013 to 2032 (adopted 2018).
- East Lindsey District Council: Core Strategy (adopted 2018).
- West Lindsey District Council: Central Lincolnshire Local Plan (adopted 2023) (Central Lincolnshire refers to the combined area covered by the City of Lincoln, North Kesteven and West Lindsey)
- North Lincolnshire Council: Core Strategy (adopted 2011) and the saved policies in the North Lincolnshire Local Plan (2003)

D.1 Lincolnshire County Council: Planning Policy Accordance

Lincolnshire County Council: Minerals and Waste Local Plan, Core Strategy and Development Management Policies, June 2016

Policy Reference

Relevant Policy Text: Requirement of the Policy

Compliance Assessment: How the Proposed Development addresses the requirement

M10: Underground Gas Storage

Planning permission will be granted for the development of underground gas storage facilities provided that proposals accord with all relevant Development Management Policies set out in the Plan.

The Proposed Development will transport CO_2 to offshore geological storage facilities. The pipeline is essential to transport CO_2 is the Viking CCS Pipeline and associated facilities that will transport CO_2 to secure storage.

In the UK, all prospective carbon dioxide storage sites are located offshore, with a large storage potential available in the North Sea region.

CCS is recognised by the Intergovernmental Panel on Climate Change (IPCC) and the UK government as a vital step on the road to achieving Net Zero carbon emissions.

This policy shows support for the Proposed Development for which there are a number of benefits including reducing greenhouse gas emissions, decarbonising industry while maintaining employment and generating new investment.

M11: Safeguarding of Mineral Resources Sand and gravel, blown sand and limestone resources that are considered to be of current or future economic importance within the Minerals Safeguarding Areas together with potential sources of dimension stone for use in building and restoration projects connected to Lincoln Cathedral/Lincoln Castle, and chalk resources will be protected from permanent sterilisation by other development.

Applications for non-minerals development in a minerals safeguarding area must be accompanied by a Minerals Assessment. Planning permission will be granted for development within a Minerals Safeguarding Area provided that it would not sterilise mineral resources within the Mineral Safeguarding Areas or prevent future minerals extraction on neighbouring land. Where this is not the case, planning permission will be granted when:

- the applicant can demonstrate to the Mineral Planning Authority that prior extraction of the mineral would be impracticable, and that the development could not reasonably be sited elsewhere; or
- the incompatible development is of a temporary nature and can be completed and the site restored to a condition that does not inhibit extraction within the timescale that the mineral is likely to be needed; or
- there is an overriding need for the development to meet local economic needs, and the development could not reasonably be sited elsewhere; or
- the development is of a minor nature which would have a negligible impact with respect to sterilising the mineral resource; or
- the development is, or forms part of, an allocation in the Development Plan.

Chapter 18: Material and Waste of the ES and its relevant appendices **[EN070008/APP/6.2.18]** reports the findings of the assessment of the Proposed Development's impact on materials and waste.

The Proposed Development does not pass through any Safeguarded Mineral Sites (SMS). However, does pass through a Mineral Safeguarded Areas (MSA) for Sand and Gravel in North East Lincolnshire Council located in Sections 2 and 3 of the Order Limits. Chapter 18 of the ES concludes that there will be no significant effects anticipated in relation to material and waste.

A Mineral Assessment is provided in chapter 7 of the Planning Design and Access Statement (PDAS) **[EN070008/APP/7.1]** which in summary outlines that MSAs are located throughout the western part of the North East Lincolnshire Council and cover both rural and urban areas. The MSAs are a record of the areas where sand and gravel reserves are present and generally cover small areas or longer narrow areas.

The presence of MSAs were considered when selecting the route for the pipeline, however it has not been possible to avoid all of the areas. Avoiding the MSA would in some instances necessitate moving the pipeline closer to urban areas, residential properties or environmental receptors.

There are no active mineral workings in North East Lincolnshire Council and a call for mineral sites during the preparation of the Local Plan did not yield any sites for allocation. Prior extraction of mineral is not considered to be feasible for the Proposed Development.

It is worthy of note that the pipeline would sterilise a narrow strip of land and mineral reserves in each MSA while the pipeline is constructed and operational. The mineral reserves could be extracted once the pipeline is no longer operational.

Policy Reference	Relevant Policy Text: Requirement of the Policy	Compliance Assessment: How the Proposed Development addresses the requirement
		With regards to public rights of way, the applicant will put in place suitable diversions during the construction and operation of the Proposed Development.
		It is considered that there is an overriding need for the Proposed Development to decarbonise industry, reduce greenhouse gas emissions associated with global warming and assist the government in achieving Net Zero by 2050.
		The Proposed Development is linear in nature resulting in a narrow easement through a small part of each MSA. Mineral would be sterilised over a small area during the operational period for the Proposed Development and so is considered to have a negligible impact with respect to sterilisation of mineral resource.

M12: Safeguarding of Existing Mineral Sites and Associated Minerals Infrastructure

Mineral sites (excluding dormant sites) and associated infrastructure that supports the supply of minerals in the County will be safeguarded against development that would unnecessarily sterilise the sites and infrastructure or prejudice or jeopardise their use by creating incompatible land uses nearby.

The Proposed Development does not pass through any Mineral Safeguard Sites and is not expected to have any significant or adverse impacts on existing mineral sites and associated minerals infrastructure within the Lincolnshire County Council Authority Boundary, or the mineral authority areas of North Lincolnshire and North East Lincolnshire.

DM1: Presumption in Favour of Sustainable Development

When considering development proposals, the County Council will take a positive approach that reflects the presumption in favour of sustainable development contained in the National Planning Policy Framework. It will always work proactively with applicants jointly to find solutions which mean that proposals can be approved wherever possible, and to secure development that improves the economic, social and environmental conditions in the area.

The Humber region is the largest emitter of CO_2 in the UK and as such represents a unique emissions density within the UK, with decarbonisation of the Humber Energy Intensive Industry Cluster being required to meet the UK Government's legally binding target of achieving Net Zero by 2050.

As set out in the Need Case **[EN070008/APP/7.3]** The Proposed Development would support sustainable growth by providing an opportunity for inward investment into the region and a future low-carbon economy. The innovative technology proposed through the DCO will help the UK Government achieve energy diversity and provide resources for local and regional businesses. The Proposed Development also supports sustainable development and environmental objectives by supporting the UK's transition to Net Zero by providing the infrastructure to contribute towards decarbonisation of the UK. It will also promote use of this technology, contributing to the delivery of similar schemes and decarbonising the industrial sector. Through this employment opportunities will be generated, positively contributing to the socio-economic wellbeing of the surrounding area.

D.2 North East Lincolnshire Council: Planning Policy Accordance

North East Lincolnshire, Local Plan 2018

Policy Reference

Relevant Policy Text: Requirement of the Policy

Land Supply

- Policy 1: Employment 1. Between 2013 and 2032, the Council will support the development of a portfolio of sites which will support the generation of 8,800 jobs.
 - 2. The provision of a portfolio of sites will enable the development of B-class uses to accommodate growth primarily within the Renewables and Energy. Chemicals and Process Industries, Food Processing, and Ports and Logistics sectors. Sites selected will also ensure sufficient flexibility and choice for investors within these sectors, whilst ensuring that a minimum requirement of 123,6ha is accommodated.
 - 3. Additionally, the Council will support the development of the Visitor Economy, ensuring provision of a minimum of 33,600m2 for non B-class uses within town centre opportunity sites.

Compliance Assessment: How the Proposed Development addresses the policy

The Need Case [EN070008/APP/7.3] outlines the employment opportunities and investment that is anticipated as a result of the Proposed Development. The Proposed Development will encourage growth within the renewables and energy sector and attract inward investment leading to economic growth and employment opportunities within the region.

It is anticipated that establishing the Viking CCS Pipeline may attract other development to the area. The presence of a CCS cluster provides opportunities for energy generating facilities and industry to make use of the carbon capture capabilities of the area.

Chapter 16: Socio-economics of the ES [EN070008/APP/6,2,16] acknowledges that although the construction period is temporary the construction of the Proposed Development will require 197 full-time equivalent construction jobs on site per day over the period. Chapter 16 concludes that there will be no potential significant adverse socio-economic effects during the construction or decommissioning phase of the Proposed Development and so no extra mitigation measures are proposed.

Policy 5: Development **Boundaries**

- 3. Beyond the development boundaries land will be regarded as open countryside. Development will be supported where it recognises the distinctive open character, landscape quality and role these areas play in providing the individual settings for independent settlements, and:
 - A. supports a prosperous rural economy, particularly where it promotes the development and diversification of agricultural and other land base rural businesses: or.
 - B. promotes the retention and development of local services and community facilities: or.
 - C. supports rural leisure and tourism developments; or,
 - D. it consists of affordable housing to meet specific local needs: or.
 - E. it is development that has been specifically defined and identified through the neighbourhood planning process.

The majority of the Proposed Development is located in rural areas, a main consideration in the design evolution of the Proposed Development has been to locate the proposed pipeline corridor away from sensitive receptors and built-up areas.

Chapter 2: Design and Alternatives of the ES [EN070008/APP/6.2.2] details the design evolution, the corridor options considered, and the methodology used for appraising each corridor. The majority of the Proposed Development comprises buried pipeline with the most visually prominent components of the Proposed Development will be the permanent above ground infrastructure along the pipeline corridor.

The visual impact of the Proposed Development has been assessed within Chapter 7: Landscape and Visual Impacts of the ES [EN070008/APP/6.2.7]. Whilst there are temporary significant impacts on landscape, the landscape and visual impact of the proposed development can be considered outweighed by the clear demonstrable benefits of the proposed national significant infrastructure.

Policy 8: Existing employment areas

- 1. Existing employment areas are identified on the Policies Map and will be safeguarded for employment uses. Proposals which promote development or reuse of vacant sites located within existing employment areas for employment use will be supported subject to other relevant policies in the Plan.
- 2. Proposals for the development of non-employment uses on existing employment sites will be permitted where:
- A. there is evidence to show that the site/building has reached the end of its useful economic life by:
 - demonstrating that there is no demand for the reuse of the building/site. following a minimum period of 12 months marketing for the existing use with a recognised commercial agent at a reasonable price reflecting typical local land values:

The majority of the Proposed Development is located in rural areas however the Immingham Facility will be located on land allocated for employment use in North Lincolnshire. The Proposed Development will make use of this previously developed land and is in keeping with the neighbouring industrial land uses. The Immingham Facility will generate a number of employment opportunities for technical staff involved in operating and maintaining the facility.

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	ii. demonstrating that the physical adaption or reuse of the building is uneconomic in commercial terms; and, B. the non-employment use would be compatible with the operations of existing employment uses nearby	
Policy 9: Habitat Mitigation – South Humber Bank	1. Within the Mitigation Zone identified on the Policies Map, proposals which adversely affect the Humber Estuary SPA/Ramsar site due to the loss of functionally linked land will normally be required to provide their own mitigation in order to comply with the requirements of the Habitats Regulations. 2. The Strategic Mitigation sites, circa 120ha, identified on the Policies Map, represent those sites which have been identified to deliver appropriate mitigation which will address the adverse impacts of development within the Mitigation Zone at a strategic level. The identified Mitigation Sites will be safeguarded against development, and appropriate habitat will be delivered and managed on these sites in accordance with the North East Lincolnshire South Humber Gateway Ecological Mitigation Delivery Plan. 3. Development proposals on greenfield land within the Mitigation Zone will be required to make contributions towards the provision and management of the mitigation sites identified on the Policies Map. Where landowners have contributed to the implementation strategy through the donation of land, the required contribution will be reduced by an equivalent value. 5. All other planning requirement will also be expected to be met. 6. On an exceptional basis independent alternative mitigation proposals should be supported by evidence that demonstrates that the alternative mitigation contributes to the overall mitigation strategy and ensures that the development avoids adverse effects on the integrity of the SPA/Ramsar site, alone or in combination. It will be a requirement of any planning consent that mitigation is implemented prior to the commencement of development.	The potential effects of the Proposed Development on biodiversity and ecology are assessed in Chapter 6: Ecology and Biodiversity of the ES [EN070008/APP/6.2.6]. Wherever possible, mitigation measures have been embedded into the design of the Proposed Development to avoid sensitive ecological features, for example through careful routeing to avoid sensitive habitats such as ancient woodland and veteran trees. Where it is not possible to avoid adverse effects, additional mitigation is proposed. A Draft CEMP is provided in Appendix 3-1 of the ES [EN070008/APP/6.4.3.1] which aims to reduce any adverse effects upon designated sites and habitats. With the application of these further mitigation measures which will be secured as a requirement of the Order, no significant adverse residual effects are anticipated during construction relating to ecology and biodiversity. The Applicant has prepared a Report to Inform the Habitat Regulations Assessment (HRA) [EN070008/APP/6.5] for the Proposed Development. The HRA considers the potentialimpact of the Proposed Development on European sites of biodiversity value. The HRAcontains an Appropriate Assessment which confirms that the Proposed Developmentwould not adversely affect the integrity of any European protected sites in the studyarea.
Policy 11: Skills and training	The Council will support development proposals that relate directly to the development of local skills, and training opportunities, focusing on existing facilities and town centre locations.	Chapter 16: Socio-economics of the ES [EN070008/APP/6.2.16] estimates that the Proposed Development will create approximately 197 new jobs into the local workforce also acknowledging the potential for the creation of training and upskilling opportunities, including apprenticeships, during the construction phase.
Policy 22: Good design in new developments	1. A high standard of sustainable design is required in all developments. The Council will expect the design approach of each development to be informed by: A. a thorough consideration of the particular site's context (built and natural environment, and social and physical characteristics); B. the need to achieve: i. protection and enhancement of natural assets; ii. resource efficiency; iii. climate change resilience; iv. Sustainable transport; v. accessibility and social inclusion; vi. crime and fear of crime reduction; vii. Protection and enhancement of heritage assets, including character and local distinctiveness;	The design evolution of the Proposed Development has been informed by environmental assessments, engineering considerations, stakeholder feedback and through the consultation exercises undertaken. These have considered site context, existing features within and adjacent to the Order Limits, nearby sensitive receptors and assets, consultation responses and access considerations to develop a design that balances the need to maximise the most efficient route with avoidance and mitigation of impacts and provision of environmental and other enhancements. Chapter 2: Design Evolution and Alternatives of the ES [EN070008/APP/6.2.2] details the design process undertaken. The design development process included the identification of mitigation commitments, both for mitigation embedded in the design and good practice mitigation. The route of the pipeline has been influenced by the desire to reduce potential likely effects on

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viii. high quality public realm: and.

- ix. efficient use of land.
- C. Design guidance for North East Lincolnshire published by the Council; and,
- D. where applicable and relevant:
- i. the objectives and expectations of the Lincolnshire Wolds Area of Outstanding Natural Beauty Management Plan 2013-2018 (and any subsequent updates).
 - ii. Landscape Character Assessment: and.
 - iii. Conservation Area Appraisals.
- 2. Where a Design and Access Statement is required, this should describe the specific considerations and rationale on which design proposals have been based.
- 3. Incorporation of elements of public art that serve to enrich the wider area will be encouraged in the development of sites within or adjoining prominent public locations. or sites which have significance in terms of local heritage.
- 4. Proposals for express consent to display advertisements will be permitted if the proposal respects the interest of amenity and public safety, taking account of cumulative impacts.

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communities, for example, the route seeks to limit adverse impacts on habitats, historic receptors and residential buildings.

The Planning Design and Access Statement [EN070008/APP/7.1] details how the location, layout and physical design of the Proposed Development has evolved and taken account of the existing environmental, physical and committed development constraints.

Policy 31: Renewable and low carbon infrastructure

- 1. The Council will support opportunities to maximise renewable energy capacity within The Proposed Development contributes directly to the UK's transition to a low carbon the Borough and seeks to deliver at least 75MW of installed grid-connected renewable energy by 2032.
- 2. Proposals for renewable and low carbon energy generating systems will be supported where any significant adverse impacts are satisfactorily minimised and the residual harm is outweighed by the public benefits of the proposal. Developments and their associated infrastructure will be assessed on their merits and subject to the following impact considerations, taking account of individual and cumulative effects:
 - A, the scale and nature of the impacts on landscapes and townscapes, particularly having regard to the Landscape Character Assessment and impact on the setting and scenic beauty of the AONB:
 - B. local amenity, including noise, air quality, traffic, vibration, dust and visual
 - C. biodiversity, geodiversity and nature conservation, with regard given to the findings of the site and project specific HRA and potential impacts on SPA birds. where appropriate:
 - D. the historic environment, including individual and groups of heritage assets;
 - E. telecommunications and other networks; including the need for additional cabling to connect to the National Grid, electromagnetic production and interference, and aeronautical impacts such as on radar systems:
 - F. highway safety and network capacity;
 - G. increasing the risk of flooding; and,
 - H, the land, including land stability, contamination, soils resources and loss of agricultural land.
- 3. Where appropriate, proposals should include provision for decommissioning at the end of their operational life. Where decommissioning is necessary the site should be restored, with minimal adverse impact on amenity, landscape and biodiversity, and opportunities taken for enhancement of these features.

economy. This is highlighted by the Government's need for CCS projects and the designation of the Humber region as a track 2 cluster, with the aim of decarbonising the region. The Proposed Development provides an opportunity to decarbonise the energy generating stations that use fossil fuel.

The Application is informed by an ES which assesses a range of the likely environmental effects of the Proposed Development. Where potential adverse effects cannot be mitigated through design and embedded mitigation measures incorporated into the design of the Proposed Development, further mitigation measures have been included within supporting documents such as the draft CEMP. These measures seek to help reduce the environmental effects of the Proposed Development and will be secured as requirements of the Order.

The potential adverse effects of the Proposed Development are outlined in the topic specific section of Chapter 7 of the PDAS and appendix C [EN070008/APP/7.1].

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- 4. Proposals for onshore wind energy development will be permitted if: A. the development site is located in one of the following identified broad areas:
- Flat Open Farmland south of the settlements of Humberston, New Waltham and Waltham:
- **Wooded Open Farmland** east of the A18, and east and west of the A1173;
- Open Farmland along the A180 corridor; and,
- Industrial Landscape to the north west and south east of Immingham, and within the South Humber Bank employment zone: or. B. located in an area that is identified as potentially suitable for wind energy development in an adopted Neighbourhood Plan; and,
 - C. demonstrate that the impacts identified through consultation with the local community have been satisfactorily addressed.

- Policy 33: Flood Risk 1. Development proposals should have regard to the requirements of the flood risk sequential test and, if necessary, the exception test. The regeneration benefits of development in areas of high flood risk should also be considered in light of the Council's Guidance Note on the application of the Sequential and Exception Tests in North East Lincolnshire, and the Environment Agency's Standing Advice.
 - 2. In order to minimise flood risk impacts and mitigate against the likely effects of climate change, development proposals should demonstrate that:
 - A. where appropriate, a site specific flood risk assessment has been undertaken, which takes account of the best available information related to all potential forms of
 - B. there is no unacceptable increased risk of flooding to the development site or to existing properties;
 - C. the development will be safe during its lifetime:
 - D. Sustainable Drainage Systems (SuDS) have been incorporated into the development unless their use has been deemed inappropriate;
 - E. opportunities to provide natural flood management and mitigation through green infrastructure have been assessed and justified, based upon sound evidence, and, where appropriate, incorporated, particularly in combination with delivery of other aspects of green infrastructure in an integrated approach across the site;
 - F. arrangements for the adoption, maintenance and management of any mitigation measures have been established and the necessary agreements are in place: G. access to any watercourse or flood defence asset for maintenance, clearance, repair or replacement is not adversely affected; and,
 - H. the restoration, improvement or provision of additional flood defence infrastructure represents an appropriate response to local flood risk and does not conflict with other Plan policies.

Chapter 11 of the ES: Water Environment [EN070008/APP/6.2.11] and its associated appendices (including Appendix 11-4: Flood Risk Assessment) assess the likely significant effects of the Proposed Development on Water Resources and Flood Risk.

Assessments of groundwater and surface water quality and resource, fluvial geomorphology and flood risk have been carried out in order to identify the potential significant effects associated with the construction, operation and decommissioning of the Proposed Development on potentially sensitive receptors.

The pipeline route was selected and designed to reduce the impact on flood risk, avoiding flood zone 2 and 3 areas where possible. However, it has been necessary to locate the Immingham Facility and Theddlethorpe Facility in an area of Flood Zone 3 to be suitably located to emitters and the existing LOGGS pipeline respectively.

The Sequential Test included in the FRA was carried out to assess the flood risk for the Proposed Development and to direct it to areas of lowest probability of flooding (flood zone 1) where possible. Elements of the Proposed Development including the Immingham Facility, Theddlethorpe Facility and sections of the pipeline are located in Flood Zones 2 & 3. The Proposed Development is classed as 'Essential Infrastructure' which is considered acceptable in the Flood Zones 1 and 2 and also in Flood Zone 3 where the requirements of an Exception Test are met.

The FRA demonstrates how risk (for each phase of development) is managed to ensure that the development remains safe and operational throughout its lifetime, taking climate change into account, without increasing flood risk elsewhere and where possible reducing flood risk overall. The FRA recommends appropriate mitigation measures including flood resilience techniques.

Construction flood mitigation measures have been described within the Draft CEMP in ES appendix 3-1 [EN070008/APP/6.3] and mitigation with regards to facilities remaining operational during times of flood has been considered within the FRA.

Policy 34: Water Management

1. Development proposals that have the potential to impact on surface and ground water should consider the objectives and programme of measures set out in the Humber River Basin Management Plan.

Chapter 11: Water Environment of the ES [EN070008/APP/6.2.11] and its relevant appendices make assessment of the possible significant effects of the Proposed Development on water resources and flood risk.

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2. Development proposals should consider how water will be used on the site and ensure that appropriate methods for management are incorporated into the design. Development proposals should demonstrate that:

A. adequate and sustainable water supplies are available to support the development

B. provisions are made for the efficient use of water, including is reuse and recycling. Proposals for residential development will be expected to demonstrate that a water efficiency standard of 110 litres per person per day can be achieved; and.

C. adequate foul water treatment already exists or can be provided in time to serve the development. Appropriate and sustainable sewerage systems should be provided for the collection and treatment of foul and surface water to ensure new development does not overload the existing sewerage infrastructure, minimising the need to discharge water into sewers, particularly combined sewers.

3. Where development is proposed within a Source Protection Zone, the potential for any risk to groundwater resources and groundwater guality must be assessed and it must be demonstrated that these would be protected throughout the construction and operational phase of development.

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During the construction phase, there is a risk of pollution to surface water from activities involving polluting substances such as fuels, concrete and chemicals, along with disturbance of soil during earthworks. During construction, standard pollution prevention and construction best practice would be adopted to mitigate potential impacts upon the water environment where required and reasonably practicable. Such measures are included in a Draft CEMP in appendix 3-1 of the ES [EN070008/APP/6.4] To inform the ES Chapter 11: Water Environment [EN070008/APP/6.2], consultation has taken place with key stakeholders such as the Environment Agency, Natural England, Canals and Rivers Trust.

and enhancing the historic environment

- Policy 39: Conserving 1. Proposals for development will be permitted where they would sustain the cultural distinctiveness and significance of North East Lincolnshire's historic urban, rural and coastal environment by protecting, preserving and, where appropriate, enhancing the character, appearance, significance and historic value of designated and nondesignated heritage assets and their settings.
 - 2. In addition, the Council will pursue an integrated approach that:
 - A. seeks to update existing Conservation Area Appraisals and Management Plans to identify the qualities and interests of each area and management guidelines to guide future development:

B. takes a positive and proactive approach to addressing Heritage at Risk (including those assets on the national and local Heritage at Risk Registers), where necessary using statutory powers to undertake enforcement action where there is identified harm. immediate threat or serious risk to the preservation of a heritage assets:

C. considers the use of Article 4 Directions to remove permitted development rights in all or part of conservation areas or on local list assets where there is evidence that important features are at risk of being degraded:

D. supports the development of Listed Building Heritage Partnership Agreements. where appropriate;

E. supports heritage-led regeneration:

F. encourages sympathetic uses, and repair, maintenance and restoration of heritage assets: and.

G. considers the use of Local Listed Building Consent Orders.

3. Development will be supported, and planning permission granted, where proposals: A. protect the significance of heritage assets, including their setting; through consideration of scale, design, materials, siting, mass, use and views;

B. conserve and, where appropriate, enhance other historic landscape and townscape features, including historic shop fronts;

The design of the Proposed Development has been selected to reduce the impact on the historic environment by avoiding where practicable designated heritage assets.

Non-designated and designated heritage assets have been included in the environmental impact assessment and assessed against its value based on professional judgements informed by guidance and national policy.

Chapter 8: Historic Environment [EN070008/APP/6.2.8] of the ES assess the effects during the construction, operation and decommissioning phase of development. Embedded mitigation measures have been incorporated into the design process of the Proposed Development and where required further mitigation measures are presented within the Draft CEMP [EN070008/APP/6.4].

The historic environment assessment has identified likely significant residual effects on non-designated buried archaeological remains at one site due to construction of the pipeline, at Section 5 - cropmark enclosures at Theddlethorpe, Likely significant residual effects on three designated heritage assets comprising, the grade II* listed Church of St Edmund in Riby, the grade II listed Ashleigh Farm at Theddlethorpe, and the grade II listed Manor House and non-designated former parkland at Barnoldby le Beck have been identified during the construction phase.

Where impacts cannot be avoided, mitigation will take the form of archaeological investigation and recording, to be undertaken as advanced works. A detailed archaeological mitigation strategy will be developed and agreed during Examination.

Operation of the Theddlethorpe Facility would have significant residual effects on the setting of one designated heritage asset (the grade II listed Ashleigh Farm). This effect is assessed as Moderate adverse and would be permanent during the operational

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C. preserve and enhance the special character and architectural appearance of Conservation Areas, especially those positive elements in any Conservation Area Appraisal:

D. conserve and, where appropriate, enhance the design, character appearance and historic significance of the Borough's only registered park and garden (Peoples Park, Grimsby);

E. make appropriate provision to record, and where possible preserve in situ features of archaeological significance; and,

F. captures opportunities to increase knowledge and access to local heritage assets and better reveal their significance.

4. Where a development proposal would affect the significance of a heritage asset (whether designated or non-designated), including any contribution made to its setting, it should be informed by proportionate historic environment assessments and evaluations (such as heritage impact assessments, desk based appraisals, field evaluation and historic building reports) that:

A. identify all heritage assets likely to be affected by the proposal:

B. explain the nature and degree of any effect on elements that contribute to their significance and demonstrating how, in order of preference, any harm will be avoided, minimised or mitigated:

C. provide a clear explanation and justification for the proposal in order for the harm to be weighed against public benefits; and,

D. demonstrate that all reasonable efforts have been made to sustain the existing use, find new uses, or mitigate the extent of the harm to the significance of the asset; and whether the works proposed are the minimum required to secure the long-term use of the asset.

5. The Council will assess each application individually in terms of the magnitude of impact of any change on the significance of the asset or the contribution that setting makes to that significance or experiencing significance. Where an impact equates to substantial loss of significance (demolition in the case of direct harm or the effective destruction of an asset's setting in the case of indirect harm), a proposal will be considered to cause substantial harm. Permission will only be granted where substantial harm to assets of the highest significance is wholly exceptional, and for all other nationally designated assets, exceptional.

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lifetime of the Proposed Development. Decommissioning of the Theddlethorpe Facility would reverse this effect and reinstate the existing baseline conditions. Residual effects on other built heritage assets due to operation and decommissioning of the Proposed Development are assessed as Minor or Negligible adverse: these temporary effects are not considered to be significant.

It is considered that the benefits of the Proposed Development to the public and the wider community outweigh any harm to designated and non-designated heritage assets. These benefits include that the Proposed Development will help the government to achieve its target for Net Zero by 2050, reduce greenhouse gas emissions, provide low carbon energy supplies, retain existing employment at local industry and generate new investment in the region.

It is assessed that the operation and decommissioning phases of the Proposed Development would not result in any additional significant effects on buried archaeological remains.

Policy 40: Developing a green infrastructure network

1. Development will be expected to maintain and improve the network of green infrastructure. Appropriate opportunities should be taken to improve the overall connectivity of green spaces, including improvements to access to the countryside and permeability of the urban area, for pedestrians, cyclists and horse riders. Recognition should also be made to the role such green infrastructure plays in mitigating the effects of recreational pressure on the Humber Estuary SAC/SPA/Ramsar, specifically designing natural green space which is attractive to walkers and dog walkers, particularly in areas where development is most likely to result in increasing visitors to the Humber Estuary SCA/SPA/Ramsar

2. Proposals that would result in the loss or reduction in quality or existing public rights of way (PROWs) will not be permitted unless acceptable equivalent alternative

Chapter 16: Socio-Economic of the ES [EN070008/APP/6.2] assesses the likely significant effects of the Proposed Development on socio-economics, the chapter considers effects on employment and the local economy, users' recreational routes and PRoW, community severance and private assets. Chapter 16: Socio-Economics [EN070008/APP/6.2] acknowledges that no recreational routes or ProW will be permanently redirected during the construction phase of the Proposed Development. Any temporary diversions will be reinstated to the original route on the completion of the construction works. This disruption will be avoided as much as possible and suitable diversions or temporary closures will be agreed with the relevant Local Authority in advance.

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Policy 41: Biodiversity and Geodiversity

provision is made. Where diversions are proposed, these should be convenient and attractive to users and not increase disturbance on protected wildlife sites.

1. The Council will have regard to biodiversity and geodiversity when considering

- development proposals, seeking specifically to:

 A. establish and secure appropriate management of, long-term mitigation areas within the Estuary Employment Zone, managed specifically to protect the integrity of the internationally important biodiversity sites (see Policy 9 Habitat Mitigation South Humber Bank'):
 - B. designate Local Wildlife Sites (LWSs) and Local Geological Sites (LGSs) in recognition of particular wildlife and geological value:
 - C. protect manage and enhance international, national and local sites of biological and geological conservation importance, having regard to the hierarchy of designated sites, and the need for appropriate buffer zones;
 - D. minimise the loss of biodiversity features, or where loss is unavoidable and justified ensure appropriate mitigation and compensation measures are provided; E. create opportunities to retain, protect, restore and enhance features of biodiversity value, including priority habitats and species; and,
 - F. take opportunities to retain, protect and restore the connectivity between components of the Borough's ecological network.
- 2. Any development which would, either individually or cumulatively, result in significant harm to biodiversity which cannot be avoided, adequately mitigated or as a last resort compensated for, will be refused.

The route of the Proposed Development has been designed to reduce the potential for significant adverse effects where possible on biodiversity. Where biodiversity may be affected by the development, mitigation measures have been set out within the Application supporting documents such as the draft CEMP appendix 3-1 of the ES [EN070008/APP/6.4.3.1]., these additional mitigation measures will be secured as a requirement of the Order and seek to reduce the effect of the Proposed Development.

The Application is supported by a Report to Inform the HRA **[EN070008/APP/6.5]**. The assessment was progressed to the Appropriate Assessment stage where it was concluded that there would be no adverse effects from the ProposedDevelopment on the integrity of European designated sites.

The Proposed Development has been sensitively designed to minimise the loss or biodiversity features and to avoid ancient woodland and veteran trees. The Applicant recognises the importance of BNG and has made a voluntary commitment to deliver up to a 10% net gain in biodiversity relating to the permanent habitat loss at the above ground facilities (the Immingham Facility, Block Valve Stations and Theddlethorpe Facility, including permanent accesses.

The potential effects of the Proposed Development on biodiversity and ecology are assessed in Chapter 6: Ecology and Biodiversity of the ES [EN070008/APP/6.2].

Policy 42: Landscape

- 1. Landscape character should be given due consideration in the nature, location, design and implementation of development proposals. Developers should:
- A. have regard to the landscape context and type within which the development is to be located, (as identified in the Landscape Character Assessment); considering the landscape guidelines and management strategies relevant to the prevalent landscape type. Priority will be given to the protection and enhancement of the landscape character and natural beauty, and setting of the Lincolnshire Wolds Area of Outstanding Natural Beauty (AONB);
- B. complete a site specific landscape appraisal, proportionate to the anticipated scale and impact of a proposal, and submit a landscaping scheme for all development where this is appropriate, which complements the character and appearance of the site, responds to landscape character, climate change and flood alleviation where appropriate, and improves local biodiversity and levels of amenity:
- C. seek opportunities, when incorporating landscape buffers to offset development impacts, to enhance landscape quality including opportunities to incorporate suitable landscape planting;
- D. retain and protect trees and hedgerows which offer value for amenity, biodiversity and landscape; and
- E. take opportunities where appropriate, to retain, protect and restore elements that contribute to historic landscape character

Where feasible, the route has been designed to avoid sensitive areas. The preferred route was determined to be the most suitable based on the cumulative impacts on the physical environment and local communities.

A Landscape and Visual Impact Assessment (LVIA) has been prepared to support the assessment of relevant impacts and is included at Chapter 7: Landscape and Visual of the ES [EN070008/APP/6.2.7]. As the proposed pipeline would be buried and not affect landscape character, operational phase effects associated with the pipeline are scoped out of the LVIA. The LVIA confirms that the pipeline passes through the AONB and close to an area identified as an Area of Great Landscape Value (AGLV) within the western part of the pipeline route.

It is confirmed in Chapter 7 that the main impact on landscape takes place during the construction phase of the Proposed Development. The main potential impacts relating to construction include changes to views through the addition of detracting visual features associated with the construction process. This would result in short-term significant adverse effects at four representative viewpoints. Short term significant visual effects for the construction phase would be limited to highly sensitive viewpoints located in close proximity to the pipeline route.

Embedded mitigation measures have been incorporated into the design to reduce the likely effects. This includes siting and routing selection, construction management, and landscape design measures. Although the mitigation measures set out would assist in reducing the impacts at the identified locations, the reduction would be insufficient to reduce the impact rating and therefore effects to below significant levels.

Policy Reference Relevant Policy Text: Requirement of the Policy

Policy 44: Safeguarding minerals and related infrastructure

- The Council will safeguard mineral deposits of sand and gravel, and blown sand (silica sand) within the identified Minerals Safeguarding Areas identified on the Policies Map (Minerals Safeguarding Areas).
- 2. Prior extraction of mineral should take place, unless it is not feasible or environmentally acceptable to extract the mineral.
- 3. Non-mineral development proposals within, or adjacent to Minerals Safeguarding Areas which do not allow for the prior extraction, will be permitted where:
 - A. the need for the development outweighs the need to safeguard the site for future mineral extraction;
 - B. the mineral is proven to not be present, not of a quality or quantity to justify its extraction, or too deep to allow for extraction; or
 - C. the proposed development is temporary in nature and would not prevent minerals extraction taking place in the future.
- 4. This Policy would not apply to the following:
 - A. applications for household development or applications to extend existing commercial premises:
 - B. minor developments and 'infill' schemes: or.
 - C. applications for Listed Buildings Consent, Advertisement Consents, Tree Works, Prior Notifications, or Certificates of Lawfulness of Existing or Proposed Use of Development.
- 5. Within Minerals Safeguarding Areas, non-mineral development, with the exception of the development set out above, will not be permitted until the developer has provided evidence to the Council to determine whether the mineral is feasible and viable to extract ahead of development. Where prior extraction can be undertaken, the developer should provide an explanation of how this will be carried out as part of the overall development.
- 6. Significant existing and planned infrastructure identified on the Policies Map, that supports the supply of minerals in the Borough will be safeguarded against development that would unnecessarily sterilise or prejudice its use, including development of incompatible land uses nearby. This includes strategic rail freight links, sites for concrete batching, manufacture of coated materials and concrete products, and sites associated with the handling, processing, and distribution of substitute, recycled and secondary aggregate material. Development that may sterilise or prejudice the operation of the safeguarded site will not be permitted unless: A. an alternative site is available upon which the safeguarded use can relocate to; or, B. it can be demonstrated that the infrastructure no longer meets the current or anticipated future needs.

Compliance Assessment: How the Proposed Development addresses the policy

With the incorporation of embedded design mitigation and additional mitigation, there would be short term, temporary significant effects on the Lincolnshire Wolds AONB during construction. Effects would reduce to not significant during operation and decommissioning.

The Proposed Development does not pass through any Safeguarded Mineral Sites (SMS). However, does pass through a Mineral Safeguarded Areas (MSA) for Sand and Gravel in North East Lincolnshire Council located in Sections 2 and 3 of the Order Limits. Chapter 18 of the ES concludes that there will be no significant effects anticipated in relation to material and waste.

A Mineral Assessment is provided in Chapter 7 of the Planning Design and Access Statement (PDAS) [EN070008/APP/7.1] which in summary outlines that MSAs are located throughout the western part of the North East Lincolnshire Council and cover both rural and urban areas. The MSAs are a record of the areas where sand and gravel reserves are present and generally cover small areas or longer narrow areas.

The presence of MSAs were considered when selecting the route for the pipeline, however it has not been possible to avoid all of the areas. Avoiding the MSA would in some instances necessitate moving the pipeline closer to urban areas, residential properties or environmental receptors.

There are no active mineral workings in North East Lincolnshire Council and a call for mineral sites during the preparation of the Local Plan did not yield any sites for allocation. Prior extraction of mineral is not considered to be feasible for the Proposed Development.

It is worthy of note that the pipeline would sterilise a narrow strip of land and mineral reserves in each MSA while the pipeline is constructed and operational. The mineral reserves could be extracted once the pipeline is no longer operational.

With regards to public rights of way, the applicant will put in place suitable diversions during the construction and operation of the Proposed Development.

It is considered that there is an overriding need for the Proposed Development to decarbonise industry, reduce greenhouse gas emissions associated with global warming and assist the government in achieving Net Zero by 2050.

The Proposed Development is linear in nature resulting in a narrow easement through a small part of each MSA. Mineral would be sterilised over a small area during the operational period for the Proposed Development and so is considered to have a negligible impact with respect to sterilisation of mineral resource.

D.3 East Lindsey District Council: Planning Policy Accordance

East Lindsey Local Plan Core Strategy, July 2018

Policy Reference

Relevant Policy Text: Requirement of the Policy

SP2: Sustainable Development

- 1. When considering development proposals the Council will take a positive approach that reflects the presumption in favour of sustainable development contained in the National Planning Policy Framework. It will always work proactively with applicants jointly to find solutions which mean that proposals can be approved wherever possible, and to secure development that improves the economic, social and environmental conditions in the area.
- 2. Planning applications that accord with the policies in this Local Plan (and, where relevant, with polices in neighbourhood plans) will be approved without delay, unless material considerations indicate otherwise; and
- Where there are no policies relevant to the application or relevant policies are out of date at the time of making the decision then the Council will grant permission unless.
- Any adverse impacts of granting permission would significantly and demonstrably outweigh the benefits, when assessed against the policies in the National Planning Policy Framework taken as a whole; or specific policies in that Framework indicate that development should be restricted.

Compliance Assessment: How the Proposed Development addresses policy

As part of their commitments to tackling climate change, the UK government has set legally binding targets to become net-zero in all greenhouse gases by 2050. In addition, the Government has shown clear commitment to developing Carbon Capture Usage and Storage (CCUS) infrastructure.

The Humber industrial cluster represents a unique emissions density within the UK, with decarbonisation of the Humber Energy Intensive Industry Cluster being required to meet the UK Government's legally binding target of achieving Net Zero by 2050. The wider Humber region will require multiple CO_2 storage options to promote greater onshore capture infrastructure development and underpin robust storage risk management through diversity of storage options.

The Proposed Development would support sustainable growth by providing an opportunity for inward investment into the region and a future low-carbon economy. The innovative technology proposed through the DCO will help the UK Government achieve energy diversity and provide resources for local and regional businesses.

The Proposed Development also supports sustainable development and environmental objectives by supporting the UK's transition to Net Zero by providing the infrastructure to contribute towards decarbonisation of the UK. It will also promote use of this technology, contributing to the delivery of similar developments and decarbonising the industrial sector. Through this employment opportunities will be generated, positively contributing to the socio-economic wellbeing of the surrounding area.

The design of the Proposed Development has taken into account local, regional and national policy and guidance on how development should be designed. The proposed design of the development constitutes innovative technology and design, that will promote and contribute to high levels of sustainable development.

SP10: Design

The Council will support well-designed sustainable development, which maintains and enhances the character of the District's towns, villages and countryside by:-

- 1. Where possible supporting the use of brownfield land for development, unless it is of high environmental value, seeking to use areas of poorer quality agricultural land in preference to that of a higher quality.
- 2. The use of high quality materials and where the layout, scale, massing, height and density reflect the character of the surrounding area.
- 3. Ensuring it is easy for everyone to get around by incorporating safe and attractive roads, cycleways and footways that enable people of all abilities to access shops, jobs, schools and other community facilities.
- 4. Providing on-site landscaping to integrate the development into its wider surroundings and make provision for open space.
- 5. Development will be supported if it is designed to minimise glare and light spillage, it does not unacceptably harm the rural or dark-sky character of a settlement or landscape

The design of the Proposed Development has evolved through a series of design iterations as outlined in Chapter 2: Design Evolution and Alternatives of the ES [EN070008/APP/6.2.2]. Design evolution has been informed by environmental assessments, engineering considerations, stakeholder feedback and through the consultation exercises undertaken. These have considered site context, existing features within and adjacent to the order limits, nearby sensitive receptors and assets, consultation responses and access considerations to develop a good design that balances the need to maximise the most efficient route with avoidance and mitigation of impacts and provision of environmental and other enhancements.

The design development process included the identification of mitigation commitments, both for mitigation embedded in the design and good practice mitigation. The route of the pipeline has been influenced by the desire to reduce potential likely effects on communities, for example, the route seeks to limit adverse impacts on habitats, historic receptors and residential buildings.

Policy Reference

Relevant Policy Text: Requirement of the Policy

or any nearby residential amenity; it respects the local historic environment; and it does not unacceptably harm or reduce the safety of highways, cycleways and footways.

6. The design of new and altered buildings or areas will be supported where they adequately take into account the safety and security of the users of the facilities both during the day and at night and that of neighbouring residents.

SP11: Historic Environment

- The Council will support proposals that secure the continued protection and enhancement of heritage assets in East Lindsey, contribute to the wider vitality and regeneration of the areas in which they are located and reinforce a strong sense of place.
- 2. Proposals will be supported where they:
- Preserve or enhance heritage assets and their setting;
- Preserve or enhance the special character, appearance and setting of the District's Conservation Areas. Proposals should take into account the significance of Conservation Areas including spaces, street patterns, views vistas and natural features, and reflect this in their layout, scale, design, detailing, and materials;
- Have particular regard to the special architectural or historic interest and setting of the District's Listed Buildings. Proposals will be expected to demonstrate that they are compatible with the significance of a listed building including fabric, form, setting and use:
- Do not harm the site or setting of a Scheduled Monument; any unscheduled nationally important or locally significant archaeological site. Appropriate evaluation, recording or preservation in situ is required and should be undertaken by a suitably qualified party:
- Preserve or enhance the quality and experience of the historic landscapes and woodland of the District and their setting;
- Are compatible with the significance of non-designated heritage assets in East Lindsey;
- Do not have a harmful cumulative impact on heritage assets;
- Promote a sustainable and viable use which is compatible with the fabric, interior, surroundings and setting of the heritage asset, and;
- Conserve heritage assets identified as being at risk, ensuring the optimum viable
 use of an asset is secured where it is consistent with the significance of the heritage
 asset. This may include redevelopment or enabling development, particularly where
 a use would benefit the wider.
- 3. The Council will support proposals for replacement shop fronts or alterations to shop fronts, including new signage, affecting heritage assets where it can be evidenced that retention and repair cannot be achieved and providing the materials and design protect and enhance the special interest of the building and its setting. Retention and repair of shop fronts will normally be expected where these contribute to the significance of a heritage asset.

Compliance Assessment: How the Proposed Development addresses policy

Where feasible brownfield land has been used, including for the Immingham Facility and Theddlethorpe Facility option 1. The materials used in the design are high quality and used to provide a functional, safe and sustainable pipeline and above ground facilities. Landscaping will be provided around the perimeter of the above ground facilities that are located in rural areas. This includes the Block Valve Stations and Theddlethorpe Facility Option 2.

The pipeline route of the Proposed Development has been selected to reduce the impact on the historic environment by avoiding where practicable designated heritage assets.

Chapter 8: Historic Environment [EN070008/APP/6.2.8] of the ES assess the effects during the construction, operation and decommissioning phase of development. Embedded mitigation measures have been incorporated into the design process of the Proposed Development and where required further mitigation measures are presented within the Draft CEMP [EN070008/APP/6.41.

The historic environment assessment has identified likely significant residual effects on non-designated buried archaeological remains at one site due to construction of the pipeline, at Section 5 – cropmark enclosures at Theddlethorpe.

The historic environment assessment has identified likely significant residual effects on three designated heritage assets, the grade II* listed Church of St Edmund in Riby, the grade II listed Ashleigh Farm at Theddlethorpe, and the grade II listed Manor House and non-designated former parkland at Barnoldby le Beck due to construction of the pipeline.

Where impacts cannot be avoided, mitigation will take the form of archaeological investigation and recording, to be undertaken as advanced works. A detailed archaeological mitigation strategy will be developed and agreed during Examination.

Policy Reference

Relevant Policy Text: Requirement of the Policy

SP16: Inland Flood Risk

- 1. The Council will support development for business, leisure and commercial uses in areas of inland flood risk where it can be demonstrated that accommodating the development on a sequentially safer site would undermine the overall commercial integrity of the existing area. Such developments must incorporate flood mitigation measures in their design.
- 2. The Council will support housing in areas of inland flood risk, providing all the following criteria are complied with:
- A site is in need of regeneration and is not suitable for a business, leisure and commercial use.
- The site is brownfield and has become empty, buildings have become disused and run down or a combination of both.
- Applications should evidence that they have tried to develop/market sites for a business, leisure or commercial use, this includes active marketing for a minimum of 12 months.
- 3. Brownfield sites in towns, large villages, medium and small villages that are only partly in areas of flood risk will be supported for housing providing that the development takes place on the area of low flood risk and does not conflict with any other policies for town centre development in this plan.
- 4. Any housing development in areas of inland flood risk should not have ground floor sleeping accommodation unless it can be demonstrated that flood mitigation measures can be incorporated into its design.
- 5. The Council will not support development in identified flood storage areas.
- 6. All new development must show how it proposes to provide adequate surface water disposal, including avoiding impacting on surface water flow routes or ordinary watercourses. The Council will expect this to involve the use of Sustainable Urban Drainage Systems along with other appropriate design features, including the retention of any existing water features on a site.
- 7. Surface water connections to the combined or surface water system should only be made in exceptional circumstances where it can be demonstrated that there are no feasible alternatives and where there is no detriment to existing users.
- 8. The Council will support development that demonstrates an integrated approach to sustainable drainage that has positive gains to the natural environment.
- 9. All new development must show how it can provide adequate foul water treatment and disposal or that it can be provided in time to serve the development.
- 10. The Council will support improvements to the existing flood defences, the creation of new flood defences, infrastructure associated with emergency planning, washlands and flood storage areas.
- 11. Where required by national planning policy development proposals in areas at risk of flooding must be accompanied by a site-specific flood risk assessment.

Compliance Assessment: How the Proposed Development addresses policy

Chapter 11 of the ES: Water Environment [EN070008/APP/6.2.11] and its relevant appendices make assessment of the possible significant effects of the Proposed Development on water resources and flood risk. The majority of the Proposed Development is located in low flood risk areas (Flood Zone 1) due to the linear nature of the pipeline and need to connect the Immingham Area with Theddlethorpe some elements of the Proposed Development are located in medium and high-risk areas (flood zones 2 and 3) associated with watercourses.

The pipeline route was selected and designed to reduce the impact on flood risk, avoiding flood zone 2 and 3 areas where possible. However, it has been necessary to locate the Immingham Facility and Theddlethorpe Facility in an area of Flood Zone 3 to be suitably located to emitters and the existing LOGGS pipeline respectively.

A Flood Risk Assessment is included within appendix 11-5 of the ES **[EN070008/APP/6.4.11.5]**. The FRA demonstrates how risk (for each phase of development) is managed to ensure that the development remains safe and operational throughout its lifetime, taking climate change into account, without increasing flood risk elsewhere and where possible reducing flood risk overall. The FRA recommends appropriate mitigation measures including flood resilience techniques.

Construction flood mitigation measures have been described within the draft CEMP in ES appendix 3-1 [EN070008/APP/6.3] and mitigation with regards to facilities remaining operational during times of flood has been considered within the FRA. The effects of Climate change and climate change adaption has been considered throughout the design and selection process for the proposed route and when considering how it will be constructed and operated.

The Sequential Test included in the FRA was carried out to assess the flood risk for the Proposed Development and to direct it to areas of lowest probability of flooding (flood zone 1) where possible. Elements of the Proposed Development including the Immingham Facility, Theddlethorpe Facility and sections of the pipeline are located in Flood Zones 2 & 3. The Proposed Development is classed as 'Essential Infrastructure' which is considered to be acceptable in the Flood Zones 1 and 2 and also in Flood Zone 3 where the requirements of an Exception Test are met.

SP17: Coastal East Lindsey

The Coastal Policy applies to the following settlements: Addlethorpe, Anderby, Chapel St Leonards, Croft, Ingoldmells, Mablethorpe, New Leake, North Cotes, North Somercotes, Saltfleetby All Saints, Saltfleetby St Clements, Saltfleetby St Peter, Skegness, Skidbrook cum Saltfleet, South Somercotes, Sutton on Sea, Theddlethorpe All Saints. Theddlethorpe St Helen and Trusthorpe.

SP17 applies to Theddlethorpe, the location of the former Theddlethorpe Gas Terminal, where the proposed Pipeline will connect to the LOGGS. The Proposed Development will provide employment opportunities and contribute directly to the local economy through providing infrastructure that will contribute towards the needs of the local community.

Policy Reference

Relevant Policy Text: Requirement of the Policy

- The Council will give a high priority to development that extends and diversifies allyear round employment opportunities, contributes directly to the local economy, infrastructure or extends and diversifies the tourism market.
- 2. The Council will support improvements to the existing flood defences, the creation of new flood defences and infrastructure associated with emergency planning.
- 3. New and replacement community buildings will be supported, providing they are located within or adjoining an existing settlement.
- 4. Development will need to demonstrate that it satisfies the Sequential and Exception Test as set out in Annex 2 of this Plan.
- 5. All relevant development will need to provide adequate flood mitigation.

Socio-Economics of the ES **[EN070008/APP/6.2.16]** acknowledges that although the construction period is temporary the construction of the Proposed Development will require 197 full-time equivalent construction jobs on site per day over the period. The assessment considers the effects of whether these positions will be taken up by local residents.

Compliance Assessment: How the Proposed Development addresses policy

The Application is supported by a FRA included as Appendix 11-5 to the ES **[EN070008/APP/6.4.11.5]**. The FRA demonstrates how risk (for each phase) is managed toensure that the development remains safe and operational throughout its lifetime, taking climate change into account, without increasing flood risk elsewhere and where possible reducing flood risk overall. The FRA recommends appropriate mitigation measures including flood resilience techniques.

The Sequential Test included in the FRA was carried out to assess the flood risk for the Proposed Development and to direct it to areas of lowest probability of flooding (flood zone 1) where possible. Elements of the Proposed Development including the Immingham Facility, Theddlethorpe Facility and sections of the pipeline are located in Flood Zones 2 & 3. The Proposed Development is classed as 'Essential Infrastructure' which is considered to be acceptable in the Flood Zones 1 and 2 and also in Flood Zone 3 where the requirements of an Exception Test are met.

SP23: Landscape

- 1. The District's landscapes will be protected, enhanced, used and managed to provide an attractive and healthy working and living environment. Development will be guided by the District's Landscape Character Assessment and landscapes defined as highly sensitive will be afforded the greatest protection.
- 2. Development will be supported where it allows for greater public access to the countryside and naturalistic coast, supports visitors to the District and helps provide additional employment opportunities, provided this does not compromise landscape quality or the biodiversity objectives of the plan.
- 3. The Council will ensure that the distinctive character of the District's landscapes whether they are of cultural, natural or historic significance, will not be compromised. In particular, the highest level of protection will be given to the Lincolnshire Wolds Area of Outstanding Natural Beauty, which is designated at a national level because of its landscape quality.
- 4. The Council will support development that conserves and enhances designated and historic landscapes (Winceby Battlefield, Lincolnshire Wolds, Coastal Country Park, Conservation Areas, Historic Parks and Gardens, setting of listed buildings within the landscape) as focal points for widening and improving the visitor experience.

Chapter 7: Landscape and Visual of the ES [EN070008/APP/6.2.7] and its relevant appendices provide an assessment of the likely significant effects of the Proposed Development on landscape character and visual amenity.

It is confirmed by Chapter 7 and LVIA that the main impact on landscape takes place during the construction phase of the Proposed Development. The main potential impacts relating to construction include changes to views through the addition of detracting visual features associated with the construction process. This would result in short-term significant adverse effects at four representative viewpoints. Short term significant visual effects for the construction phase would be limited to highly sensitive viewpoints located in close proximity to the pipeline route.

Mitigation measures have been incorporated into the design to reduce any impact. This includes siting and routing, construction management, and landscape and design measures, with the Proposed Development designed to reduce the impact on the landscape where practicable. Although the measures set out would assist in reducing the impacts at the identified locations, the reduction would be insufficient to reduce the impact rating and therefore effects to below significant levels.

With the incorporation of embedded design mitigation and additional mitigation, there would be significant effects on the Lincolnshire Wolds AONB during construction. Effects would reduce to not significant during operation and decommissioning. The remaining landscape receptors will experience not significant effects during all stages of the Proposed Development. Whilst there are temporary significant impacts, the landscape and visual impact of the Proposed Development can be considered outweighed by the clear demonstrable benefits of the proposed national significant infrastructure.

Policy Reference

Relevant Policy Text: Requirement of the Policy

SP27: Renewable and Low Carbon Energy

- Large-scale renewable and low carbon energy development, development for the transmission and interconnection of electricity, and infrastructure required to support such development, will be supported where their individual or cumulative impact is, when weighed against the benefits, considered to be acceptable in relation to:
 a) residential amenity:
- b) surrounding landscape, townscape and historic landscape character, and visual qualities:
- c) the significance (including the setting) of a historic garden, park, battlefield, building, conservation area, archaeological site or other heritage asset:
- d) sites or features of biodiversity or geodiversity importance, or protected species;
- e) the local economy;
- f) highway safety; and
- g) water environment and water quality
- 2. Wind energy developments will be supported in the areas shown on the policies map, provided where their individual or cumulative impact is, when weighed against the benefits, considered to be acceptable in relation to the criteria a) to g) set out at Clause 1 above.
- 3. Development within or affecting the setting of the Lincolnshire Wolds Area of Outstanding Natural Beauty, and landscape areas defined as highly sensitive within the East Lindsey Landscape Character Assessment, will only be permitted in exceptional circumstances, where the development is in the public interest and considering the following:
- a) The need for the development, including any national considerations, and the impact of permitting it, or refusing it, upon the local economy; and
- b) the cost of, and scope for, developing elsewhere outside the designated area, or meeting the need for it in some other way; and
- c) any detrimental effect on the environment, the landscape and recreational opportunities, and the extent to which that could be satisfactorily moderated.
- 4. The presumption will be for connecting cables to be placed underground, or use made of existing or replacement infrastructure (of the same size and scale) along existing routes to carry any additional base load cabling.
- 5. Small scale and micro renewable energy development will be supported where their individual or cumulative impact, when weighed against the benefits, is not considered to have an unacceptable impact on residential amenity; the context and setting of any areas of cultural or historic importance or heritage assets; and local landscape character and visual qualities.

Compliance Assessment: How the Proposed Development addresses policy

The UK Government has committed to a legally binding target of achieving Net Zero by 2050. To meet this target, the UK needs to transition towards cleaner sources of energy, while decarbonising existing infrastructure. This is where carbon capture technology is set to play a crucial role.

The Proposed Development contributes directly to the UK's transition to a low carbon economy. This is highlighted by the Government's need for CCS projects and the designation of the Humber region as a track 2 cluster, with the aim of decarbonising the region. As part of their commitments to tackling climate change, the UK government has set legally binding targets to become net-zero in all greenhouse gases by 2050. In addition, the Government has shown clear commitment to developing Carbon Capture Usage and Storage (CCUS) infrastructure.

The Humber industrial cluster represents a unique emissions density within the UK, with decarbonisation of the Humber Energy Intensive Industry Cluster being required to meet the UK Government's legally binding target of achieving Net Zero by 2050. The wider Humber region will require multiple CO₂ storage options to promote greater onshore capture infrastructure development and underpin robust storage risk management through diversity of storage options.

The Proposed Development would support sustainable growth by providing an opportunity for inward investment into the region and a future low-carbon economy. The innovative technology proposed through the DCO will help the UK Government achieve energy diversity and provide resources for local and regional businesses.

The Needs Case [EN070008/APP/7.3] expands on this and establishes the need for Proposed Development and the wider Viking CCS project.

The Proposed Development also proposes appropriate mitigation to reduce adverse impacts. On landscape, historic character, socio economic factors, highway safety and the water environment. These are considered within the following ES chapters:

- Chapter 7: Landscape and Visual.
- Chapter 11: Water Environment.
- Chapter 12: Traffic and Transport
- Chapter 13: Noise and Vibration
- Chapter 14: Air Quality
- Chapter 16: Socio-economics
- Chapter 20: Cumulative Effects Assessment

D.4 West Lindsey District Council: Planning Policy Accordance

West Lindsey District Council: Adopted Central Lincolnshire Local Plan, April 2023

Policy Reference

Relevant Policy Text: Requirement of the Policy

Compliance Assessment: How the Proposed Development addresses the policy

Policy S11: Embodied Carbon All development should, where practical and viable, take opportunities to reduce the development's embodied carbon content, through the careful choice, use and sourcing of materials.

of materials.

Major development proposals:

All major development proposals should explicitly set out what opportunities to lower a building's embodied carbon content have been considered, and which opportunities, if any, are to be taken forward.

In the period to 31 December 2024, there will be no requirement (unless mandated by Government) to use any specific lower embodied carbon materials in development proposals, provided the applicant has at least demonstrated consideration of options and opportunities available.

From 1 January 2025, there will be a requirement for a development proposal to demonstrate how the design and building materials to be used have been informed by a consideration of embodied carbon, and that reasonable opportunities to minimise embodied carbon have been taken. Further guidance is anticipated to be issued by the local planning authorities on this matter prior to 1 January 2025.

The Viking CCS Project will transport CO₂ received at the Immingham Facility to store in depleted gas reservoirs in the Southern North Sea. The Viking CCS Project aims to transport and store up to 10 million tonnes of CO₂ annually by 2030, rising to 15 million tonnes by 2035.

The Wider Viking CCS Project will prevent those CO₂ emissions from being released into the atmosphere. CCS is recognised by the Intergovernmental Panel on Climate Change (IPCC) and the UK Government as a vital step on the road to achieving Net Zero carbon emissions.

Chapter 18: Materials and Waste of the ES **[EN070008/APP/6.2.18]** considers waste reduction and the use of materials during the construction phase. The Applicant has set targets for the recovery and reuse of materials along with other commitments in the construction of the Proposed Development which will reduce carbon emissions.

Policy S16: Wider Energy Infrastructure The Joint Committee is committed to supporting the transition to net zero carbon future and, in doing so, recognises and supports, in principle, the need for significant investment in new and upgraded energy infrastructure.

Where planning permission is needed from a Central Lincolnshire authority, support will be given to proposals which are necessary for, or form part of, the transition to a net zero carbon sub-region, which could include: energy storage facilities (such as battery storage or thermal storage); and upgraded or new electricity facilities (such as transmission facilities, sub-stations or other electricity infrastructure.

However, any such proposals should take all reasonable opportunities to mitigate any harm arising from such proposals, and take care to select not only appropriate locations for such facilities, but also design solutions (see Policy S53) which minimises harm arising.

The Humber industrial cluster represents a unique emissions density within the UK, with decarbonisation of the Humber Energy Intensive Industry Cluster being required to meet the UK Government's legally binding target of achieving Net Zero by 2050. The wider Humber region will require multiple CO₂ storage options to promote greater onshore capture infrastructure development and underpin robust storage risk management through diversity of storage options.

The Proposed Development would support sustainable growth by providing an opportunity for inward investment into the region and a future low-carbon economy. The innovative technology proposed through the DCO will help the UK Government achieve energy diversity and provide resources for local and regional businesses.

The Proposed Development also supports sustainable development and environmental objectives by supporting the UK's transition to Net Zero by providing the infrastructure to contribute towards decarbonisation of the UK. It will also promote use of this technology, contributing to the delivery of similar developments and decarbonising the industrial sector. Through this employment opportunities will be generated, positively contributing to the socio-economic wellbeing of the surrounding area.

Policy S20: Resilient Heat resilience and Adaptable Design

The design of the Proposed Development has evolved through a series of steps and design iterations. Design evolution has been informed by environmental assessments, engineering considerations, stakeholder feedback and through the consultation

Policy Reference

Relevant Policy Text: Requirement of the Policy

In order to prevent and minimise the impacts of overheating in the built environment, applicants must demonstrate, commensurate with the scale and location of the proposal, consideration of:

- 1. How the design of the development minimises overheating and reduces demand on air conditioning systems, including considering:
 - orienting buildings to maximise the opportunities for both natural heating and ventilation and to reduce wind exposure; and
 - ii. measures such as solar shading, thermal mass and appropriately coloured materials in areas exposed to direct and excessive sunlight;

In considering the above, the balance between solar gain versus solar shading will need to be carefully managed.

2. The potential to incorporate a green roof and/or walls to aid cooling, add insulation, assist water management and enhance biodiversity, wherever possible linking into a wider network of green infrastructure; unless such roof space is being utilised for photovoltaic or thermal solar panels; or on a whole life cycle basis, it is demonstrated that a lower specification roof has a significantly lower carbon impact than a green roof; or the nature of the development makes it impracticable to incorporate a green roof. Adaptable Design

Applicants should design proposals to be adaptable to future social, economic, technological and environmental requirements in order to make buildings both fit for purpose in the long term and to minimise future resource consumption in the adaptation and redevelopment of buildings in response to future needs. To meet this requirement, applicants should undertake the following, where applicable:

- 3. Allow for future adaptation or extension by means of the building's internal arrangement internal height, detailed design and construction, including the use of internal stud walls rather than solid walls to allow easier reconfiguration of internal layout. Residential proposals which meet, as a minimum, Building Regulations M4(2) (accessible and adaptable dwellings) standard would be deemed to have complied with this criterion:
- 4. Identification on floor plans of internal space with potential to accommodate 'home working': this may include bedrooms where there is more than 1 bedroom proposed;
- 5. Provision of electric car charging infrastructure (see Policy NS18);
- 6. Infrastructure that supports car free development and lifestyles;
- 7. Having multiple well-placed entrances on larger non-residential buildings to allow for easier subdivision; and
- 8. Is resilient to flood risk, from all forms of flooding (see Policy S21).

Policy S21: Flood Risk and Water Resources

Flood Risk

All development proposals will be considered against the NPPF, including application of the sequential and, if necessary, the exception test. Through appropriate consultation and option appraisal, development proposals should demonstrate:

 that they are informed by and take account of the best available information from all sources of flood risk and by site specific flood risk assessments where appropriate;

Compliance Assessment: How the Proposed Development addresses the policy

exercises undertaken. These have considered site context, existing features within and adjacent to the order limits, nearby sensitive receptors and assets, consultation responses and access considerations to develop a good design that balances the need to maximise the most efficient route with avoidance and mitigation of impacts and provision of environmental and other enhancements. Chapter 2: Design Evolution and Alternatives of the ES [EN070008/APP/6.2.2] details the design process undertaken.

Chapter 15: Climate Change of the ES **[EN070008/APP/6.2.15]** includes a climate change resilience assessment to understand the resilience of the Proposed Development to projected future climate change impacts, including damage to the Proposed Development caused by accidents resulting from climate change. Chapter 15 concludes that there are no significant impacts on climate change resulting from the laying of this pipeline. Generally, the use of the pipelines offers a more climate friendly transportation method on emissions, as the alternative would consist of more road transport. Environment Agency, Natural England.

Chapter 11 of the ES: Water Environment [EN070008/APP/6.2.11] and its associated appendices (including Appendix 11-4: Flood Risk Assessment) assess the likely significant effects of the Proposed Development on Water Resources and Flood Risk.

Assessments of groundwater and surface water quality and resource, fluvial geomorphology and flood risk have been carried out in order to identify the potential significant effects associated with the construction, operation and decommissioning of the Proposed Development on potentially sensitive receptors.

Policy Reference Relevant Policy Text: Requirement of the Policy

- b) that the development does not place itself or existing land or buildings at increased risk of flooding:
- that the development will be safe during its lifetime taking into account the impacts of climate change and will be resilient to flood risk from all forms of flooding such that in the event of a flood the development could be quickly brought back into use without significant refurbishment;
- that the development does not affect the integrity of existing flood defences and any necessary flood mitigation measures have been agreed with the relevant bodies, where adoption, ongoing maintenance and management have been considered and any necessary agreements are in place:
- how proposals have taken a positive approach to reducing overall flood risk and have considered the potential to contribute towards solutions for the wider area: and
- that they have incorporated Sustainable Drainage Systems (SuDS)/ be inappropriate.

Protecting the Water Environment

Development proposals that are likely to impact on surface or ground water should consider the requirements of the Water Framework Directive. Development proposals should demonstrate:

- that water is available to support the development proposed;
- that adequate mains foul water treatment and disposal already exists or can be provided in time to serve the development. Non mains foul sewage disposal solutions should only be considered where it can be shown to the satisfaction of the local planning authority that connection to a public sewer is not feasible:
- that they meet the Building Regulation water efficiency standard of 110 litres per occupier per day or the highest water efficiency standard that applies at the time of the planning application (see also Policy S12);
- that water reuse and recycling and rainwater harvesting measures have been incorporated wherever possible in order to reduce demand on mains water supply as part of an integrated approach to water management (see also Policy S11);
- that they have followed the surface water hierarchy for all proposals:
 - surface water runoff is collected for use:
 - ii. discharge into the ground via infiltration;
 - iii. discharge to a watercourse or other surface water body;
 - discharge to a surface water sewer, highway drain or other drainage system, discharging to a watercourse or other surface water body:
 - discharge to a combined sewer;
- that no surface water connections are made to the foul system;
- that surface water connections to the combined or surface water system are only made in exceptional circumstances where it can be demonstrated that

Compliance Assessment: How the Proposed Development addresses the policy

The pipeline route was selected and designed to reduce the impact on flood risk, avoiding flood zone 2 and 3 areas where possible. However, it has been necessary to locate the Immingham Facility and Theddlethorpe Facility in an area of Flood Zone 3 to be suitably located to emitters and the existing LOGGS pipeline respectively.

The Sequential Test included in the FRA was carried out to assess the flood risk for the Proposed Development and to direct it to areas of lowest probability of flooding (flood zone 1) where possible. Elements of the Proposed Development including the Immingham Facility, Theddlethorpe Facility and sections of the pipeline are located in Flood Zones 2 & 3. The Proposed Development is classed as 'Essential Infrastructure' which is considered to be acceptable in the Flood Zones 1 and 2 and also in Flood Zone 3 where the requirements of an Exception Test are met.

Construction flood mitigation measures have been described within the draft CEMP in Integrated Water Management into the proposals unless they can be shown to ES appendix 3-1 [EN070008/APP/6.3] and mitigation with regards to facilities remaining operational during times of flood has been considered within the FRA. The effects of Climate change and climate change adaption has been considered throughout the design and selection process for the proposed route and when considering how it will be constructed and operated.

Policy Reference

Relevant Policy Text: Requirement of the Policy

Compliance Assessment: How the Proposed Development addresses the policy

there are no feasible alternatives (this applies to new developments and redevelopments) and where there is no detriment to existing users;

- n) that no combined sewer overflows are created in areas served by combined sewers, and that foul and surface water flows are separated;
- that development contributes positively to the water environment and its ecology where possible and does not adversely affect surface and ground water quality in line with the requirements of the Water Framework Directive;
- that development with the potential to pose a risk to groundwater resources is not located in sensitive locations to meet the requirements of the Water Framework Directive;
- q) how Sustainable Drainage Systems (SuDS)/ Integrated Water Management to deliver improvements to water quality, the water environment and to improve amenity and biodiversity net gain wherever possible have been incorporated into the proposal unless they can be shown to be impractical:
- that relevant site investigations, risk assessments and necessary mitigation measures for source protection zones around boreholes, wells, springs and water courses have been agreed with the relevant bodies (e.g., the Environment Agency and relevant water companies).
- s) that suitable access is safeguarded for the maintenance of watercourses, water resources, flood defences and drainage infrastructure; and
- t) that adequate provision is made to safeguard the future maintenance of water bodies to which surface water and foul water treated on the site of the development is discharged, preferably by an appropriate authority (e.g., Environment Agency, Internal Drainage Board, Water Company, the Canal and River Trust or local Council).

In order to allow access for the maintenance of watercourses, development proposals that include or abut a watercourse should ensure no building, structure or immovable landscaping feature is included that will impede access within 8m of a watercourse, or within 16m of a tidal watercourse. Conditions may be included where relevant to ensure this access is maintained in perpetuity and may seek to ensure responsibility for maintenance of the watercourse including land ownership details up to and of the watercourse is clear and included in maintenance arrangements for future occupants.

Policy S53: Design and Amenity

All development, including extensions and alterations to existing buildings, must achieve high quality sustainable design that contributes positively to local character, landscape and townscape, and supports diversity, equality and access for all.

Good design will be at the centre of every development proposal, and this will be required to be demonstrated through evidence supporting planning applications to a degree proportionate to the proposal. Design Codes may be produced for parts of Central Lincolnshire or in support of specific developments. The approach taken in these Design Codes should be informed by the National Model Design Code and where these codes have been adopted, developments will be expected to adhere to the Code.

The design of the Proposed Development has evolved through a series of steps and design iterations. Design evolution has been informed by environmental assessments, engineering considerations, stakeholder feedback and through the consultation exercises undertaken. These have considered site context, existing features within and adjacent to the order limits, nearby sensitive receptors and assets, consultation responses and access considerations to develop a good design that balances the need to maximise the most efficient route with avoidance and mitigation of impacts and provision of environmental and other enhancements. Chapter 2: Design Evolution and Alternatives of the ES [EN070008/APP/6.2.2] details the design process undertaken.

The design development process included the identification of mitigation commitments, both for mitigation embedded in the design and also good practice mitigation. The route

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Proposals for new buildings should incorporate the Design Principles for Efficient Buildings in Policy S6 at the centre of design.

All development proposals will be assessed against and will be expected to meet the following r43elevant design and amenity criteria. All development proposals will:

1. Context

- a) Be based on a sound understanding of the context, integrating into the surroundings and responding to local history, culture and heritage;
- b) Relate well to the site, its local and wider context and existing characteristics including the retention of existing natural and historic features wherever possible and including appropriate landscape and boundary treatments to ensure that the development can be satisfactorily assimilated into the surrounding area;
- c) Protect any important local views into, out of or through the site;

2. Identity

- Contribute positively to the sense of place, reflecting and enhancing existing character and distinctiveness;
- Reflect or improve on the original architectural style of the local surroundings, or embrace opportunities for innovative design and new technologies which sympathetically complement or contrast with the local architectural style;
- Use appropriate, high-quality materials which reinforce or enhance local distinctiveness;
- Not result in the visual or physical coalescence with any neighbouring settlement nor ribbon development.

3. Built Form

- Make effective and efficient use of land that contribute to the achievement of compact, walkable neighbourhoods;
- b) Be appropriate for its context and its future use in terms of its building types, street layout, development block type and size, siting, height, scale, massing, form, rhythm, plot widths, gaps between buildings, and the ratio of developed to undeveloped space both within a plot and within a scheme;
- Achieve a density not only appropriate for its context but also taking into account its accessibility;
- Have a layout and form that delivers efficient and adaptable homes in accordance with Policy S6 and Policy S20.

4. Movement

- a) Form part of a well-designed and connected travel network with consideration for all modes of transport offering genuine choices for non-car travel and prioritising active travel and where relevant demonstrate this through evidence clearly showing connectivity for all modes and a hierarchy of routes (also see Policy S47 and Policy S48);
- Maximise pedestrian and cycle permeability and avoid barriers to movement through careful consideration of street layouts and access routes both within the site and in the wider context contributing to the delivery of walkable and cyclable neighbourhoods in accordance with Policy S48;

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of the pipeline has been influenced by the desire to reduce potential likely effects on communities, for example, the route seeks to limit adverse impacts on habitats, historic receptors and residential buildings.

The effects of Climate change and climate change adaption has been considered throughout the design and selection process for the proposed route and when considering how it will be constructed and operated. Chapter 15: Climate Change of the ES [EN070008/APP/6.2.15] includes a lifecycle GHG assessment to identify the impact of GHG emissions arising over the lifetime of the Proposed Development on the climate and a climate change resilience assessment to understand the resilience of the Proposed Development to projected future climate change impacts, including damage to the Proposed Development caused by accidents resulting from climate change.

The design of the pipeline has considered measures to make it resilient to climate change, and the ES concludes that there are no significant impacts on climate change resulting from the laying of this pipeline. Generally, the use of the pipelines offers a more climate friendly transportation method on emissions, as the alternative would consist of more road transport.

The Application is supported by a FRA included in appendix 11-5 of the ES **[EN070008/APP/6.4.11.5]**. The FRA demonstrates how risk (for each phase) is managed to ensure that the development remains safe and operational throughout its lifetime, taking climate change into account, without increasing flood risk elsewhere and where possible reducing flood risk overall. The FRA recommends appropriate mitigation measures including flood resilience techniques.

Policy Reference Relevant Policy Text: Requirement of the Policy

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- Ensure areas are accessible, safe and legible for all including people with physical accessibility difficulties;
- Deliver well-considered parking, including suitable electric vehicle charging points, with appropriate landscaping provided in accordance with the parking standards set out in Policy NS18 and Policy S49;
- e) Deliver suitable access solutions for servicing and utilities.

5. Nature

- a) Incorporate and retain as far as possible existing natural features including hedgerows, trees, and waterbodies particularly where these features offer a valuable habitat to support biodiversity, aligned with policies in the Natural Environment chapter of the Local Plan;
- b) Incorporate appropriate landscape and boundary treatments to ensure that the development can be satisfactorily assimilated into the surrounding area, maximising opportunities to deliver diverse ecosystems and biodiverse habitats, strengthening wildlife corridors and green infrastructure networks, and helping to achieve wider goals for biodiversity net gain, climate change mitigation and adaptation and water management.

6. Public Spaces

- a) Ensure public spaces are accessible to all, are safe and secure and will be easy to maintain with clear definition of public and private spaces;
- Form part of a hierarchy of spaces where relevant to offer a range of spaces available for the community and to support a variety of activities and encourage social interaction;
- Be carefully planned and integrated into the wider community to ensure spaces feel safe and are safe through natural surveillance, being flanked by active uses and by promoting activity within the space;
- d) Maximise opportunities for delivering additional trees and biodiversity gains through the creation of new habitats and the strengthening or extending wildlife corridors and the green infrastructure network in accordance with policies in the Natural Environment chapter.

7. Uses

- a) Create or contribute to a variety of complementary uses that meet the needs of the community:
- b) Be compatible with neighbouring land uses and not result in likely conflict with existing uses unless it can be satisfactorily demonstrated that both the ongoing use of the neighbouring site will not be compromised, and that the amenity of occupiers of the new development will be satisfactory with the ongoing normal use of the neighbouring site;
- c) Not result in adverse noise and vibration taking into account surrounding uses nor result in adverse impacts upon air quality from odour, fumes, smoke, dust and other sources.

8. Homes and Buildings

 a) Provide homes with good quality internal environments with adequate space for users and good access to private, shared or public spaces;

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- Be adaptable and resilient to climate change and be compatible with achieving a net zero carbon Central Lincolnshire as required by Policies S6, S7 and S8;
- Be capable of adapting to changing needs of future occupants and be cost effective to run by achieving the standards set out in Policy S20;
- d) Not result in harm to people's amenity either within the proposed development or neighbouring it through overlooking, overshadowing, loss of light or increase in artificial light or glare;
- e) Provide adequate storage, waste, servicing and utilities for the use proposed.

9. Resources

- Minimise the need for resources both in construction and operation of buildings and be easily adaptable to avoid unnecessary waste in accordance with Policies S10 and S11:
- Use high quality materials which are not only suitable for the context but that are durable and resilient to impacts of climate change in accordance with the requirements of Policy S20.

10. Lifespan

- Use high quality materials which are durable and ensure buildings and spaces are adaptive; and
- Encourage the creation of a sense of ownership for users and the wider community with a clear strategy for ongoing management and stewardship.

Development proposals will be expected to satisfy requirements of any adopted local design guide or design code where relevant to the proposal.

Policy S56: Development on Land Affected by Contamination

Development proposals must take into account the potential environmental impacts on people, biodiversity, buildings, land, air and water arising from the development itself and any former use of the site, including, in particular, adverse effects arising from pollution.

Where development is proposed on a site which is known to be or has the potential to be affected by contamination, a preliminary risk assessment should be undertaken by the developer and submitted to the relevant Central Lincolnshire Authority as the first stage in assessing the risk of contamination.

Proposals will only be permitted if:

- it can be demonstrated that the site is suitable for its proposed use;
- layout and drainage have taken adequate account of ground conditions, contamination and gas risks arising from previous uses and any proposed sustainable land remediation and
- there are no significant impacts on future users, neighbouring users, groundwater or surface water.

The construction phase has the potential to result in loss or damage of soil resource, the identified potential impacts which may occur during the construction phase are primarily associated with spillages and leaks of fuel/oil associated with plant/machinery, disturbance of contaminated soils and potential degradation of soil quality during handling and movement of soil or tracking of heavy plant, as well as the potential for dewatering to locally affect groundwater levels.

Once operational no significant effects are anticipated, with potential impacts limited to effects resulting from potential land contamination on site users and groundwater receptors. These soil resources would be protected against damage and loss though mitigation comprising the adoption of industry standard methods put in place at construction phase.

Chapter 9: Geology and Hydrogeology of the ES [EN070008/APP/6.2.9] provides a detailed assessment of the impacts on geology and hydrogeology as a result of the Proposed Development. The assessment concludes that the potential impacts which may occur during the construction phase are primarily associated with spillages and leaks of fuel/oil associated with plant and machinery, disturbance of contaminated soils and potential degradation of soil quality during handling and movement of soil or tracking of heavy plant as well as the potential dewatering to locally affected groundwater levels. It is considered that all of these effects can be controlled through good practice and standard mitigation measures which are outlined within the Draft CEMP in Appendix 3-1 of the ES [EN070008/APP/6.4.3.1].

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During the operational phase potential impacts are limited to effects resulting from potential land contamination on site users and groundwater receptors Required mitigation will be confirmed by means of risk assessments based on ground investigation data (when available) and may include removal of contaminant sources and installation of gas protection measures on the buildings. Overall, the mitigation required to address the potential impacts is standard practice.

Policy S57: The Historic Environment

Development proposals should protect, conserve and seek opportunities to enhance the historic environment of Central Lincolnshire. In instances where a development proposal would affect the significance of a heritage asset (whether designated or non-designated), including any contribution made by its setting, the applicant will be required to undertake and provide the following, in a manner proportionate to the asset's significance:

- a) describe and assess the significance of the asset, including its setting, to determine its architectural, historical or archaeological interest; and
- identify the impact of the proposed works on the significance and special character of the asset, including its setting; and
- provide a clear justification for the works, especially if these would harm the significance of the asset, including its setting, so that the harm can be weighed against public benefits.

Development proposals will be supported where they:

- d) protect the significance of heritage assets (including where relevant their setting) by protecting and enhancing architectural and historic character, historical associations, landscape and townscape features and through consideration of scale, design, architectural detailing, materials, siting, layout, mass, use, and views and vistas both from and towards the asset;
- e) promote opportunities to better reveal significance of heritage assets, where possible:
- take into account the desirability of sustaining and enhancing non-designated heritage assets and their setting.

Proposals to alter or to change the use of a heritage asset, will be supported provided:

- g) the proposed use is compatible with the significance of the heritage asset, including its fabric, character, appearance, setting and, for listed buildings, interior; and
- h) such a change of use will demonstrably assist in the maintenance or enhancement of the heritage asset; and
- features essential to the special interest of the individual heritage asset are not harmed to facilitate the change of use.

Development proposals that will result in substantial harm to, or the total loss of, a designated heritage asset will only be granted permission where it is necessary to achieve substantial public benefits that outweigh the harm or loss, and the following criteria can be satisfied:

- i) the nature of the heritage asset prevents all reasonable uses of the site; and
- k) no viable use of the heritage asset itself can be found in the medium term through appropriate marketing that will enable its conservation; and

The pipeline route of the Proposed Development has been selected to reduce the impact on the historic environment by avoiding where practicable designated heritage assets

Chapter 8: Historic Environment [EN070008/APP/6.2.8] and Chapter 7: Landscape and Visual Impact of the ES assess the effects during the construction, operation and decommissioning phase of development. Embedded mitigation measures have been incorporated into the design process of the Proposed Development and where required further mitigation measures are presented within the Draft CEMP [EN070008/APP/6.4.3.1].

The historic environment assessment has identified likely significant residual effects on non-designated buried archaeological remains at one site due to construction of the pipeline, at Section 5 – cropmark enclosures at Theddlethorpe [622].

The historic environment assessment has identified likely significant residual effects on three designated heritage assets, the grade II* listed Church of St Edmund in Riby, the grade II listed Ashleigh Farm at Theddlethorpe, and the grade II listed Manor House and non-designated former parkland at Barnoldby le Beck due to construction of the pipeline. Where impacts cannot be avoided, mitigation will take the form of archaeological investigation and recording, to be undertaken as advanced works. A detailed archaeological mitigation strategy will be developed and agreed during Examination.

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 conservation by grant-funding or some form of not for profit, charitable or public ownership is demonstrably not possible; and

m) the harm or loss is outweighed by the benefit of bringing the site back into use. Where a development proposal would result in less than substantial harm to a designated heritage asset, permission will only be granted where the public benefits, including, where appropriate, securing its optimum viable use, outweigh the harm.

Where a non-designated heritage asset is affected by development proposals, there will be a presumption in favour of its retention, though regard will be had to the scale of any harm or loss and the significance of the heritage asset. Any special features which contribute to an asset's significance should be retained and reinstated, where possible.

Listed Buildings

Permission to change the use of a Listed Building or to alter or extend such a building will be granted where the local planning authority is satisfied that the proposal is in the interest of the building's conservation and does not involve activities or alterations prejudicial to the special architectural or historic interest of the Listed Building or its setting. Development proposals that affect the setting of a Listed Building will, in principle, be supported where they make a positive contribution to, or better reveal the significance of the Listed Building.

Conservation Areas

Significant weight will be given to the protection and enhancement of Conservation Areas.

Archaeology

Development affecting archaeological remains, whether known or potential, designated or undesignated, should take every practical and reasonable step to protect and, where possible, enhance their significance. Planning applications for such development should be accompanied by an appropriate and proportionate assessment to understand the potential for and significance of remains, and the impact of development upon them. If initial assessment does not provide sufficient information, developers will be required to undertake field evaluation in advance of determination of the application. This may include a range of techniques for both intrusive and non-intrusive evaluation, as appropriate to the site. Wherever possible and appropriate, mitigation strategies should ensure the preservation of archaeological remains in-situ. Where this is either not possible or not desirable, provision must be made for preservation by record according to an agreed written scheme of investigation submitted by the developer and approved by the planning authority.

Any work undertaken as part of the planning process must be appropriately archived in a way agreed with the local planning authority.

Policy S59: Green and Blue

The Central Lincolnshire Authorities will safeguard green and blue infrastructure in Central Lincolnshire from inappropriate development and work actively with partners to

Chapter 16: Socio-Economic of the ES [EN070008/APP/6.2.16] assesses the likely significant effects of the Proposed Development on socio-economics the chapter

Policy Reference

Relevant Policy Text: Requirement of the Policy

Infrastructure Networks

maintain and improve the quantity, quality, accessibility and management of the green infrastructure network.

Proposals that cause loss or harm to the green and blue infrastructure network will not be supported unless the need for and benefits of the development demonstrably outweigh any adverse impacts. Where adverse impacts on green infrastructure are unavoidable, development will only be supported if suitable mitigation measures for the network are provided.

Development proposals should ensure that existing and new green and blue infrastructure is considered and integrated into the scheme design from the outset. Where new green infrastructure is proposed, the design and layout should take opportunities to:

- a) incorporate a range of types and sizes of green and blue spaces, green routes and environmental features that are appropriate to the development and the wider green and blue infrastructure network to maximise the delivery of multifunctionality:
- b) deliver biodiversity net gain and support ecosystem services;
- c) respond to landscape/townscape and historic character;
- d) support climate change adaptation and resilience including through use of appropriate habitats and species; and
- e) encourage healthy and active lifestyles.

Development proposals must protect the linear features of the green and blue infrastructure network that provide connectivity between green infrastructure assets, including public rights of way, bridleways, cycleways and waterways, and take opportunities to improve and expand such features.

Development will be expected to make a contribution proportionate to their scale towards the establishment, enhancement and on-going management of green and/or blue infrastructure by contributing to the development of the strategic green infrastructure network within Central Lincolnshire, in accordance with the Developer Contributions SPD.

Policy S60: Protecting Biodiversity and Geodiversity

All development should:

- a) protect, manage, enhance and extend the ecological network of habitats, species and sites of international, national and local importance (statutory and nonstatutory), including sites that meet the criteria for selection as a Local Site;
- b) minimise impacts on biodiversity and features of geodiversity value;
- deliver measurable and proportionate net gains in biodiversity in accordance with Policy S61; and
- d) protect and enhance the aquatic environment within or adjoining the site, including water quality and habitat.

Part One: Designated Sites

The following hierarchy of sites will apply in the consideration of development proposals:

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considers effects on employment and the local economy, users' recreational routes and PRoW, community severance and private assets. Chapter 16 acknowledges that no recreational routes or PRoW will be permanently redirected during the construction phase of the Proposed Development Any temporary diversions will be reinstated to the original route on the completion of the construction works. This disruption will be avoided as much as possible and suitable diversions or temporary closures will be agreed with the relevant Local Authority in advance.

The effects of Climate change and climate change adaption has been considered throughout the design and selection process for the proposed route and when considering how it will be constructed and operated.

Chapter 15: Climate Change of the ES **[EN070008/APP/6.2.15]** includes a lifecycle GHG assessment to identify the impact of GHG emissions arising over the lifetime of the Proposed Development on the climate and a climate change resilience assessment to understand the resilience of the Proposed Development to projected future climate change impacts, including damage to the Proposed Development caused by accidents resulting from climate change.

The design of the pipeline has considered measures to make it resilient to climate change, and the ES concludes that there are no significant impacts on climate change resulting from the laying of this pipeline. Generally, the use of the pipelines offers a more climate friendly transportation method on emissions, as the alternative would consist of more road transport.

The Application is supported by a FRA included in appendix 11-5 of the ES **[EN070008/APP/6.4.11.5]**. The FRA demonstrates how risk (for each phase) is managed to ensure that the development remains safe and operational throughout its lifetime, taking climate change into account, without increasing flood risk elsewhere and where possible reducing flood risk overall. The FRA recommends appropriate mitigation measures including flood resilience techniques.

The potential effects of the Proposed Development on biodiversity and ecology are assessed in Chapter 6: Ecology and Biodiversity of the ES **[EN070008/APP/6.2.6]** The assessment of effects concluded that the Proposed Development would not result in any significant adverse effects for biodiversity and ecology with the implementation of mitigation outlined in the Draft CEMP and the presence of an ecological clerk of works.

The Proposed Development has close proximity to Ramsar, SPA, SAC, SSSI and NNR designations. However, the route has been designed to avoid these and make use of existing facilities and pipeline where these designations may be affected. Where biodiversity may be affected by development, appropriate mitigation measures will be considered and implemented to offset any adverse impacts caused.

Policy Reference

Relevant Policy Text: Requirement of the Policy

1. International Sites

The highest level of protection will be afforded to internationally protected sites. Development proposals that will have an adverse impact on the integrity of such areas, will not be supported other than in exceptional circumstances, in accordance with the NPPF.

Development proposals that are likely to result in a significant adverse effect, either alone or in combination with other proposals, on any internationally designated site, must satisfy the requirements of the Habitats Regulations (or any superseding similar UK legislation). Development requiring Appropriate Assessment will only be allowed where it can be determined, taking into account mitigation, that the proposal would not result in significant adverse effects on the site's integrity.

National Sites (NNRs and SSSIs)

Development proposals should avoid impact on these nationally protected sites. Development proposals within or outside a national site, likely to have an adverse effect, either individually or in combination with other developments, will not normally be supported unless the benefits of the development, at this site, clearly outweigh both the adverse impacts on the features of the site and any adverse impacts on the wider network of nationally protected sites.

3. Irreplaceable Habitats

Planning permission will be refused for development resulting in the loss, deterioration or fragmentation of irreplaceable habitats, including ancient woodland and aged or veteran trees, unless there are wholly exceptional reasons, and a suitable compensation strategy will be delivered.

4. Local Sites (LNR, LWS and LGS)

Development likely to have an adverse effect on locally designated sites, their features or their function as part of the ecological network, will only be supported where the benefits of the development clearly outweigh the loss, and the coherence of the local ecological network is maintained. Where significant harm cannot be avoided, the mitigation hierarchy should be followed.

Part Two: Species and Habitats of Principal Importance

All development proposals will be considered in the context of the relevant Local Authority's duty to promote the protection and recovery of priority species and habitats.

Development should seek to preserve, restore and re-create priority habitats, ecological networks and the protection and recovery of priority species set out in the Natural Environment and Rural Communities Act 2006, Lincolnshire Biodiversity Action Plan, Lincolnshire Geodiversity Strategy and Local Nature Recovery Strategy.

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A Habitats Regulations Assessment **[EN070008/APP/6.5]** has been undertaken in relation to any likely significant effects which confirmed that the Proposed Development will not adversely affect the integrity of the European designated sites.

The Applicant recognises the importance of BNG and has made a voluntary commitment to deliver up to a 10% net gain in biodiversity relating to the permanent habitat loss at the above ground facilities (the Immingham Facility, Block Valve Stations and Theddlethorpe Facility, including permanent accesses.

The potential effects on ecology during construction will be managed through the implementation of further mitigation measures set out within the Draft CEMP [EN070008/APP/6.4.3.1] the Draft CEMP will be secured by a requirement of the Order.

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Where adverse impacts are likely, development will only be supported where the need for and benefits of the development clearly outweigh these impacts. In such cases, appropriate mitigation or compensatory measures will be required.

Part Three: Mitigation of Potential Adverse Impacts

Development should avoid adverse impact on existing biodiversity and geodiversity features as a first principle, in line with the mitigation hierarchy. Where adverse impacts are unavoidable, they must be adequately and proportionately mitigated. If full mitigation cannot be provided, compensation will be required as a last resort where there is no alternative

Development will only be supported where the proposed measures for mitigation and/or compensation along with details of net gain are acceptable to the Local Planning Authority in terms of design and location and are secured for the lifetime of the development with appropriate funding mechanisms that are capable of being secured by condition and/or legal agreement.

If significant harm to biodiversity resulting from development cannot be avoided, adequately mitigated, or, as a last resort, compensated for, then planning permission will be refused.

Policy S61: Biodiversity Opportunity and Delivering Measurable Net Gains Following application of the mitigation hierarchy, all development proposals should ensure opportunities are taken to retain, protect and enhance biodiversity and geodiversity features proportionate to their scale, through site layout, design + of new buildings and proposals for existing buildings with consideration to the construction phase and ongoing site management.

Development proposals should create new habitats, and links between habitats, in line with Central Lincolnshire Biodiversity Opportunity and Green Infrastructure Mapping evidence, the biodiversity opportunity area principles set out in Appendix 4 to this Plan and the Local Nature Recovery Strategy (once completed), to maintain and enhance a network of wildlife sites and corridors, to minimise habitat fragmentation and provide opportunities for species to respond and adapt to climate change. Proposals for major and large-scale development should seek to deliver wider environmental net gains where feasible.

Biodiversity Net Gain

The following part of the policy applies unless, and until, subsequently superseded, in whole or part, by national regulations or Government policy associated with the delivery of mandatory biodiversity net gain arising from the Environment Act 2021. Where conflict between the policy below and the provisions of Government regulations or national policy arises, then the latter should prevail.

The potential effects of the Proposed Development on biodiversity and ecology are assessed in Chapter 6: Ecology and Biodiversity of the ES **[EN070008/APP/6.2.6]**. The assessment of effects concluded that the Proposed Development would not result in any significant adverse effects for biodiversity and ecology with the implementation of mitigation outlined in the Draft CEMP and the presence of an ecological clerk of works.

The Applicant recognises the importance of BNG and has made a voluntary commitment to deliver up to a 10% net gain in biodiversity relating to the permanent habitat loss at the above ground facilities (the Immingham Facility, Block Valve Stations and Theddlethorpe Facility, including permanent accesses. Further information is presented in the Initial Biodiversity Net Gain Assessment [EN070008/APP/6.7.1] and the Draft Biodiversity Net Gain Strategy [EN070008/APP/6.7.2].

Policy Reference

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All qualifying development proposals must deliver at least a 10% measurable biodiversity net gain attributable to the development. The net gain for biodiversity should be calculated using Natural England's Biodiversity Metric.

Biodiversity net gain should be provided on-site wherever possible. Off-site measures will only be considered where it can be demonstrated that, after following the mitigation hierarchy, all reasonable opportunities to achieve measurable net gains on-site have been exhausted or where greater gains can be delivered off-site where the improvements can be demonstrated to be deliverable and are consistent with the Local Nature Recovery Strategy.

All development proposals, unless specifically exempted by Government, must provide clear and robust evidence for biodiversity net gains and losses in the form of a biodiversity gain plan, which should ideally be submitted with the planning application (or, if not, the submission and approval of a biodiversity gain plan before development commences will form a condition of any planning application approval), setting out:

- a) information about the steps to be taken to minimise the adverse effect of the development on the biodiversity of the onsite habitat and any other habitat
- b) the pre-development biodiversity value of the onsite habitat;
- c) the post-development biodiversity value of the onsite habitat following implementation of the proposed ecological enhancements/interventions;
- d) the ongoing management strategy for any proposals;
- e) any registered off-site gain allocated to the development and the biodiversity value of that gain in relation to the development; and
- exceptionally any biodiversity credits purchased for the development through a recognised and deliverable offsetting scheme.

Demonstrating the value of the habitat (pre and post-development) with appropriate and robust evidence will be the responsibility of the applicant. Proposals which do not demonstrate that the post-development biodiversity value will exceed the predevelopment value of the onsite habitat by a 10% net gain will be refused.

Ongoing management of any new or improved onsite and offsite habitats, together with monitoring and reporting, will need to be planned and funded for 30 years after completion of a development.

Policy S62: Area of Outstanding Natural Beauty and Areas of Great Landscape Value

The Lincolnshire Wolds Area of Outstanding Natural Beauty

The Lincolnshire Wolds Area of Outstanding Natural Beauty (AONB) is a nationally designated landscape and has the highest level of protection. Great weight should be given to conserving and enhancing the landscape and scenic beauty in this area. All development proposals within, or affecting the setting of, the AONB shall:

 a) be compatible with the special character of the area and have had regard to conserving and enhancing the special quality and scenic beauty of the landscape; and

Chapter 7: Landscape and Visual of the ES [EN070008/APP/6.2.7] and its relevant appendices provide an assessment of the likely significant effects of the Proposed Development on landscape character and visual amenity.

As the proposed pipeline would be buried and not affect landscape character, operational phase effects associated with the pipeline are scoped out of the LVIA. The LVIA confirms that the pipeline passes through the Lincolnshire Wolds Area of Outstanding Natural Beauty (AONB) and in close proximity to the Area of Great Landscape Value (AGLV) within the western part of the pipeline route.

Policy Reference

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- respect the landscape character, topography, and context in relation to the siting, design, scale and extent of development; and
- c) protect and enhance important views into, out of and within the AONB; and
- d) retain and enhance existing natural, historic and cultural features that contribute to the special quality of the landscape.

Proposals which will result in an adverse impact on the AONB, or which fail to demonstrate that they will not have an adverse impact taking into account any mitigation proposed, will not be supported.

Areas of Great Landscape Value

Areas of Great Landscape Value (AGLV) are locally designated landscape areas recognised for their intrinsic character and beauty and their natural, historic and cultural importance. A high level of protection will be afforded to AGLV reflecting their locally important high scenic quality, special landscape features and sensitivity.

Development proposals within, or within the setting of, AGLV shall:

- e) conserve and enhance the qualities, character and distinctiveness of locally important landscapes; and
- f) protect, and where possible enhance, specific landscape, wildlife and historic features which contribute to local character and landscape quality; and
- maintain landscape quality and minimise adverse visual impacts through high quality building and landscape design; and
- demonstrate how proposals have responded positively to the landscape character in relation to siting, design, scale and massing and where appropriate have retained or enhanced important views, and natural, historic and cultural features of the landscape; and
- i) where appropriate, restore positive landscape character and quality.

Where a proposal may result in adverse impacts, it may exceptionally be supported if the overriding benefits of the development demonstrably outweigh the harm – in such circumstances the harm should be minimised and mitigated through design and landscaping.

It is confirmed by Chapter 7 and LVIA that the main impact on landscape takes place during the construction phase of the Proposed Development. The main potential impacts relating to construction include changes to views through the addition of detracting visual features associated with the construction process. This would result in short-term significant adverse effects at four representative viewpoints. Short term significant visual effects for the construction phase would be limited to highly sensitive viewpoints located in close proximity to the pipeline route.

Mitigation measures have been incorporated into the design to reduce any impact. This includes siting and routing, construction management, and landscape and design measures, with the Proposed Development designed to reduce the impact on the landscape where practicable. Although the measures set out would assist in reducing the impacts at the identified locations, the reduction would be insufficient to reduce the impact rating and therefore effects to below significant levels.

With the incorporation of embedded design mitigation and additional mitigation, there would be significant effects on the Lincolnshire Wolds AONB during construction. Effects would reduce to not significant during operation and decommissioning. The remaining landscape receptors will experience not significant effects during all stages of the Proposed Development. Whilst there are temporary significant impacts, the landscape and visual impact of the Proposed Development can be considered outweighed by the clear demonstrable benefits of the proposed national significant infrastructure.

Policy S66: Trees, Woodland and Hedgerow

Development proposals should be prepared based on the overriding principle that:

- the existing tree and woodland cover is maintained, improved and expanded; and
- opportunities for expanding woodland are actively considered and implemented where practical and appropriate to do so.

Existing Trees and Woodland

Planning permission will only be granted if the proposal provides evidence that it has been subject to adequate consideration of the impact of the development on any existing trees and woodland found on-site (and off-site, if there are any trees near the site, with 'near' defined as the distance comprising 12 times the stem diameter of the off-site tree). If any trees exist on or near the development site, 'adequate consideration' is likely to mean the completion of a British Standard 5837 Tree Survey and, if applicable,

Wherever possible, mitigation has been embedded into the design of the Proposed Development to avoid negative impacts on sensitive ecological features, for example through careful routeing to avoid habitats such as woodland and veteran trees. Where it is not possible to avoid adverse effects, additional mitigation is proposed. A Draft CEMP is provided in Appendix 3-1 of the ES [EN070008/APP/6.4.3.1]. An Arboricultural impact assessment has been carried out and is presented at Appendix 6-10 of the ES [EN070008/APP/6.4.6.10].

Policy Reference

Relevant Policy Text: Requirement of the Policy

Compliance Assessment: How the Proposed Development addresses the policy

an Arboricultural Method Statement. Where the proposal will result in the loss or deterioration of:

- a) ancient woodland; and/or
- b) the loss of aged or veteran trees found outside ancient woodland.

Permission will be refused, unless and on an exceptional basis the need for, and benefits of, the development in that location clearly outweigh the loss.

Where the proposal will result in the loss or deterioration of a tree protected by a Tree Preservation Order or a tree within a Conservation Area, then permission will be refused unless:

- there is no net loss of amenity value which arises as a result of the development; or
- the need for, and benefits of, the development in that location clearly outweigh the loss.

Where the proposal will result in the loss of any other tree or woodland not covered by the above, then the Council will expect the proposal to retain those trees that make a significant contribution to the landscape or biodiversity value of the area, provided this can be done without compromising the achievement of good design for the site.

Mitigating for loss of Trees and Woodland

Where it is appropriate for higher value tree(s) (category A or B trees (BS5837)) and/or woodland to be lost as part of a development proposal, then appropriate mitigation, via compensatory tree planting, will be required. Such tree planting should be on-site wherever possible and should:

- e) take all opportunities to meet the six Tree Planting Principles (see supporting text); and
- unless demonstrably impractical or inappropriate, provide the following specific quantity of compensatory trees:

New Trees and Woodland

Where appropriate and practical, opportunities for new tree planting should be explored as part of all development proposals (in addition to, if applicable, any necessary compensatory tree provision). Where new trees are proposed, they should be done so on the basis of the five Tree Planting Principles. Proposals which fail to provide practical opportunities for new tree planting will be refused.

Planting schemes should include provision to replace any plant failures within five years after the date of planting. Planting of trees must be considered in the context of wider plans for nature recovery which seeks to increase biodiversity and green infrastructure generally, not simply planting of trees, and protecting / enhancing soils, particularly peat soils. Tree planting should only be carried out in appropriate locations that will not impact on existing ecology or opportunities to create alternative habitats that could deliver better enhancements for people and wildlife, including carbon storage. Where woodland habitat creation is appropriate, consideration should be given to the economic and ecological benefits that can be achieved through natural regeneration. Any tree planting should use native and local provenance tree species suitable for the location.

Policy Reference

Relevant Policy Text: Requirement of the Policy

Compliance Assessment: How the Proposed Development addresses the policy

Management and Maintenance

In instances where new trees and/or woodlands are proposed, it may be necessary for the council to require appropriate developer contributions to be provided, to ensure provision is made for appropriate management and maintenance of the new trees and/or woodland.

Hedgerows

Proposals for new development will be expected to retain existing hedgerows where appropriate and integrate them fully into the design having regard to their management requirements. Proposals for new development will not be supported that would result in the loss of hedges of high landscape, heritage, amenity or biodiversity value unless the need for, and benefits of, the development clearly outweigh the loss and this loss can be clearly demonstrated to be unavoidable. Development requiring the loss of a hedgerow protected under The Hedgerow Regulations will only be supported where it would allow for a substantially improved overall approach to the design and landscaping of the development that would outweigh the loss of the hedgerow. Where any hedges are lost, suitable replacement planting or restoration of existing hedges, will be required within the site or the locality, including appropriate provision for maintenance and management.

Most Versatile **Agricultural Land**

Policy S67: Best and Proposals should protect the best and most versatile agricultural land so as to protect opportunities for food production and the continuance of the agricultural economy. With the exception of allocated sites, significant development resulting in the loss of the best and most versatile agricultural land will only be supported if:

- a) The need for the proposed development has been clearly established and there is insufficient lower grade land available at that settlement (unless development of such lower grade land would be inconsistent with other sustainability considerations): and
- b) The benefits and/or sustainability considerations outweigh the need to protect such land, when taking into account the economic and other benefits of the best and most versatile agricultural land; and
- c) The impacts of the proposal upon ongoing agricultural operations have been minimised through the use of appropriate design solutions; and
- Where feasible, once any development which is supported has ceased its useful life the land will be restored to its former use (this condition will be secured by planning condition where appropriate).

Where proposals are for sites of 1 hectare or larger, which would result in the loss of best and most versatile agricultural land, an agricultural land classification report should be submitted, setting out the justification for such a loss and how criterion b has been met.

The majority of the Proposed Development is located in rural areas, Chapter 10: Agriculture and Soil of the ES [EN070008/APP/6.2.10] presents an assessment of the likely significant effects of the Proposed Development on agriculture and soils during construction and decommissioning, including consideration of impacts on soil resources and agricultural land.

The loss of the vast majority of the grade 2 and 3a BMV agricultural land is temporary and reversible and the permanent loss of grade 2 and 3a BMV land falls significantly below the 20 ha threshold above which effects are considered to be significant. Although both BMV and non-BMV land would be directly impacted by the Proposed Development the majority of impacts will be temporary and for the duration of the construction phase only, as all land within the pipeline corridor, temporary compounds and temporary accesses will be reinstated immediately following construction to its original condition and land use. The residual impacts to agricultural land as a result of the temporary development are assessed within the ES as not significant.

D.5 North Lincolnshire Council: Planning Policy Accordance

North Lincolnshire Council, saved policies in the 'North Lincolnshire Local Plan' (2003)

Policy Reference

Relevant Policy Text: Requirement of the Policy

Policy T1: Location of Development

Development proposals, which generate a significant volume of traffic movement, will be permitted provided that they are located:

The Proposed Development will generate traffic movements during the construction phase which are necessary for the delivery of materials and for workers to travel to see the proposed Development will generate traffic movements during the construction phase which are necessary for the delivery of materials and for workers to travel to see the proposed Development will generate traffic movements during the construction phase which are necessary for the delivery of materials and for workers to travel to see the proposed Development will generate traffic movements during the construction phase which are necessary for the delivery of materials and for workers to travel to see the proposed Development will generate traffic movements during the construction phase which are necessary for the delivery of materials and for workers to travel to see the proposed Development will generate traffic movements during the construction phase which are necessary for the delivery of materials and for workers to travel to see the proposed Development will generate traffic movements during the construction phase which are necessary for the delivery of materials and for workers to travel to see the proposed Development will generate traffic movements and the proposed Development will be proposed D

- in the urban area of Scunthorpe and Bottesford, Barton upon Humber, Brigg, and the areas identified for development at the South Humber Bank and Humberside International Airport; and
- ii. where there is good access to rail, water and air transport, or to the North Lincolnshire Strategic Road Network; and
- iii. where there is good foot, cycle and public transport provision or where there are opportunities for foot, cycle and public transport to be provided.

Compliance Assessment: How the Proposed Development addresses the policy

The Proposed Development will generate traffic movements during the construction phase which are necessary for the delivery of materials and for workers to travel to site. Construction compounds and laydown areas will be located along the pipeline route for the efficient delivery and distribution of materials. It is not suitable to locate the construction compounds and laydown areas in the urban areas outlined in Policy T1.

Chapter 12: Traffic and Transport of the ES **[EN070008/APP/6.2.12]** and its relevant appendices include an assessment of the likely significant effects of the Proposed Development on the environment in respect of traffic and transport during the construction phase. The assessment of construction traffic includes consideration of; the present day and future baseline conditions during construction; and the effects of construction traffic on the local road network, including the strategic road network (SRN) as a result of the Proposed Development in terms of the increase in overall vehicle numbers, including HGVs.

Policy R5: Recreational Paths Network

The creation of a strategic network of recreational paths to provide linkages from the built up areas of North Lincolnshire to open spaces, woodland, riverside and water areas and the wider countryside will actively be pursued. Additional footpath links are to be created over the Local Plan period.

In determining planning applications where development may either have implications for the maintenance of the recreational paths network, or offer opportunities to expand this network the following factors will be taken into account:

- favourable consideration will be given to development proposals which provide additional links to the recreational network;
- ii. the Council will seek to negotiate additional linkages to the recreational paths network, where appropriate:
- iii. favourable consideration will be given to development proposals which will improve the condition and appearance of existing links in the network:
- existing rights of way will be protected from development that would remove or restrict the right of way;
- permission will not be granted for any development which would prejudice
 public access onto and through the recreational path network, unless specific
 arrangements are made for suitable alternative linkages;
- vi. where necessary, the diversion of footpaths will be required.

Chapter 16: Socio-Economic of the ES [EN070008/APP/6.2.16] assesses the likely significant effects of the Proposed Development on users' recreational routes and PRoW, community severance and private assets. Chapter 16 acknowledges that no recreational routes or PRoW will be permanently redirected during the construction phase of the Proposed Development Any temporary diversions will be reinstated to the original route on the completion of the construction works. This disruption will be avoided as much as possible and suitable diversions or temporary closures will be agreed with the relevant

Local Authority in advance.

Policy LC1: Special Protection Areas, Special Areas of Conservation and Ramsar Sites

Proposals for development which may affect an SPA, a proposed SPA, a SAC or candidate SAC will be assessed according to their implications for the site's conservation objectives. Proposals not directly connected with, or necessary for, the site, and which are likely to have a significant effect on the site (either individually or in combination with other proposals), will not be permitted unless it can be conclusively demonstrated that:

- i. there is no alternative solution: and
- ii. there are imperative reasons of overriding public interest for the development.

The potential effects of the Proposed Development on biodiversity and ecology are assessed in Chapter 6: Ecology and Biodiversity of the ES **[EN070008/APP/6.2.6]**. The surveys that have informed the assessments are contained within the appendices to the FS

The assessment of effects concluded that the Proposed Development would not result in any significant adverse effects for biodiversity and ecology with the implementation of mitigation outlined in the CEMP and the presence of an ecological clerk of works.

Policy Reference	Relevant Policy Text: Requirement of the Policy	Compliance Assessment: How the Proposed Development addresses the policy
	Where the site hosts a priority natural habitat type or a priority species, proposals will not be permitted unless it can be conclusively demonstrated that it is necessary for reasons of human health or public safety, or for consequences of primary importance for nature conservation.	A Report to Inform the Habitat Regulations Assessment [EN070008/APP/6.5] has also been prepared insupport of the assessment due to the presence of European designated sites. The Report to inform the HRA Assessment [EN070008/APP/6.5] concludes that the Proposed Development would not have an adverse effect on integrity of European sites.
	Where such a development does proceed, the use of conditions or planning obligations to secure all compensatory measures necessary to comply with Article 3 of the EEC Habitats and Species Directive will be considered.	
Policy LC2: Sites of Special Scientific Interest and National Nature Reserves	Proposals for development in, or likely to affect, Sites of Special Scientific Interest will be subject to special scrutiny. Where such development may have an adverse effect, directly or indirectly on the SSSI, it will not be permitted unless the reasons for the development clearly outweigh the nature conservation value of the site itself and the national policy to safeguard the national network of such sites. Where a site is a National Nature Reserve (NNR), or a site identified under the Nature	The potential effects of the Proposed Development on biodiversity and ecology are assessed in Chapter 6: Ecology and Biodiversity of the ES [EN070008/APP/6.2.6]. The surveys that have informed the assessments are contained within the appendices to the ES. The assessment considers nationally and locally designated sites for nature conservation. The assessment of effects concluded that the Proposed Development would not result in any significant adverse effects for biodiversity and ecology with the implementation of mitigation outlined in the Draft CEMP and the presence of an ecological
	Conservation Review (NCR) or Geological Conservation Review (GCR) particular regard will be paid to the individual site's national importance.	clerkof works.
	In all cases where development is permitted which would damage the nature conservation value of the site, such damage should be kept to a minimum. Where development is permitted the use of conditions or planning obligations to ensure the protection and enhancement of the site's nature conservation value and other appropriate compensatory measures will be considered.	
Policy LC4: Development Affecting Sites of Local Nature Conservation Importance	Any development or land use change which is likely to have an adverse impact on a Local Nature Reserve, a Site of Importance for Nature Conservation or a Regionally Important Geological Site will not be approved unless it can be clearly demonstrated that there are reasons for the proposal which outweigh the need to safeguard the intrinsic nature conservation value of the site or feature.	The potential effects of the Proposed Development on biodiversity and ecology are assessed in Chapter 6: Ecology and Biodiversity of the ES [EN070008/APP/6.2.6]. The surveys that have informed the assessments are contained within the appendices to the ES. The assessment considers locally designated sites for nature conservation. The assessment of effects concluded that the Proposed Development would not result in any significant adverse effects for biodiversity and ecology with the implementation of
	In all cases where development is permitted which may damage the nature conservation value of the site, such damage shall be kept to a minimum. Where development is permitted the use of conditions or planning obligations to ensure the protection and enhancement of the site's nature conservation value and other appropriate compensatory measures will be considered.	
Policy LC5: Species Protection	Planning permission will not be granted for development or land use changes which would have an adverse impact on badgers or species protected by Schedules 1, 5 or 8 of the Wildlife and Countryside Act 1981 (as amended). Where development is permitted that may have an effect on those species, conditions or the use of planning agreements will be considered to: i. facilitate the survival of individual members of the species; and ii. reduce disturbance to a minimum; and iii. provide adequate alternative habitats to sustain at least the current levels of population.	Protected Species surveys have taken place as part of the EIA process. Badger Setts have been recorded within the Order Limits. Discussions have taken place with Natural England and a suitable licence will be obtained before the commencement of development in proximity to badger setts.

North Lincolnshire Council, saved policies in the 'North Lincolnshire Local Plan' (2003)

Policy Reference

Relevant Policy Text: Requirement of the Policy

Compliance Assessment: How the Proposed Development addresses the policy

Policy LC7: Landscape Protection Where development is permitted within rural settlements or within the open countryside, special attention will be given to the protection of the scenic quality and distinctive local character of the landscape. Development which does not respect the character of the local landscape will not be permitted.

Mitigation measures have been incorporated into the design to reduce impacts. This includes siting and routing, construction management, and landscape and design measures, with the Proposed Development designed to reduce the impact on the landscape where practicable. Although the measures set out would assist in reducing the impacts at the identified locations, the reduction would be insufficient to reduce the impact rating and therefore effects to below significant levels.

With the incorporation of embedded design mitigation and additional mitigation, there would be significant effects on the Lincolnshire Wolds AONB during construction. Effects would reduce to not significant during operation and decommissioning. The remaining landscape receptors will experience not significant effects during all stages of the Proposed Development. Whilst there are temporary significant impacts, the landscape and visual impact of the proposed development can be considered outweighed by the clear demonstrable benefits of the proposed national significant infrastructure.

ES Chapter 7: Landscape and Visual [EN070008/APP/6.2.7] is supported by appendices including:

- Appendix 7-1: Representative Viewpoints: and
- Appendix 7-2: Visualisations

Policy LC12: Protection of Trees, Woodland and Hedgerow

Proposals for all new development will, wherever possible ensure the retention of trees, woodland and hedgerows. Particular regard will be given to the protection of these features within the setting of settlements, the protection of ancient woodlands and historic hedgerows and the amenity value of trees within built up areas. Tree preservation orders will be made where trees which contribute to local amenity or local landscape character are at risk. Landscaping and tree and hedgerow planting schemes will be required to accompany applications for new development where it is appropriate to the development and its setting.

Wherever possible, mitigation has been embedded to avoid sensitive ecological features, for example through careful routeing to avoid habitats such as woodland and veteran trees.

There is no ancient woodland within the Order Limits. Veteran trees have been identified within the Order Limits at Barnoldby le Beck parkland as detailed in the Arboriculture Report in ES Appendix 6-10 [EN070008/APP/6.4.6.10]. Whilst a small area of the parkland habitat will be lost, the veteran trees will be avoided. Mitigation measures will reduce any impacts on the veteran trees.

Policy HE5: Development affecting Listed Buildings The Council will seek to secure the preservation, restoration and continued use of buildings of special architectural or historic interest. When applications for planning permission relating to a listed building or listed building consent are being assessed, the primary consideration will be the need to preserve or enhance the fabric and character of the building. Permission or consent will not be granted unless it has been demonstrated that the proposed works would secure this objective. The Council will encourage the retention and restoration of the historic setting of listed buildings. Proposals which damage the setting of a listed building will be resisted. Whenever appropriate, proposals which would entail the loss of historic fabric from a listed building will be conditional upon a programme of recording being agreed and implemented.

Chapter 8: Historic Environment [EN070008/APP/6.2.8] contains an assessment of the Proposed Developments likely impacts on the historic environment.

The historic environment assessment has identified likely significant residual effects on three designated heritage assets, the grade II* listed Church of St Edmund in Riby, the grade II listed Ashleigh Farm at Theddlethorpe, and the grade II listed Manor House and non-designated former parkland at Barnoldby le Beck during the construction phase.

Operation of the Theddlethorpe Facility would have significant residual effects on the setting of one designated heritage asset (the grade II listed Ashleigh Farm). This effect is assessed as Moderate adverse and would be permanent during the operational lifetime of the Proposed Development. Decommissioning of the Theddlethorpe Facility would reverse this effect and reinstate the existing baseline conditions. Residual effects on other built heritage assets due to operation and decommissioning of the Proposed Development are assessed as Minor or Negligible adverse: these temporary effects are not considered to be significant.

Policy Reference	Relevant Policy Text: Requirement of the Policy	Compliance Assessment: How the Proposed Development addresses the policy
		It is considered that the benefits of the Proposed Development to the public and the wider community outweigh any harm to designated and non-designated heritage assets. These benefits include that the Proposed Development will help the government to achieve its target for Net Zero by 2050, reduce greenhouse gas emissions, provide low carbon energy supplies, retain existing employment at local industry and generate new investment in the region.
		It is assessed that the operation and decommissioning phases of the Proposed Development would not result in any additional significant effects on buried archaeological remains.
Policy HE8: Ancient Monuments	Development proposals which would result in an adverse effect on Scheduled Ancient Monuments and other nationally important monuments, or their settings, will not be permitted.	There are no ancient monuments affected by the Proposed Development.
Policy HE9: Archaeological Evaluation	Where development proposals affect sites of known or suspected archaeological importance, an archaeological assessment to be submitted prior to the determination of a planning application will be required. Planning permission will not be granted without adequate assessment of the nature, extent and significance of the remains present and the degree to which the proposed development is likely to affect them.	Chapter 8: Historic Environment of the ES [EN070008/APP/6.2.8] assesses the effects during the construction, operation and decommissioning phase of development. Embedded mitigation measures have been incorporated into the design process of the Proposed Development and where required further mitigation measures are presented within the Draft CEMP in Appendix 3-1 of the ES [EN070008/APP/6.2.8].
	Sites of known archaeological importance will be protected. When development affecting such sites is acceptable in principle, mitigation of damage must be ensured and the preservation of the remains in situ is a preferred solution. When in situ preservation is not justified, the developer will be required to make adequate provision for excavation and recording before and during development.	The historic environment assessment has identified likely significant residual effects on non-designated buried archaeological remains at one site due to construction of the pipeline, at Section 5 – cropmark enclosures at Theddlethorpe [622]. Where impacts cannot be avoided, mitigation will take the form of archaeological investigation and recording, to be undertaken as advanced works. A detailed archaeological mitigation strategy will be developed and agreed during Examination.
Policy M8: Safeguarding Minerals	Existing aggregate mineral resources, wharves and railhead facilities used in conjunction with the transportation of minerals will be safeguarded from development that may otherwise sterilise or adversely affect their operation.	The Proposed Development will not affect existing mineral sites, mineral infrastructure / processing plants or Mineral Safeguard Areas in North Lincolnshire.
Policy DS13: Groundwater Protection and Land Drainage	All development proposals must take account of the need to secure effective land drainage measures and ground water protection in order to control the level of water in the land drainage system.	Initial assessments of groundwater and surface water quality and resource, fluvial geomorphology and flood risk have been carried out in order to identify the potential significant effects associated with the construction, operation and decommissioning of the Proposed Development on potentially sensitive receptors.
		During the construction phase, there is a risk of pollution to surface water from activities involving polluting substances such as fuels, concrete and chemicals, along with disturbance of soil during earthworks. During construction, standard pollution prevention and construction best practice would be adopted to mitigate potential impacts upon the water environment where required and reasonably practicable. Such measures would be included in the Draft CEMP in Appendix 3-1 of the ES [EN070008/APP/6.4.3.1].
Policy DS15: Water Resources	Development will not be permitted which would adversely affect the quality and quantity of water resources or adversely affect nature conservation, fisheries and amenity by means of: i. pollution from the development; or ii. water abstraction	During the construction phase, there is a risk of pollution to surface water from activities involving polluting substances such as fuels, concrete and chemicals, along with disturbance of soil during earthworks. During construction, standard pollution prevention and construction best practice would be adopted to mitigate potential impacts upon the

Policy Reference	Relevant Policy Text: Requirement of the Policy	Compliance Assessment: How the Proposed Development addresses the policy
	unless adequate measures are undertaken to reduce the impact to an acceptable level.	water environment where required and reasonably practicable. Such measures would be included in a Draft CEMP in Appendix 3-1 of the ES [EN070008/APP/6.4.3.1].
Policy DS16: Flood Risk	Development will not be permitted within floodplains where it would: i. increase the number of people or buildings at risk; or ii. impede the flow of floodwater; or iii. impede access for the future maintenance of watercourses; or iv. reduce the storage capacity of the floodplain; or v. increase the risk of flooding elsewhere; or vi. undermine the integrity of existing flood defences. unless adequate protection or mitigation measures are undertaken.	Chapter 11 of the ES: Water Environment [EN070008/APP/6.2.11] and its associated appendices (including Appendix 11-4: Flood Risk Assessment) assess the likely significant effects of the Proposed Development on Water Resources and Flood Risk.
		Assessments of groundwater and surface water quality and resource, fluvial geomorphology and flood risk have been carried out in order to identify the potential significant effects associated with the construction, operation and decommissioning of the Proposed Development on potentially sensitive receptors.
		The pipeline route was selected and designed to reduce the impact on flood risk, avoiding flood zone 2 and 3 areas where possible. However, it has been necessary to locate the Immingham Facility and Theddlethorpe Facility in an area of Flood Zone 3 to be suitably located to emitters and the existing LOGGS pipeline respectively.
		The Sequential Test included in the FRA was carried out to assess the flood risk for the Proposed Development and to direct it to areas of lowest probability of flooding (flood zone 1) where possible. Elements of the Proposed Development including the Immingham Facility, Theddlethorpe Facility and sections of the pipeline are located in Flood Zones 2 & 3. The Proposed Development is classed as 'Essential Infrastructure' which is considered to be acceptable in the Flood Zones 1 and 2 and also in Flood Zone 3 where the requirements of an Exception Test are met.
		The majority of the Proposed Development is located in low flood risk areas although there are some areas of high and medium risk associated with watercourses. A Flood Risk Assessment is included within appendix 11-5 of the ES [EN070008/APP/6.4.11.5]. The FRA demonstrates how risk (for each phase of development) is managed to ensure that the development remains safe and operational throughout its lifetime, taking climate change into account, without increasing flood risk elsewhere and where possible reducing flood risk overall. The FRA recommends appropriate mitigation measures including flood resilience techniques.
		Construction flood mitigation measures have been described within the Draft CEMP in ES appendix 3-1 [EN070008/APP/6.4.3.1] and mitigation with regards to facilities remaining operational during times of flood has been considered within the FRA. The effects of Climate change and climate change adaption has been considered throughout the design and selection process for the proposed route and when considering how it will be constructed and operated.
		The information presented in the FRA demonstrates that the Proposed Development will not contravene objectives i to vi in policy DS16.

D.6 North Lincolnshire Council: Planning Policy Accordance

North Lincolnshire, Core Strategy, June 2011

Policy Reference

Relevant Policy Text: Requirement of the Policy

CS1: Spatial Strategy for North Lincolnshire

The spatial vision and the future development requirements will be delivered through the spatial strategy for North Lincolnshire as outlined below and on the key diagram. The spatial strategy will focus on:

- Delivering an urban renaissance in Scunthorpe and supporting its role as a major subregional town.
- b) Supporting the Market Towns of Barton upon Humber, Brigg, Crowle, Epworth, Kirton in Lindsey and Winterton as thriving places to live, work and visit, and as important service centres serving the needs of local communities across North Lincolnshire.
- c) Supporting thriving rural communities and a vibrant countryside through the protection and enhancement of local services, creating opportunities for rural economic diversification and the promotion of tourism.
- d) Supporting the development of key strategic employment sites at the South Humber Bank, Humberside Airport and Sandtoft Airfield.
- e) Supporting the protection and enhancement of North Lincolnshire's world class natural and built environment to ensure the continued attractiveness of the area as place to live, work and visit.

All future growth regardless of location should contribute to sustainable development in particular in respect of those criteria set out in policy CS2 as well as the other policies of the plan. All change will be managed in an environmentally sustainable way by avoiding/minimising or mitigating development pressure on the area's natural and built environment, its existing utilities and associated infrastructure and areas at risk of flooding. Where development unavoidably has an environmental impact adequate mitigation measures should be used for the development to be acceptable.

Compliance Assessment: How the Proposed Development addresses the policy

The Proposed Development helps contribute to the Spatial Strategy for North Lincolnshire by creating further economic growth on the South Humber Bank. The Proposed Development has the potential to increase technology, diversity and attract inward investment to North Lincolnshire that can create jobs and training opportunities.

The Proposed Development also contributes to sustainable development within the region, helping to create a healthier environment for those who work and reside in the local area. The Development makes use of Immingham as an already industrial setting, utilising the capacity and infrastructure, along with the expertise that already exist there.

The design evolution of the Proposed Development has been informed by and had consideration of the location of existing urban areas, committed development and development allocations, environmental constraints, and engineering constraints. The Application is therefore considered to be in accordance with the spatial strategy of North Lincolnshire.

CS2: Delivering More Sustainable Development

In supporting the delivery of the spatial strategy set out in policy CS1, as well as determining how future development needs will be met in North Lincolnshire, a sequential approach will be adopted. Development should be focused on:

- Previously developed land and buildings within the Scunthorpe urban area, followed by other suitable infill opportunities within the town, then by appropriate greenfield urban extensions.
- Previously developed land and buildings within the defined development limits of North Lincolnshire's Market Towns, followed by other suitable infill opportunities then appropriate small scale greenfield extensions to meet identified local needs.
- Small scale developments within the defined development limits of rural settlements to meet identified local needs.

Any development that takes place outside the defined development limits of settlements or in rural settlements in the countryside will be restricted. Only development which is essential to the functioning of the countryside will be allowed to take place. This might include uses such as that related to agriculture, forestry or other uses which require a countryside location, or which will contribute to the sustainable development of the tourist industry.

A 'sequential approach' will also be applied to ensure that development is, where possible, directed to those areas that have the lowest probability of flooding, taking

The Proposed Development has the purpose of delivering more sustainable development not just on a regional scale, but also on a national scale by supporting the UK's transition to Net Zero by providing the infrastructure to contribute towards decarbonisation of the UK. It will also promote use of this technology, contributing to the delivery of similar developments and decarbonising the industrial sector. Through this employment opportunities will be generated, positively contributing to the socioeconomic wellbeing of the surrounding area.

The Development within North Lincolnshire is proposed in an already industrial setting making use of previously developed land. It is necessary for the Pipeline to pass through areas outside of settlement boundaries and use land that has not previously been developed in order to connect with the existing LOGGS pipeline near Theddlethorpe.

The Proposed Development has been designed to a high standard, maximising the use of latest technology and sustainable design techniques, as outlined in ES Chapter 2: Design Evolution and Alternatives [EN07008/APP/6.2.2].

Policy Reference

Relevant Policy Text: Requirement of the Policy

Compliance Assessment: How the Proposed Development addresses the policy

account the vulnerability of the type of development proposed, its contribution to creating sustainable communities and achieving the sustainable development objectives of the plan. Where development does take place in the flood plain, mitigation measures should be applied to ensure that the development is safe.

All future development in North Lincolnshire will be required to contribute towards achieving sustainable development. Proposals should comply with the overall spatial strategy together with the following sustainable development principles:

- Be located to minimise the need to travel and to encourage any journeys that remain necessary to be possible by walking, cycling and public transport. It should be compliant with public transport accessibility criteria as set out in the Regional Spatial Strategy
- Be located where it can make the best use of existing transport infrastructure and capacity, as well as taking account of capacity constraints and deliverable transport improvements particularly in relation to junctions on the Strategic Road Network
- Where large freight movements are involved the use of rail and water transport should be maximised
- Contribute towards to the creation of locally distinctive, sustainable, inclusive, healthy and vibrant communities.
- Contribute to achieving sustainable economic development to support a competitive business and industrial sector.
- Ensure that everyone has access to health, education, jobs, shops, leisure and other community and cultural facilities that they need for their daily lives.
- Ensure the appropriate provision of services, facilities and infrastructure to meet the needs of the development, but where appropriate it is to be recognised that a phased approach may not be required on small scale development proposals.
- To be constructed and operated using a minimum amount of non-renewable resources including increasing the use of renewable energy in construction and operation.
- Take account of local environmental capacity and to improve air, water and soil quality and minimise the risk and hazards associated with flooding, and
- Be designed to a high standard, consistent with policy CS5, and use sustainable construction and design techniques.

All change will be managed in an environmentally sustainable way by avoiding/minimising or mitigating development pressure on the area's natural and built environment, its existing utilities and associated infrastructure and areas at risk of flooding. Environmental impacts to or from development that cannot be avoided should be adequately mitigated for it to be acceptable.

CS5: Delivering Quality Design in North Lincolnshire All new development in North Lincolnshire should be well designed and appropriate for their context. It should contribute to creating a sense of place. The council will encourage contemporary design, provided that it is appropriate for its location and is informed by its surrounding context. 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.

New development in North Lincolnshire should:

The design of the Proposed Development has evolved through a series of steps and design iterations. Design evolution has been informed by environmental assessments, engineering considerations, stakeholder feedback and through the consultation exercises undertaken. These have taken into account site context, existing features within and adjacent to the order limits, nearby sensitive receptors and assets, consultation responses and access considerations to develop a good design that balances the need to maximise the most efficient route with avoidance and mitigation of impacts and provision of environmental and other enhancements. Chapter 2:

Policy Reference

Relevant Policy Text: Requirement of the Policy

- Contribute towards creating a positive and strong identity for North Lincolnshire by enhancing and promoting the image of the area through the creation of high-quality townscapes and streetscapes.
- Ensure it takes account of the existing built heritage from the earliest stages in the design process, in particular terms of scale, density, layout and access.
- Incorporate the principles of sustainable development throughout the whole design
 process. This will include site layout, minimising energy consumption, maximising
 use of on-site renewable forms of energy whilst mitigating against the impacts of
 climate change, for instance flood risk.
- Create safe and secure environments, which reduce the opportunities for crime and increase the sense of security for local residents through the use of Secured by Design guidance.
- Consider the relationship between any buildings and the spaces around them, and how they interact with each other as well as the surrounding area. The function of buildings should also be considered in terms of its appropriateness for the context in which it is located.
- Create attractive, accessible and easily distinguished public and private spaces that complement the built form.
- Support sustainable living and ensure that a mix of uses, which complement one another are incorporated.
- Provide flexibility in that new and existing buildings and spaces are able to respond to future social, technological, environmental and economic needs.
- Be easily accessible to all users via recognisable routes, interchanges and landmarks that are suitably connected to public transport links, community facilities and services and individual communities and neighbourhoods in North Lincolnshire. Buildings and spaces should be accessible by all sections of the community and ensure that the principles of inclusive design are reflected.
- Incorporate appropriate landscaping and planting which enhances biodiversity or geological features whilst contributing to the creation of a network of linked greenspaces across the area. Tree planting and landscaping schemes can also assist in minimising the impacts of carbon emissions upon the environment.
- Integrate car parking provision within the existing public realm and other pedestrian and cycle routes.

Compliance Assessment: How the Proposed Development addresses the policy

Design Evolution and Alternatives of the ES [EN070008/APP/6.2.2] details the design process undertaken.

The design development process included the identification of mitigation commitments, both for mitigation embedded in the design and also good practice mitigation. The route of the pipeline has been influenced by the desire to reduce potential likely effects on communities, for example, the route seeks to limit adverse impacts on habitats, historic receptors and residential buildings.

CS6: Historic Environment

The council will promote the effective management of North Lincolnshire's historic assets

The design of the Proposed Development has been selected to reduce the impact on the historic environment by avoiding where practicable designated heritage assets.

- Safeguarding the nationally significant medieval landscapes of the Isle of Axholme (notably the open strip fields and turbaries) and supporting initiatives which seek to realise the potential of these areas as a tourist, educational and environmental resource.
- Preserving and enhancing the rich archaeological heritage of North Lincolnshire
- Ensuring that development within Epworth (including schemes needed to exploit the
 economic potential of the Wesleys or manage visitors) safeguards and, where
 possible, improves the setting of buildings associated with its Methodist heritage.

The design of the Proposed Development has been selected to reduce the impact on the historic environment by avoiding where practicable designated heritage assets. Chapter 8: Historic Environment of the ES [EN070008/APP/6.2.8] contains an assessment of the Proposed Developments likely impacts on the historic environment.

Chapter 8: Historic Environment [EN070008/APP/6.2.8] of the ES assesses the effects during the construction, operation and decommissioning phase of development. Embedded mitigation measures have been incorporated into the design process of the Proposed Development and where required further mitigation measures are presented within the Draft CEMP in Appendix 3-1 of the ES [EN070008/APP/6.4.3.1].

Policy Reference

Relevant Policy Text: Requirement of the Policy

 Ensuring that development within North Lincolnshire's Market Towns safeguards their distinctive character and landscape setting, especially Barton upon Humber, Crowle and Epworth.

The council will seek to protect, conserve and enhance North Lincolnshire's historic environment, as well as the character and setting of areas of acknowledged importance including historic buildings, conservation areas, listed buildings (both statutory and locally listed), registered parks and gardens, scheduled ancient monuments and archaeological remains.

All new development must respect and enhance the local character and distinctiveness of the area in which it would be situated, particularly in areas with high heritage value. Development proposals should provide archaeological assessments where appropriate.

CS12: South Humber Bank Strategic Employment Site – A Broad Location

The South Humber Bank Strategic Employment Site (SHBSES) will be reserved for B1, B2 and B8 port related activities to take special advantage of its location, flat topography and adjacent a deep water channel of the River Humber as an extension to Immingham Port and the Humber Sea Terminal.

The delivery of the SHBSES will be achieved through the following Plans, Boards and Delivery Groups:

- South Humber Bank Master Plan (2004):
- Individual South Humber Bank Infrastructure, Economic and Environmental Studies that update the South Humber Bank Master Plan where relevant
- South Humber Bank Gateway Board (formed May 2009)
- South Humber Bank Gateway Delivery Group and its South Humber Bank Ecology SubGroup

The Plans, Strategies and Investment Decisions and Programmes for the SHBSES should:

a) Role and Function of the Site

Maintain, increase and enhance the role of Immingham Port as part of the busiest port complex in the UK, by extending port related development northwards from Immingham Port to East Halton Skitter in harmony with the environmental and ecological assets of the Humber Estuary. This will include safeguarding the site frontage to the deep water channel of the River Humber for the development of new port facilities and the development of new pipe routes needing access to the frontage. The deep water channel offers the opportunity of developing a new port along the River Humber frontage between Immingham Port and the Humber Sea Terminal. The role of the South Humber

Compliance Assessment: How the Proposed Development addresses the policy

Temporary and permanent likely significant effects arising from impacts during construction, operation and decommissioning of the Proposed Development have been considered and the full extent is detailed in Chapter 8: Historic Environment of the ES [EN070008/APP/6.2.8].

The historic environment assessment has identified likely significant residual effects on non-designated buried archaeological remains at one site due to construction of the pipeline, at Section 5 – cropmark enclosures at Theddlethorpe [622]. The historic environment assessment has identified likely significant residual effects on three designated heritage assets, the grade II* listed Church of St Edmund in Riby, the grade II listed Ashleigh Farm at Theddlethorpe, and the grade II listed Manor House and non-designated former parkland at Barnoldby le Beck due to construction of the pipeline.

Where impacts cannot be avoided, mitigation will take the form of archaeological investigation and recording, to be undertaken as advanced works. A detailed archaeological mitigation strategy will be developed and agreed during Examination; however, it is anticipated that the following mitigation approaches may be relevant: Surface artefact collection / test pitting / metal detection where required in advance of archaeological excavation and recording; Topographic survey of earthworks to allow reinstatement works post-construction.

Archaeological excavation and recording in areas where significant archaeological remains have been recorded/identified, including by archaeological Strip, Map and Sample.

The Proposed Development within North Lincolnshire is located within the South Humber Bank Strategic Employment Site vicinity. Within this the Development will contribute towards economic growth in the region, helping attract investment inwards to the Port of Immingham and the wider region beyond.

The pipeline route has been selected and designed to reduce impacts on flood risk, avoiding high flood risk areas where possible. The design of the above ground infrastructure would be appropriately designed, to ensure no adverse flood risk is generated in areas adjacent, including mitigation measures that will contribute to improvements in infrastructure within the South Humber Bank region.

The Proposed Development is supported with a FRA in Appendix 11-5 of the ES **[EN070008/APP/6.4.11.5].** Consultation with relevant partners has taken place with key stakeholders including the Environment Agency, Natural England, Canals and Rivers Trust. Mitigation measures and management plans are presented within the Draft CEMP in Appendix 3-1 of the ES **[EN070008/APP/6.4.3.1]**.

Any impacts on biodiversity and ecology will also be mitigated against. A Report to Inform the Habitats Regulation Assessment **[EN070008/APP/6.5]** has been undertaken and mitigation methods where necessary, have been proposed.

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Compliance Assessment: How the Proposed Development addresses the policy

Ports should be strengthened by providing an increased number of jobs particularly giving employment opportunities for North Lincolnshire and North East Lincolnshire residents.

b) Economic Development

Diversify and develop the economies of North Lincolnshire and North East Lincolnshire Council areas within the Humber sub area's economy. This can be achieved in the following ways: by making the most of the multimodal transport links and proposed highway improvements on site and to the port entrance along the A160 from the A180: by enhancing and improving the railway line between the East Coast Main Line at Doncaster and Immingham; by enhancing the established South Humber Ports; by taking the sustainable opportunity to transfer goods by trans-shipping goods from the southern and south eastern UK ports and by offering berths for transporting goods by barge/boat inland along the well connected inland waterways; and by utilising the workforces of the nearby towns of Scunthorpe, Immingham, Grimsby and Cleethorpes. Attract value added employment port-related activities and maximise opportunities around the ports by enhancing and improving skills. This can be achieved by encouraging the expansion of existing training centres such as CATCH near Immingham and taking opportunities to create new training centres within the South Humber Ports area. These opportunities should also benefit the existing and growing economic clusters of the energy, chemicals and food sectors. This will include the diversification of the energy sector into the development of renewable energy such as biomass opportunities.

c) Infrastructure

Develop an infrastructure strategy to improve transport accessibility and movement, drainage and flood defence.

Improve multimodal land access to the South Humber Ports and develop their complementary roles. The transport strategy includes the delivery of the South Humber Bank Transport Study outcomes within the SHBSES, the Highways Agency A160/A180 Highway Improvement Scheme (top priority in the Regional Transport Priorities) anticipated to begin construction around 2015 and the Network Rail Freight Utilisation Strategy that programmes line speed and signalling improvements between Immingham and Doncaster (being carried out within the current strategy 2007 and 2014) and the Killingholme Loop (that will enable a one way freight rail route into the South Humber Ports) post 2015.

In improving transport accessibility, it is vital that the ports can be accessed by a range of transport modes, including public transport, cycling and walking. According, robust travel plans should be developed to show how the area will be linked to surrounding settlements.

Development will be assisted by a drainage programme. Works are programmed to start and be completed in 2011. The outcome will be to include surface water and sewage management solutions to accommodate development of the SHBSES without harming the natural environment.

Safeguard and improve the flood defences of the SHBSES from tidal flooding through partnership working with the Environment Agency and its Humber Flood Risk Management Strategy (March 2008), North Lincolnshire and North East Lincolnshire Councils, Yorkshire Forward, landowners and industry. This will include managing the

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predicted effects of climate change in harmony with the development of port related

activities by managing and minimising the risk of flooding.

d) Environment

Protect and enhance the biodiversity and landscape character of the Humber Estuary by harmonising the ecology, nature conservation and landscape with port related development activities. This will be achieved by implementing the South Humber Gateway Conservation Mitigation Strategy Delivery Plan (SHGCMSDP). The SHGCMSDP will identify appropriate areas of mitigation for the loss of offsite SPA and Ramsar waterbird roosting and foraging habitat. These areas will be delineated and safeguarded in the Housing and Employment Land Allocations DPD. The SHGCMSDP will help unlock the economic development opportunity of the South Humber Bank Employment Site whilst ensuring the protection of the Humber Estuary Special Protection Area, SAC and Ramsar site and developing new green infrastructure. The delivery of this SHGCMSDP will link directly to the Green Infrastructure Strategy for North Lincolnshire and will be produced by partnership working with Natural England. Royal Society for the Protection of Birds (RSPB), Lincolnshire Wildlife Trust. Environment Agency, Yorkshire Forward, North Lincolnshire and North East Lincolnshire Councils, landowners and industry. New development will also need to harmonise with the North Killingholme Haven Pits SSSI and the Local Wildlife Sites such as Chase Hill Wood (a proposed Local Nature Reserve) Burkinshaws Covert, Halton Marsh Clav Pits and Rosper Road Ponds.

CS17: Biodiversity

The council will promote effective stewardship of North Lincolnshire's wildlife through:

- 1. Safeguarding national and international protected sites for nature conservation from inappropriate development.
- 2. Appropriate consideration being given to European and nationally important habitats
- 3. Maintaining and promoting a North Lincolnshire network of local wildlife sites and corridors, links and stepping stones between areas of natural green space. 4. Ensuring development retains, protects and enhances features of biological and
- geological interest and provides for the appropriate management of these features.
- 5. Ensuring development seeks to produce a net gain in biodiversity by designing in wildlife, and ensuring any unavoidable impacts are appropriately mitigated for.
- 6. Supporting wildlife enhancements that contribute to the habitat restoration targets set out in the North Lincolnshire's Nature Map and in national, regional and local biodiversity action plans.
- 7. Improving access to and education/interpretation of biodiversity sites for tourism and the local population, providing their ecological integrity is not harmed.

The Proposed Development has close proximity to Ramsar, SPA, SAC, SSSI and

Compliance Assessment: How the Proposed Development addresses the policy

use of existing facilities and pipeline where these designations may be affected. Where biodiversity may be affected by development, appropriate mitigation measures will be considered and implemented to offset any adverse impacts caused.

NNR designations. However, the route has been designed to avoid these and make

A Report to Inform the Habitats Regulations Assessment [EN070008/APP/6.5] has been undertaken inrelation to any likely significant effects.

The potential effects of the Proposed Development on biodiversity and ecology are assessed in Chapter 6: Ecology and Biodiversity of the ES [EN070008/APP/6.2.6]. Within Chapter 6 it is acknowledged that ecology and biodiversity are interrelated with other environmental effects and so other ES Chapters also include reference to ecology and biodiversity including:

- Chapter 7: Landscape and Visual;
- Chapter 11: Water Environment:
- Chapter 13: Noise and Vibration:
- Chapter 14: Air Quality: and.
- Chapter 20: Cumulative Effects Assessment

The surveys that have informed the assessments are contained within ES Volume III. The potential effects on ecology during construction will be managed through the implementation of mitigation measures that will be set out within the Draft CEMP [EN070008/APP/6.4.3.1].

CS19: Flood Risk

The council will support development proposals that avoid areas of current or future flood risk, and which do not increase the risk of flooding elsewhere. This will involve a risk based sequential approach to determine the suitability of land for development that

Chapter 11 of the ES: Water Environment [EN070008/APP/6.2.11] and its relevant appendices make assessment of the possible significant effects of the Proposed Development on water resources and flood risk. The majority of the Proposed

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uses the principle of locating development, where possible, on land that has a lower flood risk, and relates land use to its vulnerability to flood. Development in areas of high flood risk will only be permitted where it meets the following prerequisites: 1. It can be demonstrated that the development provides wider sustainability benefits to the community and the area that outweigh flood risk, 2. The development should be on previously used land. If not, there must be no reasonable alternative developable sites on previously developed land. 3. A flood risk assessment has demonstrated that the development will be safe, without increasing flood risk elsewhere by integrating water management methods into development. Development within the Lincolnshire Lakes area will comply with the flood management principals set out in the Western Scunthorpe Construction flood mitigation measures have been described within the Draft CEMP in Urban Extension Exception Test Strategy. Any further flood management proposals will have to be agreed by both the council and the Environment Agency during the process of the Lincolnshire Lakes Area Action Plan. Development proposals in flood risk areas which come forward in the remainder of North Lincolnshire shall be guided by the Strategic Flood Risk Assessment for North Lincolnshire and North East Lincolnshire. This will ensure that proposals include site specific flood risk assessments which take into account strategic flood management objectives and properly apply the Sequential and, where necessary, Exception Tests. In addition development will be required, wherever practicable, to incorporate Sustainable Urban Drainage Systems (SUDS) to manage surface water drainage. The Council will also seek to reduce the increase in flood risk due to climate change through measures to reduce carbon dioxide emissions.

CS20: Sustainable Waste Management

of waste in the following broad strategic areas:

- Scunthorpe
- South Humber Bank Employment Area
- Flixborough Industrial Estate
- Power station sites and other high energy usage installations
- Farms which will directly use organic agricultural products derived from waste

In general, a sequential search will be made for the location of waste management facilities from the highest to lowest preference as follows:

- 1. On-site management of waste where it arises at retail, industrial and commercial locations, particularly in the main urban areas (The Proximity Principle)
- 2. Pursuit of neighbourhood self-sufficiency, at the lowest practicable level for the waste stream concerned (The Self-Sufficiency Principle)
- 3. Encouraging co-location of waste facilities at Materials or Resource Recovery Parks for example
- 4. Locations at existing mineral extraction and waste landfill sites
- 5. Locations at established and proposed industrial and business sites.
- 6. Locations in redundant farm buildings and associated land
- 7. Use of other previously developed land.

The Council will promote sustainable waste management by:

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Development is located in low flood risk areas although there are some areas of high and medium risk associated with watercourses. A Flood Risk Assessment is included within appendix 11-5 of the ES [EN070008/APP/6.4.11.5]. The FRA demonstrates how risk (for each phase of development) is managed to ensure that the development remains safe and operational throughout its lifetime, taking climate change into account, without increasing flood risk elsewhere and where possible reducing flood risk overall. The FRA recommends appropriate mitigation measures including flood resilience techniques.

ES appendix 3-1 [EN070008/APP/6.3] and mitigation with regards to facilities remaining operational during times of flood has been considered within the FRA. The effects of Climate change and climate change adaption has been considered throughout the design and selection process for the proposed route and when considering how it will be constructed and operated.

Chapter 15: Climate Change of the ES [EN070008/APP/6.2.15] includes a climate change resilience assessment to understand the resilience of the Proposed Development to projected future climate change impacts, including damage to the Proposed Development caused by accidents resulting from climate change. Chapter 15 concludes that there are no significant impacts on climate change resulting from the laying of this pipeline. Generally, the use of the pipelines offer a more climate friendly transportation method on emissions, as the alternative would consist of more road transport.

The Council will consider new and enhanced facilities for the treatment and management. The Consents and Agreements Position Statement [EN070008/APP/7.2] submitted in support of the application includes details of other environmental licenses, consents. and permits including waste, that would be required to construct, operate and maintain the Proposed Development. Waste management regulations will be adhered to.

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- Requiring Site Waste Management Plans for future major developments to minimise
 waste
- Requiring the integration of facilities for waste minimisation, re-use, recycling and composting, in association with the planning, construction and occupation of new development.
- Providing guidance on minimising potential social, environmental and economic impacts that are likely to arise in the development of waste infrastructure.
- Establishing a planning policy framework that identifies suitable locations for waste management.

CS21: Minerals

The Council will safeguard mineral resources in North Lincolnshire from other development that would prejudice future mineral extraction. To achieve this Mineral Safeguarding Areas will be identified in the Minerals and Waste DPD.

The Proposed Development is not expected to have any significant or adverse impacts on existing mineral sites and associated minerals infrastructure within the Lincolnshire County Council Authority Boundary.

Chapter 18: Material and Waste of the ES [EN070008/APP/6.2] reports the outcome of the assessment of the likely significant environmental effects of the Proposed Development on materials and waste. Chapter 18 includes a review of relevant documents with regards Minerals Safeguarding areas in proximity to the Draft Order Limits, highlighting that in North East Lincolnshire the Order Limits passes through a MSA for sand and gravel. Chapter 18 of the ES concludes that there will be no significant effects anticipated in relation to material and waste. The Proposed Development does not pass through any other Mineral Safeguarding Areas (MSAs),

D.7 North Lincolnshire Council: Planning Policy Accordance

North Lincolnshire Local Plan (Submission Version) November 2022 (Draft)

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Policy SS1: Presumption in Favour of Sustainable Development

- 1. Creating and delivering sustainable growth; growth that is not for its own sake, but which brings benefits for all sectors of the community, for both existing and new residents; lies at the heart of the spatial strategy for North Lincolnshire, with all new development contributing towards sustainable development. When considering development proposals, the council will take a positive approach that reflects the presumption in favour of sustainable development contained in the National Planning Policy Framework.
- a) The council will work proactively with applicants jointly to find solutions which mean that proposals can be approved, wherever possible, and to secure development that improves the economic, social and environmental conditions in North Lincolnshire.
- b) Planning applications that accord with the policies in this Local Plan (and, where relevant, with policies in Neighbourhood Plans) will be approved without delay, unless material considerations indicate otherwise.
- c) Where there are no policies relevant to the application or relevant policies are out of date at the time of making the decision, then the council will grant permission unless material considerations indicate otherwise taking into account whether:
 - Any adverse impacts significantly and demonstrably outweigh the benefits, when assessed against the NPPF, taken as a whole: or
- Specific policies in the NPPF or Local Plan indicate that development should be restricted.

Policy SS8: Employment Land Requirement (Including Strategic Employment Sites)

- 1. Over the period 2020 to 2038 provision will be made to deliver around 131.7 hectares of employment land.
- 2. The employment land requirement will be provided for in line with the overall Development Strategy identified in Policy SS2 and will be delivered by the sites allocated under Policy EC1 Employment Land Supply.
- **Employment Sites)** 3. In addition to the Employment Sites listed under EC1 the following Strategic Employment sites have also been identified: -
 - South Humber Bank
 - North Killingholme

Where the proposal is for business development under E(g) Use Class (i.e., offices, research and development, or other industrial processes), the local planning authority may seek to apply conditions limiting the ability to change use to other uses within Use Class E without the need for planning permission.

Proposals for the removal or the variation of condition where the LPA has restricted the use to E (G) Use Class (i.e. offices, research and development, or other industrial processes) to permit other uses under E (g) Classes beyond E(g) will only be acceptable where the sequential test against the network and hierarchy of town centres as defined in Policy TC1 is passed or where the proposed use can be shown to be clearly ancillary to existing uses on the site.

Compliance Assessment: How the Proposed Development addresses the policy

The Humber industrial cluster represents a unique emissions density within the UK, with decarbonisation of the Humber Energy Intensive Industry Cluster being required to meet the UK Government's legally binding target of achieving Net Zero by 2050. The wider Humber region will require multiple CO₂ storage options to promote greater onshore capture infrastructure development and underpin robust storage risk management through diversity of storage options.

The Proposed Development would support sustainable growth by providing an opportunity for inward investment into the region and a future low-carbon economy. The innovative technology proposed through the DCO will help the UK Government achieve energy diversity and provide resources for local and regional businesses. The Proposed Development also supports sustainable development and environmental objectives by supporting the UK's transition to Net Zero by providing the infrastructure to contribute towards decarbonisation of the UK. It will also promote use of this technology, contributing to the delivery of similar developments and decarbonising the industrial sector. Through this employment opportunities will be generated, positively contributing to the socio-economic wellbeing of the surrounding area

The Proposed Development will encourage growth within the Renewables and Energy sector and attract inward investment leading to economic growth and employment opportunities within the region.

The Needs Case Report [EN070008/APP/7.3] outlines employment opportunitiesChapter 16: Socio-Economic of the ES [EN070008/APP/6.2.16] assesses the likelysignificant effects of the Proposed Development on socio-economics the chapter considerseffects on employment and the local economy, users recreation routes and ProW, community severance and private assets.

Chapter 16 acknowledges that socio-economic impacts are interrelated with other environmental effects and so should be read in conjunction with:

Chapter 7: Landscape and Visual;

Chapter 12: Traffic and Transport;

Chapter 13: Noise and Vibration; and

Chapter 14: Air Quality

Chapter 16 acknowledges that although the construction period is temporary the construction of the Proposed Development will require 197 full-time equivalent construction jobs on site per day over the period. The Chapter concludes that there will be no potential significant adverse socio-economic effects during the construction or decommissioning phase of the Proposed Development and so no extra mitigation measures are presented as part of the DCO.

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Policy EC2: Existing Employment Areas

 Existing employment areas as identified on the Policies Map will be safeguarded for employment uses. Proposals which promote development or reuse of vacant sites located within existing employment areas for employment use will be supported subject to other relevant policies in the Plan.

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The Order Limits of the Proposed Development will not impact any existing employment areas identified on the Draft Local Plan Policy Map.

Policy DQE1: Protection of Landscape, Townscape and Views

Landscape Protection

- 1. Development proposals that would cause unacceptable harm and do not respect and protect the distinctive character and quality of the landscape or important features or views will not be permitted. Proposals should have regard to the North Lincolnshire Landscape Character Assessment and should contribute to the conservation or enhancement of Character and setting
- 2. Proposals should have particular regard to maintaining and responding positively to any natural and man-made features within the landscape and townscape which positively contribute to the character of the area. These may include but are not limited to historic buildings and monuments, other landmark buildings, topography, trees and woodland, hedgerows, walls, water features, field patterns, and the intervisibility between historic rural settlements.
- 3. Development proposals should:
- a. relate well to local topography and the built form and be of an appropriate scale, siting, layout, design, density and use of materials to minimise the impact on the landscape character of the site and its surroundings;
- include provisions for the long-term management and maintenance of any existing and proposed landscaping, woodlands and trees;
- **c.** avoid detrimental effects on, or the loss of, features that make a significant contribution to the particular landscape character type;
- d. aim to conserve, enhance or restore important natural and historic landscape features, including those relating to rivers, streams and the coast, and provide measurable biodiversity net gain particularly where they contribute to Nature Recovery Networks:
- e. maintain and extend tree cover, where practicable and appropriate, through the retention of important trees, replacement of trees to be lost, and new planting to support green infrastructure, with respect to habitat priorities within the Biodiversity Opportunity Mapping and/or Local Nature Recovery Strategy:
- f. not have an unacceptable visual impact on skylines, key views and roofscapes and undertake measures, such as landscaping, to reduce those impacts where appropriate;
- g. be supported by a landscaping scheme that includes new landscaping measures that positively integrate the development into the landscape character of the area; and,
- h. be supported by a landscape analysis and management plan in appropriate cases. This should take account of, as a minimum, the most up to date Lincolnshire Landscape Character Assessment and information obtained from the North Lincolnshire Historic Environment Record.
- 4. Where a proposal may result in significant harm it may, exceptionally, be permitted if the overriding benefits of the development demonstrably outweigh the harm. In such circumstances, the harm should be minimised and mitigated.

Create and protect views

The majority of the Proposed Development is located in rural areas, a main consideration in the design evolution of the Proposed Development has been to locate the proposed pipeline corridor away from sensitive receptors and built-up areas.

The visual impact of the Proposed Development has been assessed within Chapter 7: Landscape and Visual Impacts of the ES [EN070008/APP/6.2.7]. Whilst there are temporary significant impacts on landscape which occur in North East Lincolnshire, the landscape and visual impact of the proposed development can be considered outweighed by the clear demonstrable benefits of the proposed national significant infrastructure.

It is confirmed in Chapter 7 that the main impact on landscape takes place during the construction phase of the Proposed Development. The main potential impacts relating to construction include changes to views through the addition of detracting visual features associated with the construction process. This would result in short-term significant adverse effects at four representative viewpoints.

Embedded mitigation measures have been incorporated into the design to reduce the likely effects. This includes siting and routing selection, construction management, and landscape design measures. Although the mitigation measures set out would assist in reducing the impacts at the identified locations, the reduction would be insufficient to reduce the impact rating and therefore effects to below significant levels.

With the incorporation of embedded design mitigation and additional mitigation, there would be short term, temporary significant effects on the Lincolnshire Wolds AONB during construction. Effects would reduce to not significant during operation and decommissioning.

Policy Reference

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Compliance Assessment: How the Proposed Development addresses the policy

5. All development proposals should take account of views in to, out of, and within development areas. Schemes should be designed to preserve or enhance key local views and vistas and create new public views, where possible by utilising considerate development, layout and design. Particular consideration should be given to views of significant buildings and views within landscapes, which are more sensitive to change due to their open, exposed character and extensive intervisibility from various viewpoints. **Cumulative Impacts**

6. In considering the impacts of a proposal, both the cumulative impacts and individual impacts will be considered. Developers should complete a site-specific landscape appraisal, proportionate to the anticipated scale and impact of the proposal. This appraisal should assess the character and appearance of the site, respond to landscape character, climate change and flood alleviation, where appropriate, and propose improvements to levels of amenity, incorporating measurable biodiversity net gain measures identified through ecological assessment

Proposed Extension to the Lincolnshire Wolds Area of Outstanding Natural Beauty (AONB)

7. Priority will 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). The considerations set out in this policy are particularly important when determining proposals which have the potential to impact upon the proposed extension to the Lincolnshire Wolds AONB.

Areas of High Landscape Value

- 8. Areas of High Landscape Value are considered to be of high landscape quality with strong distinctive characteristics which make them particularly sensitive to development. A review of Areas of High Landscape Value has been undertaken in the latest North Lincolnshire Landscape Character Assessment. In light of this review, it is proposed that the following Areas of High Landscape Value should be protected:
- Lincoln Edge Woodland and Heathland areas east of Scunthorpe, extending south to Kirton in Lindsey;
- b. Lincoln Edge Cliff between Whitton and Flixborough;
- c. Flat Valley Bottom Farmland, Vale of Ancholme;
- d. Heathy Woodland near Wrawby Moor
- e. Wolds Villages Scarp Slope; and
- f. Deepdale

9. The considerations set out in this policy are particularly important when determining proposals which have the potential to impact upon Areas of High Landscape Value, as identified on the Proposals Map.

Policy DQE3: Biodiversity and Geodiversity

- 1. All development schemes shall, as appropriate to their nature and scale:
- a. protect, manage and enhance natural capital, the network of habitats, species and sites of international, national and local importance (statutory and non-statutory), including sites that meet the criteria for selection as a Local Site* unless the reasons for the scheme clearly outweigh the nature conservation value of the site itself; and
- minimise, mitigate and compensate against impacts on natural capital, ecosystem services, biodiversity and geodiversity where adverse effects are unavoidable; and,

The design for the Proposed Development has been chosen with the aim of minimising adverse effects on the environment including biodiversity. The potential effects of the Proposed Development on biodiversity and ecology are assessed in Chapter 6: Ecology and Biodiversity of the ES [EN070008/APP/6.2.6].

The potential effects on ecology during construction will be managed through the implementation of mitigation measures that will be set out within the Draft CEMP [EN070008/APP/6.4.3.1]. With the application of the committed mitigation measures, no

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use the latest version of the DEFRA Biodiversity Metric to demonstrate that a proposal will deliver a minimum 10% measurable biodiversity net gain (unless national standards increase this in the future); and

- d. retain and enhance existing landscape and natural features (e.g. trees, hedges, riverbanks, watercourses, water bodies and important habitats); or
- e. ensure an alternative corridor can be provided to ensure equivalent ecological connectivity is maintained; and
- f. include provisions for the long-term management and monitoring of habitats created; and,
- g. require sufficient ecological surveys prior to decision-making to identify impact avoidance, mitigation, compensation and enhancement measures for protected and priority species and habitats and threats from invasive non-native species. Where appropriate, sufficient information to support site-specific or strategic species licensing decisions should be provided.

Proposals which may affect an SPA, SAC or Ramsar site or functionally linked land supporting these sites will be assessed according to their implications for the site's conservation objectives. Proposals not directly connected with, or necessary for, the management of the site and which are likely to have a significant effect on the site, either individually or in combination with other plans or projects, shall be subject to an Appropriate Assessment. Where it is not possible to demonstrate that development will not adversely affect the integrity of a European Site, the development will not be permitted unless it can be conclusively demonstrated that:

- a. there is no alternative solution; and,
- b. there are imperative reasons of overriding public interest for the development.
 3. Development proposals which are likely to have an adverse effect on a Site of Special Scientific Interest (SSSI) or National Nature Reserve (NNR) will not be permitted unless the reasons for the development clearly outweigh the national nature conservation value of the site itself and the national policy to safeguard the network of such sites.
- 4. Sites with local designations including Local Sites*, sites that meet the criteria for designation as a Local Site, and Local Nature Reserves should be protected from significant adverse effects, unless the reasons for the development clearly outweigh the local nature conservation value of the site.
- 5. Where adverse effects on SSSIs, NNRs or sites with local designations are likely permission will only be granted where it can be demonstrated that the effects can be avoided and/or minimised to an acceptable level or, as a last resort, appropriate compensatory measures provided.
- 6. Development resulting in the loss or deterioration of irreplaceable habitats, such as ancient woodland and aged or veteran trees, will be refused unless there are wholly exceptional reasons** and a suitable compensation strategy exists.
- 7. Wherever possible, harm to natural capital, ecosystem services, biodiversity and geodiversity should be avoided. In all cases where development is permitted which may damage the nature conservation value of the site, such damage shall be kept to a minimum. Developers will be required to ensure that impacts are appropriately mitigated with compensation measures towards loss of habitat used only as a last resort where there is no alternative. Where any mitigation and compensation measures are required,

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significant adverse residual effects are anticipated during construction relating to ecology and biodiversity.

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they should be in place before development activities start that may disturb protected or important habitats and species. The use of conditions or planning obligations to ensure the protection and enhancement of the site's nature conservation value will be required. together with monitoring and remedial measures, if appropriate and practicable or to enable major development. If significant harm to biodiversity resulting from a development cannot be avoided, mitigated or compensated for, planning permission will be refused. 8. All schemes shall, as appropriate to their nature and scale, use the DEFRA biodiversity metric to demonstrate that a proposal will deliver a minimum 10% measurable net gain for biodiversity, subject to any exemptions or thresholds identified in national policy. Measures required to deliver a measurable net gain for biodiversity shall be additional to any mitigation or compensation measures required as a consequence of identified impacts. Designated sites protected species and irreplaceable habitat impacts need to be addressed separately, in accordance with criteria 1-5 in this Policy. Where possible, biodiversity units should be delivered on site. Those that cannot viably be delivered on site should be delivered locally, according to a local plan or strategy***. Where suitable compensatory habitats are not available locally then investment in national conservation priorities may take place through a tariff.

- 9. Development intended to conserve or enhance biodiversity shall be supported. Provision will be made for the creation of new wildlife habitats in both rural and urban areas. In granting planning permission, the creation of such areas will be required for the following types of development:
- a. in association with the reclamation of former mineral workings and waste disposal sites;
- in association with schemes for derelict land clearance;
- on land which is no longer required for long-term agricultural use; and where habitat creation is required in order to achieve measurable mandatory biodiversity net gain.

Policy DQE5: Managing Flood Risk

- 1. The risk and impact of flooding will be minimised through:
- a. directing new development to areas with the lowest probability of flooding;
- ensuring that all new development addresses the effective management of all sources of flood risk:
- c. ensuring that development does not increase the risk of flooding elsewhere; and
- d. ensuring wider environmental benefits of development in relation to flood risk. A site-specific flood risk assessment (FRA) should be provided for all development in Flood Zone 2 and 3. In Flood Zone 1 a FRA should accompany all proposals for development of sites of 1 hectare or more or land which has been identified by the Local Lead Flood Authority as having critical drainage problems or land that may be subject to other sources of flooding where development would introduce a more vulnerable use.

 2. The Council will support development proposals within areas at risk of flooding (flood zones 2 and 3 or at risk as shown on the flood hazard maps in the Strategic Flood Risk Assessment), where it meets the following prerequisites:
 - a. it can be demonstrated that there are no other sites available at a lower risk of flooding (i.e. that the sequential test is passed). The sequential test will be based on a districtwide area of alternative sites unless local circumstances relating to the catchment area for the development justify a reduced search area, i.e. there is a specific need for the development in that location. The

Chapter 11 of the ES: Water Environment [EN070008/APP/6.2.11] and its relevant appendices make assessment of the possible significant effects of the Proposed Development on water resources and flood risk.

The pipeline route was selected and designed to reduce the impact on flood risk, avoiding flood zone 2 and 3 areas where possible. However, it has been necessary to locate the Immingham Facility and Theddlethorpe Facility in an area of Flood Zone 3 to be suitably located to emitters and the existing LOGGS pipeline respectively.

The Sequential Test included in the FRA was carried out to assess the flood risk for the Proposed Development and to direct it to areas of lowest probability of flooding (flood zone 1) where possible. Elements of the Proposed Development including the Immingham Facility, Theddlethorpe Facility and sections of the pipeline are located in Flood Zones 2 & 3. The Proposed Development is classed as 'Essential Infrastructure' which is considered to be acceptable in the Flood Zones 1 and 2 and also in Flood Zone 3 where the requirements of an Exception Test are met.

The Flood Risk Assessment is included within appendix 11-5 of the ES [EN070008/APP/6.4.11.5]. The FRA demonstrates how risk (for each phase of

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sequential test is not required for sites allocated in the Local Plan, for minor development (as defined in Planning Practice Guidance, paragraph 046 (Reference ID:7-046-20140306) or for change of use (except for a change of use to a caravan, camping or chalet site, or to a mobile home or park home site);

- it can be demonstrated that the development provides wider sustainability benefits to the community and the area, that outweigh flood risk;
- c. a flood risk assessment has demonstrated that the development will be safe for its lifetime, taking into account the latest guidance and allowances for climate change, without increasing flood risk elsewhere, has integrated water management methods into the development, and incorporated mitigation measures in line with the Standing Advice set out in the SFRA, which has been agreed between the Council and the Environment Agency.
- 3. All development proposals, including proposals in flood zone 1, will be permitted providing it is demonstrated that:
 - a. the peak rate of runoff over the lifetime of the development, allowing for climate change, is no greater for the developed site than it was for the undeveloped site;
 - b. the post-development volume of runoff, allowing for climate change over the development lifetime, is no greater than it would have been for the undeveloped site. If this cannot be achieved, then the maximum discharge from the site should not exceed the calculated greenfield runoff rate for all rainfall events, up to and including the 1% annual probability event plus allowance for climate change:
 - c. the development incorporates appropriate mitigation so that flooding of property in and adjacent to the development would not occur for 1% annual probability event, with appropriate allowance for climate change, and exceedance flood flow paths are taken into account;
 - d. the proposals in the first instance consider water re-use measures to encourage the conservation of water before infiltration to manage surface water, wherever this is feasible:
 - e. The proposal should consider the full separation of foul and surface water flows within the development.
 - f. the final discharge locations have the capacity to receive all foul and surface water flows from the development into water bodies and into sewers, including discharge by infiltration. Where capacity is not currently available within the public sewer network and/or receiving wastewater treatment facility it can be demonstrated that it can be made available in time to serve the development:
 - g. there is a management and maintenance plan for drainage and flood risk management infrastructure (where appropriate) for the lifetime of the development, which includes the implementation arrangements for adoption by any public authority, statutory undertaker or management company and any other arrangements to secure the operation and mitigation measures of the scheme throughout its lifetime; the final destination of the discharge complies with the following priority order to:
- water re-use at point of run-off;
- ground via infiltration;

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development) is managed to ensure that the development remains safe and operational throughout its lifetime, taking climate change into account, without increasing flood risk elsewhere and where possible reducing flood risk overall. The FRA recommends appropriate mitigation measures including flood resilience techniques.

Construction flood mitigation measures have been described within the Draft CEMP in ES appendix 3-1 **[EN070008/APP/6.4.3.1]** and mitigation with regards to facilities remaining operational during times of flood has been considered within the FRA.

The effects of Climate change and climate change adaption has been considered throughout the design and selection process for the proposed route and when considering how it will be constructed and operated.

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- a water body; surface water sewer.
 - h. where appropriate, SuDS have been included in line with the requirements of Policy DQE6 Sustainable Drainage Systems of this Plan.

Policy DQE12: Protection of Trees, Woodland and Hedgerows

- 1. Proposals for all new development will, wherever possible, ensure the retention of trees, woodland and hedgerows. Particular regard will be given to protecting their amenity value within and adjacent to settlements.
- Development resulting in the loss or deterioration of irreplaceable habitats such as ancient woodlands, aged or veteran trees, and historic hedgerows should be refused unless there are wholly exceptional reasons and a suitable compensation strategy exists.
 Where trees which contribute to local amenity or local landscape character are at risk the Council will be proactive in protecting such features through the use of Tree Preservation Orders or other applications of its powers.
- 4. Landscaping and tree and hedgerow planting schemes will be required to accompany applications for new development, having regard to the Biodiversity Opportunity Mapping and contributing towards Nature Recovery Networks. Developers will be encouraged to maximise on-site tree canopy cover in line with local and/or national canopy cover targets 5. Reference should also be made to the requirements of Policy DQE2: Landscape Enhancement, Policy DQE3: Biodiversity and Geodiversity, and Policy DQE11: Green Infrastructure Network in this Plan.

Wherever possible, mitigation has been embedded to avoid sensitive ecological features, for example through careful routeing to avoid habitats such as woodland and veteran trees. Where it is not possible to avoid adverse effects, additional mitigation is proposed. A Draft CEMP is provided in Appendix 3-1 of the ES [EN070008/APP/6.4.3.1]

There is no ancient woodland within the Order Limits. Veteran trees have been identified within the Order Limits at Barnoldby le Beck parkland as detailed in the Arboriculture Report in ES Appendix 6-10 **[EN070008/APP/6.4.6.10].** Whilst a small area of the parkland habitat will be lost, the veteran trees will be avoided. Mitigation measures will reduce any impacts on the veteran trees.

Policy HE1: Conserving and Enhancing the Historic Environment

Heritage Protection

1. Development proposals must value, protect, conserve and seek opportunities to enhance the historic environment of North Lincolnshire. Proposals that would result in unacceptable harm to heritage assets and their settings, will not be permitted. Proposals may exceptionally, be permitted if the need for, and overriding public benefits of the development demonstrably outweigh the harm. In the case of heritage assets of the highest significance this would be wholly exceptional. In all cases, harm to heritage assets should be minimised and mitigated.

Heritage Assets

- 2. Where a development proposal would affect the significance of a heritage asset (whether designated or non-designated), including any contribution made to its setting, it must be informed by proportionate historic environment assessments and evaluations (such as heritage impact assessments, desk based appraisals, field evaluation and historic building reports) that:
 - a. identify all heritage assets likely to be affected by the proposal, applications must consult the North Lincolnshire Historic Environment Record as a minimum requirement;
 - explain the nature and degree of any effect on elements that contribute to their significance and demonstrating how, in order of preference, any harm will be avoided. minimised or mitigated:
 - provide a clear explanation and justification for the proposal in order for the harm to be weighed against public benefits; and,
 - d. demonstrate that all reasonable efforts have been made to sustain the existing
 use, find new uses, or mitigate the extent of the harm to the significance of the

Chapter 8: Historic Environment [EN070008/APP/6.2.8] assesses the effects during the construction, operation and decommissioning phase of development. Embedded mitigation measures have been incorporated into the design process of the Proposed Development and where required further mitigation measures are presented within the Draft CEMP in Appendix 3-1 of the ES [EN070008/APP/6.4.3.1].

The pipeline route of the Proposed Development has been selected to reduce the impact on the historic environment by avoiding where practicable designated heritage assets. Non-designated and designated heritage assets have been included in the environmental impact assessment as identified within Part 5.8 and assessed against its value based on professional judgements informed by guidance and national policy.

The historic environment has been considered through the design process of the Proposed Development. Temporary and permanent likely significant effects arising from impacts during construction, operation and decommissioning of the Proposed Development have been considered and the full extent is detailed in Chapter 8: Historic Environment of the ES [EN070008/APP/6.2.8].

The historic environment assessment has identified likely significant residual effects on three designated heritage assets, the grade II* listed Church of St Edmund in Riby, the grade II listed Ashleigh Farm at Theddlethorpe, and the grade II listed Manor House and non-designated former parkland at Barnoldby le Beck due to construction of the pipeline. Where impacts cannot be avoided, mitigation will take the form of archaeological investigation and recording, to be undertaken as advanced works. A detailed archaeological mitigation strategy will be developed and agreed during Examination.

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- asset; and whether the works proposed are the minimum required to secure the long-term use of the asset.
- e. In considering any applications to remove or alter a historic statue, plaque, memorial or monument (whether listed or not), local planning authorities should have regard to the importance of their retention in situ and, where appropriate, of explaining their historic and social context rather than removal.
- 3. Development proposals will be supported where they:
 - a. Protect the significance of designated heritage assets (including their setting) by protecting and enhancing architectural and historic character, historical associations, landscape and townscape features and through consideration of scale, design, materials, siting, layout, mass, use, and views and vistas both from and towards the asset;

 as Minor or Negligible adverse: these temporary effects are not considered to be significant.

 With regard to the harm to heritage assets caused by the Proposed Development, the assessment included in chapter 8 of the ES concludes that the residual effects of the
 - Sustain and enhance non designated heritage assets and their setting; Take into account the desirability of sustaining and enhancing non-designated heritage assets and their setting:
 - Make appropriate provision to record, and where possible and appropriate, preserve in situ features of archaeological significance; and,
 - d. Promotes and captures opportunities to increase knowledge and access to local heritage assets and better reveal their significance.
- 4. The change of use of heritage assets will be supported where the proposed use is considered to be the optimum viable use that is compatible with the fabric, interior, character, appearance and setting of the building, and where such a change of use will demonstrably assist in the maintenance or enhancement of the building, provided features essential to the special interest of the individual building are not lost or altered to facilitate the change of use.

Conservation Areas

- 5. Development within, affecting the setting of, or affecting views into and out of, a Conservation Area should preserve, and wherever possible enhance, features that contribute positively to the area's character, appearance and setting. Proposals should:
 - Retain buildings/groups of buildings, existing street patterns, historic building lines and ground surfaces.
 - Retain architectural details that contribute to the character and appearance of the area.
 - Where relevant and practical, remove features which are incompatible with the Conservation Area.
 - Retain and reinforce local distinctiveness with reference to height, massing, scale, form, materials and lot widths of the existing built environment.
 - e. Assess, and mitigate against, any negative impact the proposal might have on the townscape, roofscape, skyline and landscape.
 - f. Aim to protect trees, or where losses are proposed, demonstrate how such losses are appropriately mitigated against.

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Operation of the Theddlethorpe Facility would have significant residual effects on the setting of one designated heritage asset (the grade II listed Ashleigh Farm). This effect is assessed as Moderate adverse and would be permanent during the operational lifetime of the Proposed Development. Decommissioning of the Theddlethorpe Facility would reverse this effect and reinstate the existing baseline conditions. Residual effects on other built heritage assets due to operation and decommissioning of the Proposed Development are assessed as Minor or Negligible adverse: these temporary effects are not considered to be significant.

With regard to the harm to heritage assets caused by the Proposed Development, the assessment included in chapter 8 of the ES concludes that the residual effects of the Proposed Development will result in less than substantial harm to three designated heritage assets during construction (for a temporary period) and at one designated heritage assets during operation (a forty-year period). The assessment concludes that there will also be less than substantial harm to non-designated heritage assets.

It is considered that the benefits of the Proposed Development to the public outweigh the less than substantial harm caused to the heritage assets identified in the ES. The benefits to the public of the Proposed Development include providing carbon capture and storage facilities which will reduce CO₂ emissions from industry in the Immingham Area. This will lead to a reduction in greenhouse gas emissions associated with global warming while also allowing existing employment and economic activity to be maintained while helping the government to meet legally binding targets to achieve Net Zero by 2050. The Proposed Development will also generate significant investment to the area. Great weight should be given to these public benefits which will be advantageous locally, regionally and nationally. The benefits of the Proposed Development are considered to significantly outweigh the less than substantial harm to heritage assets reported in the ES.

The Proposed development does not involve the change of use of heritage assets and does not interact with conservation areas.

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Archaeology

- 6. Development proposals affecting archaeological remains, whether known or potential, designated or undesignated, should take every practical and reasonable step to protect and, where possible, enhance their significance.
- 7. Planning applications for such development must be accompanied by an appropriate and proportionate desk based assessment to understand the potential for and significance of remains, and the impact of development upon them. If a desk based assessment does not provide sufficient information, developers will be required to undertake field evaluation in advance of determination of the application. This may include a range of techniques for both intrusive and non-intrusive evaluation, as appropriate to the site. All archaeological work should be undertaken by a suitably qualified party in accordance with professional standards and guidance published by Historic England and the Chartered Institute for Archaeology
- 8. Wherever possible and appropriate, mitigation strategies should ensure that important archaeology is retained in-situ to allow for expert investigation at some future time. Where it is possible to achieve this, for example within an area of open space, a management plan may be required that secures effective long-term conservation. Developers may be required to provide access to heritage assets and make financial contributions towards their on-going maintenance, and appropriate display and interpretative materials.
- 9. Where such preservation is either not possible or not desirable, the developer will be required to make adequate provision for preservation by record according to a written scheme of investigation submitted by the developer and approved by the planning authority.
- 10. Any work undertaken as part of the planning process must be appropriately archived in a way agreed with the local planning authority. The written scheme of investigation should be submitted in advance of determination of the application and its implementation will be secured by condition.

Managing the Historic Environment

- 11. The council will promote the effective management of North Lincolnshire's heritage assets through:
 - Seeking to update existing Conservation Area Appraisals to identify the qualities and interests of each area and management guidelines to guide future development.
 - b. Safeguarding the nationally significant ancient landscapes of the Isle of Axholme (notably the historic landscape character and turbaries) and supporting initiatives which seek to realise the potential of these areas as a tourist, educational and environmental resource.
 - Ensuring the wider social, cultural, economic and environmental benefits that conservation of the historic environment can bring.
 - d. Preserving and enhancing the rich archaeological heritage of North Lincolnshire.
 - Ensuring that development within Epworth (including schemes needed to exploit
 the economic potential of the Wesley's or manage visitors) safeguards and,
 where possible, improves the setting of buildings associated with its Methodist
 heritage.

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- f. Ensuring that development within North Lincolnshire's Market Towns safeguards their distinctive character and landscape setting, especially Barton upon Humber, Crowle, Kirton in Lindsey and Epworth; and,
- g. Seeking opportunities to enhance and provide access to heritage assets, including in combination with natural environment, public health, tourism and other relevant initiatives, and through planning conditions or obligations including S106 Agreements and Community Infrastructure Levy where appropriate.

Policy CSC1: Health and Wellbeing

- 1. The council will seek to improve health and wellbeing in North Lincolnshire. In order to achieve this the council will:
 - a. Make the potential for achieving positive mental and physical health outcomes a priority when considering all development proposals. Where any adverse health impacts are identified, the applicant will be expected to demonstrate how these will be addressed and mitigated.
 - Promote improvements and enhancing accessibility to the historic environment, nature, accessible natural greenspaces and green infrastructure corridors and blue and green infrastructure.
 - Recognise the vital role heritage and nature plays in people's lives by safeguarding and enhancing the quality of our surroundings to ensure positive impacts on individuals and communities.
 - d. Use the ten principles of Active Design
 - e. and develop neighbourhoods and centres that:
 - are connected, safe accessible and attractive so that crime and disorder, and fear of crime do not undermine the quality of life or community cohesion:
 - ii. ensure paths, play areas and open spaces are overlooked by inhabited buildings while maintaining the privacy of inhabitants;
 - iii. are easily accessible on foot or by bicycle to all users;
 - improve infrastructure and layouts to support, encourage and connect walking and cycling routes;
 - have high quality streets and spaces ensuring that streets and paths are adequately lit;
 - vi. have active buildings in which the design and use should promote opportunities for physical activities;
 - vii. have a strong sense of place, which encourages social interaction and continual use of public areas;
 - viii. have access to a range of facilities and amenities including transport, education, health, sport and leisure and community facilities;
 - ix. are designed to promote higher levels of physical activity, through the arrangement of buildings and uses, access to open space and landscaping and the provision of facilities to support walking and cycling; and.
 - x. have facilities and open spaces which should be accessible to all users and should support sport and physical activity across all ages
 - Support the integration of community facilities and services i.e. health, education, cultural and leisure in multi-purpose community buildings;

Chapter 17: Health and Well-being of the ES [EN070008/APP/6.2.17] assesses the impact of the Proposed Development on issues of health and well-being. Chapter 17 includes an overview of the cumulative impacts on health and concludes that when mitigation measures are implemented there are no significant residual effects in the construction, operational or decommissioning phases. Where health effects are envisaged to be minor adverse, mitigation measures ensure that this effect is reduced to negligible.

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- f. Development schemes safeguarding and, where appropriate, enhancing the role of allotments, gardens and food markets in designated public and private spaces accessible from the home, school or workplace providing access to healthy, fresh and locally produced food;
- g. Ensure development does not have an adverse impact on the environment or residential amenity through air, noise, vibration and water pollution;
- Make provision for the needs of an ageing population by promoting a range of development which supports independent living and avoiding the need for residential care;
- Work with relevant stakeholders to reduce geographical inequalities in health through maximising the provision of affordable housing and regenerating poorer neighbourhoods within the area; and,
- To require in the case of development of 50 or more homes or 1000sqm commercial floorspace, the submission of a Health Impact Assessment (HIA); as part of the planning application to explain how health impacts have been identified and how they will be addressed and mitigated and how they have informed the design. This must include a statement setting out how the active design principles and the principles of this policy have been incorporated into the new design.

Policy MIN3: Minerals Safeguarding

Policy WAS1:

Management

Waste

Facilities

 To ensure the long-term conservation of nationally and locally important minerals in North Lincolnshire, Mineral Safeguarding Areas (MSAs) are defined to prevent their sterilisation by non-minerals development. The following minerals are considered to be important:

 a. Chalk;

- b. Lincolnshire Limestones
- c. Sand & Gravel:
- d. Silica Sand; and
- e. Brick Clay

1. Development that encourages and supports the minimisation of waste production, and the re-use and recovery of waste materials will normally be supported.

2. Proposals for waste management facilities to deal with waste arisings will be encouraged based upon the following principles:

- Managing waste through the waste hierarchy in sequential order. Sites for the disposal of waste will only be permitted where it meets a need which cannot be met by treatment higher in the waste hierarchy:
- Promoting the opportunities for on-site management of waste where it arises and encouraging co-location of waste developments that can use each other's waste materials:
- c. Ensuring that sufficient capacity is located within the area to accommodate forecast waste arisings of all types during the Plan period;
- d. Supporting delivery of the North Lincolnshire Municipal Waste Management Strategy;

The Proposed Development does not interact with mineral sites or mineral safeguard areas in North Lincolnshire.

The applicant is committed to reducing waste and will treat waste in accordance with the waste hierarchy to reduce, reuse, recycle and recover waste before landfill. The waste recovery target for the Proposed Development is at least 90% (by weight) recovery of non-hazardous construction and demolition waste. This requirement is embedded in the Draft CEMP and is above the national target set out by the Waste Framework Directive.

The Draft CEMP has been prepared as part of the ES in Appendix 3-1 **[EN070008/APP/6.4.3.1].** An Outline Site Waste Management Plan has also been developed for the Proposed Development and is included within ES Appendix 18-1 **[EN070008/APP/6.4.18.1]**

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- Facilitating the development of recycling facilities across the area to ensure there
 is sufficient capacity and access for the deposit of municipal waste for re-use,
 recycling and disposal;
- f. Facilitating the development of a network of local waste management facilities in accessible locations, and effective methods of waste management such as suitable facilities to separate or store different types of waste, including materials that are required to be separated for kerbside collection schemes:
- g. Ensuring new waste developments are located and designed to avoid unacceptable adverse impacts on heritage assets and amenity;
- Ensuring new waste developments mitigate any impacts on the natural environment and provide landscape and biodiversity enhancements where feasible.
- Working collaboratively with neighbouring local authorities with responsibilities for waste and other local authorities where waste import/export relationships exist. This will ensure a co-operative cross boundary approach to waste management is established and maintained; and,
- Addressing to an acceptable standard the potential cumulative impacts of any waste development and the way it relates to existing developments.

