

Viking CCS Pipeline

**Environmental
Statement Volume IV -
Appendix 3-1 Draft
CEMP - Revision C
(Clean)**

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1 Introduction

1.1 Background

- 1.1.1 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.
- 1.1.2 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.
- 1.1.3 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.
- 1.1.4 Further details of each element of the Proposed Development are set out in Chapter 3 of the Environmental Statement (Application Document 6.2.3).

Contractor and FEED Consultant

- 1.1.5 References to the Front-End Engineering Design (FEED) Consultant and the Contractor are made through this Draft CEMP. The definitions of these are provided below for clarity:
- **FEED Consultant:** this refers to the FEED consultant who will progress the conceptual design of the Proposed Development to the FEED stage; and
 - **"the Contractor":** this refers to any Contractor appointed to deliver construction works (including any sub-contractors or suppliers involved).

Purpose of the CEMP

- 1.1.6 This Draft CEMP aims to set out the initial mitigation measures identified to help avoid or reduce adverse environmental impacts during the Proposed Development's construction, whilst also setting out applicable environmental legislation which needs to be complied with by the Contractor. In addition, this Draft CEMP establishes an initial framework within which the appointed Contractor (including any sub-contractors or suppliers involved in the construction works) will plan, implement, and deliver environmental management, mitigation

and monitoring requirements during the construction phase of the Proposed Development. The controls and procedures contained within it are the practical means by which the mitigation commitments would be implemented. The objectives of these controls and procedures are to:

- Provide a mechanism for ensuring that measures to mitigate potentially adverse environmental impacts are implemented;
- Ensure that environmental best practices are adopted throughout the construction phase of the Proposed Development;
- Ensure a prompt response if any unacceptable adverse impacts are identified, with the provision of appropriate additional mitigation measures as required;
- Provide a means for mitigating impacts that may not be anticipated or become apparent until construction is underway;
- Provide assurance to consultees and other stakeholders that requirements with respect to environmental mitigation are being addressed;
- Provide a mechanism for compliance auditing to ensure mitigation measures are being effectively implemented and maintained through construction;
- Implement a policy of waste control and minimisation that is aligned to the waste management hierarchy; and
- Enable full compliance to be maintained with all relevant legislation.

1.1.7 This iteration has been produced to support the ES to be submitted as part of the Development Consent Order (DCO) application. A summary of CEMP iterations is provided in **Table 1**.

1.1.8 It is further intended that this iteration of the Draft CEMP submitted as part of the DCO application would be updated during FEED, and then finalised by the appointed Contractor prior to the start of construction, based on a detailed design and construction programme. The Final (or construction issue) CEMP would cover all construction activities, clearly set out roles and responsibilities and provide contact details for key personnel. The Final CEMP would require approval by the host local authorities (North Lincolnshire Council, North East Lincolnshire Council, West Lindsey District Council and East Lindsey District Council) prior to construction commencing.

1.1.9 It is also intended that the CEMP will be a 'live' document and be updated as and when there are changes to the Project team (which consists of all parties on the Proposed Development) or when additional information becomes available (for example through detailed civil design or additional data supply or surveys such as pre-construction ecological surveys).

1.1.10 Compliance with the contents of the Final CEMP is therefore intended to provide a systematic approach to environmental management so that environmental risks are identified, incorporated in all decision-making and managed appropriately. Detailed construction techniques and supporting Risk Assessment Method Statements (RAMS), which would outline further mitigation requirements based on the measures discussed in the CEMP and any supporting appendices, will be produced by the Contractor.

1.1.11 The Final CEMP will be agreed with the relevant host authority in advance of each phase of the work starting. As a minimum the Final CEMP should be formally reviewed every month by the Contractor's HSE team and within a week following a high potential environmental incident; and approved by the Applicant prior to reissue.

Table 1: CEMP Iterations Summary

CEMP Iteration	Stage of the Project
Preliminary Draft CEMP	Statutory Consultation (to support the Preliminary Environmental Impact Report (PEIR) and the preliminary assessment within)
Draft CEMP	Submission of the DCO application (to support the ES and the assessment within)
Draft CEMP v2	Developed by the FEED Consultant, ahead of the appointment of the Contractor
Final CEMP	Developed by the Contractor, once appointed ahead of commencement of construction activities.

Compliance with Project Environmental Management Systems (EMS) and Sustainability

- 1.1.12 The Applicant is committed to delivering sustainability and good environmental stewardship. In accordance with this proactive approach to sustainable design and construction, the Applicant and the appointed Contractor will seek to maximise resource efficiency through reducing the amount of waste generated, minimising water consumption and making the most efficient use of energy.
- 1.1.13 The carbon footprint of the Proposed Development will be reduced during construction by avoiding CO₂ emissions where possible through a number of measures, for example, keeping construction vehicle movements to the minimum necessary.
- 1.1.14 The Applicant's Health, Safety, Environment and Security (HSES) Management System (MS) is founded on a process approach, involving the systematic definition and management of the Applicant's processes, and their interactions, to achieve the intended results in accordance with the documented HSES Policies and the strategic direction of the Applicant. It has been developed to align with the International Organization for Standardization (ISO) Standards for Occupational Health and Safety (ISO 45001), Environmental (ISO 14001) and Quality (ISO 9001) Management. The HSES MS follows the Plan-Do-Check-Act (PDCA) concept, common to all three ISO Standards.
- 1.1.15 The concept ensures an overall focus on risk-based thinking, delivery of continual improvement opportunities and the prevention of undesirable HSES results as follows:
- **Plan:** identify and assess HSES risks and opportunities, create objectives and the processes necessary to deliver results considering the established HSES Policies;
 - **Do:** consistently implement the HSES processes as planned;
 - **Check:** monitor, measure and evaluate HSES process deliverables and report the results; and
 - **Act:** take actions to continually improve HSES performance to achieve intended outcomes.
- 1.1.16 The appointed Contractor will prepare their own Project EMS in accordance with the Applicant's EMS prior to construction commencing. The Project EMS is expected to be integrated into the Contractor's own EMS arrangements and will address:
- Compliance with the Final CEMP and any other control and management documents;
 - Compliance with environmental consents and permits;

- Overall compliance with environmental legislation, approved codes of practice, British Standards, and industry best practice;
- Detailed environmental management procedures to deliver the CEMP and other control and management plans including roles and responsibilities;
- Monitoring and review arrangements;
- Emergency procedures that are defined and adopted; and
- Appropriate training and information for personnel.

Considerate Constructors Scheme (CCS)

- 1.1.17 The Proposed Development will be registered with the Considerate Constructors Scheme (CCS). CCS is a national initiative through which construction sites and companies (contractors, subcontractors, and suppliers) are monitored against a Code of Considerate Practice. The Code is designed to encourage environmental and social best-practice during the construction period beyond statutory requirements.
- 1.1.18 The main areas of focus are respecting the local community, valuing the workforce, and caring for the environment.
- 1.1.19 In light of the size of the Proposed Development, it is envisaged that the Proposed Development will receive a minimum of two CCS audit visits.

Structure

- 1.1.20 The Draft CEMP is split into 11 sections as detailed below:
- *Section 1: Introduction* – provides background information about this document and its content;
 - *Section 2: Proposed Development Description* – provides an overview of the Proposed Development including a description of construction methods;
 - *Section 3: Construction Programme* – provides a high-level programme for construction;
 - *Section 4: Environmental Organisation and Responsibilities* – sets out the roles and responsibilities of the parties involved in construction;
 - *Section 5: Environmental Control Plans* – provides a list of the required control and management plans required for the Proposed Development;
 - *Section 6: Consents and Licenses* – a schedule of the currently known consents and licences required for the Proposed Development;
 - *Section 7: Draft Mitigation Register* – all environmental commitments, mitigation measures, and measures to ensure compliance;
 - *Section 8: Communications, Inductions and Training* - sets out the requirements for regular communications and reporting as well as staff training;
 - *Section 9: Environmental Monitoring and Reporting* - programme of audit and inspections to check that site operations are in compliance with the CEMP, current procedures, and legislation; are using Best Practice; and that the mitigation measures are being effectively implemented;
 - *Section 10: Record Keeping* - sets out the records required to be kept and frequency of update; and
 - *Section 11: Design Changes* - procedures to follow in the event of the Contractor modifies the Proposed Development design.

2 Proposed Development Description

Overview

- 2.1.1 The Viking CCS Pipeline ('the Proposed Development') comprises a new 24" (609 mm) diameter onshore pipeline of approximately 55.5km 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.
- 2.1.2 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.
- 2.1.3 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.
- 2.1.4 Further details of each element of the Proposed Development are set out in Chapter 3 of the Environmental Statement (Application Document 6.2.3).

The Immingham Facility

- 2.1.5 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. CO₂ will be received by pipe from separately consented capture plants. The Immingham Facility will consist of a central control room, local equipment room, analyser house and various pipework, valves, pipeline inspection equipment, safety protection systems and a 25 m high vent. The Immingham Facility will be surrounded by security fencing.

The Pipeline

- 2.1.6 The pipeline to convey CO₂ will be a heavy walled steel pipe with a diameter of 24". For the majority of the route, it will be buried to a minimum depth of 1.2 m from the top of the pipe to ground level. This will be deeper at crossing points such as railways, roads, and watercourses.

Block Valve Stations

- 2.1.7 Three Block Valve Stations are required along the pipeline to enable sections to be isolated for operational and maintenance reasons. Block Valve Stations will comprise a kiosk, block valve, bypass valves, pipework, and a local vent approximately 4 m high. The Block Valve

Stations will include security fencing with vehicle access gates and the surface within this fenced area will mostly comprise gravel. The Block Valve Stations will cover approximately 0.3 ha including a 10m wide planting strip around the perimeter to provide screening.

Theddlethorpe Facility and LOGGS Pipeline

- 2.1.8 The Theddlethorpe Facility near the Lincolnshire coast is required to connect the new 24" pipeline to the existing 36" LOGGS pipeline. There are currently two options for locating the Theddlethorpe Facility:
- **Option 1:** A new facility on brownfield land at the former Theddlethorpe Gas Terminal (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; and
 - **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.
- 2.1.9 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.
- 2.1.10 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.

Construction Compounds

- 2.1.11 Three construction compounds are proposed, each of which will include pipe storage areas, welfare facilities, and plant storage and maintenance areas. The North Compound will be located to the south of Habrough Roundabout and the A160 covering an area of approximately 2.15 ha of arable land with access from Habrough Road. The Central Compound will be located south of Laceby and east of Barton Street (A18) covering an area of approximately 1.71 ha of arable land with access from the A18. The South Compound will be located at the car park on the former TGT site accessed from Mablethorpe Road, covering an area of approximately 1.3 ha of brownfield land. In addition, temporary laydown, parking, and welfare areas will be required at certain access points along the pipeline route.

3 Construction Programme

- 3.1.1 A preliminary construction schedule has been developed and, subject to granting of the DCO, it is anticipated that site preparation would commence in late 2025 with main construction taking place in 2026 and the Proposed Development becoming operational in early 2027. From the commencement of the construction activities to completion of commissioning, the construction programme is expected to last approximately 15 months.
- 3.1.2 The construction process would be programmed as a series of concurrent work packages along the length of the pipeline, where possible, to ensure that the overall construction programme is minimised. A work package may focus on a specific area or location where a group of construction workers would carry out a particular aspect of the main pipeline construction activities, including topsoil stripping, trench excavation, pipe installation and backfilling of trenches.

4 Environmental Organisation and Responsibilities

4.1 Introduction

4.1.1 This section of the Draft CEMP sets out the key Contractor roles and responsibilities of parties involved in the construction of the Proposed Development. The Final CEMP will include contact details for key members of staff.

4.2 Key roles

4.2.1 The exact roles and responsibilities will be confirmed prior to construction; however, the following section provides an indication of the roles which are envisaged. Clearly establishing roles and responsibilities is vital to ensure the successful construction of the Proposed Development, including the implementation of this CEMP.

4.3 Project Manager

4.3.1 The Project Manager is responsible for:

- Coordinating the delivery of all elements of the Proposed Development including ensuring conformance with the CEMP and other management plans, as well as any incident investigation required;
- Facilitating the dissemination of generic environmental requirements to the Project team;
- Oversee the implementation and review of environmental procedures throughout the Project;
- Monitoring the environmental performance of the Proposed Development through maintaining an overview of incidents, inspections and audits;
- Ensuring that environmental considerations form an integral part of design and implementation of the works and to include environmental reviews as part of regular project meetings;
- Review environmental matters with HSE Manager/ Advisor on a regular basis and as per project requirements;
- Liaise with Project HSE Manager on all environmental issues as appropriate;
- Ensure that all environmental incidents are reported to HSE Manager/ Advisor according to agreed procedures; and
- Nominate individual project team members to support the Applicant in public relations and community liaison activities, including local community meetings.

4.4 Site Manager/ Engineer

4.4.1 The Site Manager/ Engineer, working with the Project Manager is responsible for:

- Understanding and implementing all environmental procedures as identified in the CEMP, and ensuring that site operations function in compliance;

- Reviewing risk assessments and method statements (RAMS) and/ or environment method statements (EMS) submitted by the Contractor prior to beginning new works activities;
- Reviewing the Safety, Health and Environment (SHE) Plan, prepared and amended by the SHE Manager/ Advisor;
- Reviewing and monitoring the implementation, and accuracy of, the CEMP;
- Conducting incident investigation in the event of an incident or near miss being reported by any worker or member of site management staff during site walkovers or inspections;
- Monitoring of Contractor compliance with plans and procedures;
- Liaising with the emergency services;
- Conducting regular site inspections;
- Reviewing applications for environmental consents and permits in line with the Project Manager; and
- Notify HSE team (and/ or local authority) when a variation in working time may cause impact upon local residents or upon a local authority consent.

4.5 Safety, Health and Environment Manager/ Advisor

4.5.1 The SHE Manager/ Advisor is responsible for:

- Providing site inductions and toolbox talks on safety, health and environmental matters and sensitivities to the appropriate staff prior to works being undertaken;
- Preparing, reviewing and updating the SHE Plan;
- Assisting the Project Manager and Site Manager/ Engineer in reviewing and approving RAMS and/ or EMS's;
- Ensuring the RAMS/ EMS's are implemented, ensuring compliance with procedures and legislation. Check all documents for Duty of Care requirements;
- Ensuring Duty of Care with respect to all waste generated on Site;
- Preparing site specific mitigation plans in consultation with statutory consultees to ensure works can proceed in accordance with all environmental commitments and legislation;
- Providing technical advice on the implementation of the CEMP including changes to legislative requirements and best practice;
- Undertaking regular site inspections/ walkovers to ensure construction practice is compliant with best working practices and approved RAMS/ EMS. Between the SHE Manager/ Advisor and Environmental or Ecological Clerk of Works (ECoW) environmental inspections will be undertaken daily. The SHE Manager/ Advisor will have the authority to stop work where non-compliant working is observed;
- Reporting any health and/ or safety incidents to Site Management as per a defined reporting procedure (to be defined in the final iteration of the CEMP and Project SHE Plan);
- Providing health and safety advice to construction managers;

- Attending all construction progress meetings and providing updates on safety, health and environment performance of construction works. Also ensuring regular discourse with project site staff and subcontracted companies on environmental issues;
- Investigating environmental complaints (in line with the Stakeholder Communications Plan);
- In conjunction with the Applicant, liaise with government departments, local authorities and other statutory authorities on environmental matters. Obtaining consents and permits, as per project needs; and
- Ensuring that spill kits are checked at least weekly and kept fully stocked and in good repair.

4.6 Environmental Clerk of Works

- 4.6.1 An Environmental or Ecological Clerk of Works (ECoW) will be appointed for the duration of the construction phase. The purpose of this appointment is to ensure that the environmental interests of areas that may be affected by the works are safeguarded. The ECoW will have the appropriate authority to review RAMS, oversee works and recommend action as appropriate, including temporarily stopping works where non-compliant working is observed, for example to safeguard protected species and their habitats, or where any other breaches of environmental legislation are likely to occur.
- 4.6.2 The ECoW will ensure the implementation of, and compliance with, the provisions of the CEMP and the mitigation contained within the ES as well as licensing or other conditions imposed on the construction.
- 4.6.3 The ECoW may be from a company who provide a general Clerk of Works who can liaise with a team of internal specialists (Technical Specialist Advisors) on specific environmental subjects, for example, ecology, soils, noise, air quality, or pollution where required throughout construction, or a suitably qualified individual.
- 4.6.4 In summary, the ECoW is responsible for:
- Inspections of the Contractor's work site to ensure compliance with environmental standards and requirements;
 - Weekly routine audits of the Contractor's compliance with the CEMP – site activities and record keeping;
 - Monitoring or inspection of site activities in response to incidents, breaches of the CEMP or complaints received from a third party;
 - Inspections of works to ensure that environmental mitigation measures incorporated into the design have been implemented;
 - Implementation of corrective mitigation measures where proposed mitigation results in effects over and above those within any ES chapter, license or planning conditions; and
 - Delivering toolbox talks on environmental matters and sensitivities to the appropriate staff prior to works being undertaken.

4.7 The Land Officer

- 4.7.1 The Contractor's Land Officer is responsible for:
- Discussing/ agreeing with landowners and tenants all conditions relating to access, including fencing, gates, access to severed land, stock relocation, reinstatement, drainage, security and the complaints handling procedure with local land owners;

- Liaison between the Contractor, landowners / tenant farmers, other stakeholders, and appointed land officer supplier;
- Being the first point of contact for any individuals, or agents of people, with interest in land and for all land related matters;
- Dealing with all matters relating to compensation claims or losses, and complaints, from those with land interests arising as a result of the Proposed Development; and
- Attending all construction progress meetings.

4.7.2 This role may be supported by an Agricultural Liaison Officer (ALO, or similar), employed by the Contractor to provide local landowners and those with land-related interests information regarding daily construction activities. The ALO will assist on activities listed above, as well as providing the Land Officer information regarding the Contractors use of appropriate access points and relaying information on any inadvertent damage to fences, gates, drains, trees or buildings from construction activities.

4.8 Traffic Safety and Control Officer

4.8.1 If not undertaken by a named member of the Contractor's SHE team, a Traffic Safety and Control Officer (TSCO) may be appointed for the duration of the construction of the Proposed Development to act as the main point of contact and undertake the following duties in relation to traffic management:

- Ensure that works are being carried out in accordance with the Traffic Management Plan (TMP);
- Check all Traffic Management drawings for compliance prior to issue;
- Manage applications for any required temporary Traffic Regulation Orders in relation to any required road closures, one-way restrictions or partial blocking of the highway, or implementation of temporary speed limits; applications for the introduction of temporary traffic lights; or other notification to the Local Highways Authority;
- Ensure sufficient resource is available to maintain Traffic Management on site;
- Investigating and managing traffic related complaints (in line with the Stakeholder Communications Plan); and
- Monitor the Traffic Management schemes and layouts to ensure their effectiveness and safety to workers and public.

4.9 Site Security

4.9.1 Site Security is responsible for mobilising site emergency contacts in the event of an out of hours incident occurring.

4.10 All Other Project Staff

4.10.1 All other project staff will be expected to:

- Understand and implement procedures relevant to their role as laid out in the CEMP;
- Conduct their work with a view to reducing the environmental impact of the Proposed Development and to raise any environmental concerns with Site Engineer/ Manager or HSE Team; and
- Report all environmental incidents to Site Manager or HSE Team as soon as possible.

4.10.2 An environmental incident response team is to be identified. They will be trained and competent to attend environmental incidents and provided with appropriate equipment to deal with any reported incident.

5 Environmental Control Plans

5.1.1 **Table 2** lists the provisional list of environmental control plans that are expected to be developed prior to construction which set out in detail the management systems and approach that will be implemented during construction to comply with the CEMP. Outline versions of some of these control plans are provided within the relevant ES technical chapters or comprise their own DCO document (see reference below in **Table 2**).

Table 2: Environmental Control Plans

Control Plan	Description	Outline version contained within the DCO application
Stakeholder Communications Plan (SCP)	To be developed by the Contractor at detailed design. This plan will include measures for community engagement before and during construction phase; as well as detailing a complaints procedure.	No
Safety Health and Environment (SHE) Plan	To be developed by the Contractor at detailed design. The plan will detail the relevant safety, health and environmental information relating to construction activities.	No
Site Waste Management Plan (SWMP)	To be developed by the Contractor at detailed design. This will set out and identify site-specific measures for the collection, segregation, treatment, and disposal of waste.	Yes (<i>ES Volume IV Appendix 18-1: Outline SWMP (Application Document 6.4.18.1) of this ES</i>)
Materials Management Plan (MMP)	To be developed by the Contractor at detailed design. This will set out how excavated materials are to be managed to ensure that the quality of site-won materials is maintained so that they remain suitable for re-use, do not become contaminated and ultimately do not become waste, targeting 90% total waste diverted from landfill.	No

Control Plan	Description	Outline version contained within the DCO application
Construction Traffic Management Plan (TMP)	To be developed by the Contractor at detailed design. This will set out the requirements for the safe movement of project related traffic both within the site and <i>en route</i> to and from the construction sites.	Yes (<i>ES Volume IV Appendix 12.6: Draft Construction Traffic Management Plan (Application Document 6.4.12.6)</i>)
Travel Plan	Prior to the commencement of construction phase, the Contractor will prepare a Travel Plan that supports and encourages sustainable travel by workers (public transport, cycling, walking, and car-sharing).	No
Construction Logistics Plan	Prior to the commencement of works, the Contractor will prepare a Construction Logistics Plan to manage the sustainable delivery of goods and materials. This will be a live document and will be regularly reviewed and updated throughout the lifetime of the construction works as required.	No
Soil Management Plan (SMP)	To be developed by the Contractor at the detailed design phase. This plan will set out the measures to ensure the protection, sustainable management, and reuse of soil resources.	Yes (<i>ES Volume IV Appendix 10.1: Draft Soil Management Plan (Application Document 6.4.10.1)</i>)
Emergency Response Plan	To be developed by the Contractor at detailed design. This will set out emergency response measures in the event of accidental spillage or leakage and response to incidents including pollution events, and how these are to be reported (both internally to the Project and externally).	No
Flood Warning and Evacuation Plan	To be developed by the Contractor once appointed during the detailed design stage. This will set out the principles of a response to a significant flood during construction to ensure a coordinated response in the event of an emergency situation.	No

Control Plan	Description	Outline version contained within the DCO application
Energy Reduction Plan	To be developed by the Contractor once appointed during the detailed design stage This includes measures to identify and implement all cost-effective energy efficiency measures.	No
Sustainable Procurement Plan	To be developed by the Contractor. This plan will identify the risks and opportunities of procurement against a broad range of social, environmental, and economic issues.	No
Drainage Strategy (previously referred to as Drainage Management Plan)	To be developed by the Contractor during detailed design. The Drainage Strategy identifies all known risks to the water environment and identifies appropriate measures to prevent pollution during construction; and to manage runoff rates. The Drainage Strategy will define the installation of pre-construction drainage measures to intercept run-off and ensure that discharge and runoff rates are controlled in quality and volume, in turn causing no degradation to water quality. This may include specific measures to be used in high-risk areas (for example construction along or across steep gradients and water course crossings). A phased approach may be taken to the development of the Drainage Strategy to reflect the phasing of the construction programme. The Drainage Strategy will include a Site Drainage Plan.	Yes (<i>ES Volume IV Appendix 11-3: Drainage Strategy (Application Document 6.4.11.3)</i>)
Construction Ecological Management Plan (CEcMP)	Prior to the commencement of works, the Contractor will prepare a Construction Ecological Management Plan (CEcMP) to prescribe the required site-specific mitigation in relation to habitats and protected species to ensure compliance with relevant legislation and best practice. It is anticipated that this will be an appendix to the Final CEMP.	No

Control Plan	Description	Outline version contained within the DCO application
Species Protection Plans (SPP) (or similar such as Precautionary Working Method Statement)	Prior to the commencement of works, the Contractor will prepare Species Protection Plans (SPP) (or similar) for the sensitive/protected species that may be encountered by the Proposed Development, to ensure compliance with relevant legislation and best practice. These will form part of the CEcMP.	No
Invasive Non-Native Species Method Statement (INNSMS)	Prior to the commencement of works, the Contractor will prepare an Invasive Non-Native Species Method Statement (INNSMS). This plan will set out the measures which will be implemented to avoid the spread of invasive non-native species (INNS) during construction and ensure legal compliance.	No
Tree and Hedgerow Protection Strategy	Prior to construction the Contractor will prepare a Tree and Hedgerow Protection Strategy. This will include a schedule of all trees and hedgerows to be removed, a schedule of all trees which require pruning coppicing or pollarding, a schedule of all trees and hedgerows to be retained including specification for temporary physical protection, including root protection areas and details of an auditable system of compliance. It will also include details of any hedgerows where a remove/store/replant methodology has been identified as appropriate through landowner consultation.	Yes (Refer to Annex C of <i>ES Volume IV Appendix 6.10 Arboricultural Impact Assessment (Application Document 6.4.6.10)</i>)
Water Efficiency Management Plan	To be developed by the Contractor post-consent. The Plan will include measures to reduce water consumption by all water-using processes, activities, and equipment on site. It will also include details of staff engagement and training for relevant staff as well as setting out monitoring and reporting requirements (as per CEMP) and how these will be implemented.	No

Control Plan	Description	Outline version contained within the DCO application
Water Management Plan (WMP)	To be developed by the Contractor during detailed design. The plan will detail the management principles and procedures throughout the construction period that will be implemented on site to ensure that water features are protected from pollution from construction works. It will set out plans for water quality monitoring during construction and post-construction, pollution prevention measures, permits and consents and incidents and emergencies measures.	Yes – <i>Included in ES Volume IV Appendix 11.6 Outline water Management Plan</i>
Dust Management Plan	To be developed by the Contractor during detailed design, if required. This plan will include measures to control dust during construction, this includes minimising dust emissions on site and measures to minimise the travel of dust emissions beyond the site boundary.	No
Written Scheme of Investigation (WSI) for archaeological mitigation	To be developed by the Contractor post-consent based on the Outline WSI (to be provided in the ES) to fully describe the additional mitigation measures to be implemented to preserve in situ and protect, or archaeologically excavate and record heritage assets, including upstanding earthworks and buried archaeological remains. This will be informed by the by the results of the archaeological evaluation surveys.	Yes (<i>ES Volume IV Appendix 8-3: Outline WSI Trial Trenching (Application Document 6.4.8.3)</i>).
Landscape and Ecology Management Plan (LEMP)	Prior to the commencement of works, the Contractor will prepare a Landscape and Ecology Management Plan (LEMP) based upon the Outline LEMP to ensure that habitats created/ enhanced for biodiversity net gain offsetting will meet the required habitat conditions; and that long-term management requirements are clearly defined.	Yes (<i>Outline Landscape and Ecological Management Plan (Application Document 6.8)</i>).

Control Plan	Description	Outline version contained within the DCO application
Landscape Mitigation Plan	To be developed by the Contractor post-consent based upon the Outline Landscape Mitigation Plan. The plan describes the proposed landscape planting and habitat creation/enhancement and is also used to inform BNG.	Yes (refer to Annex A of <i>Outline Landscape and Ecological Management Plan (Application Document 6.8)</i>)
Public Right of Way (PRoW) Management Plan	To be developed by the Contractor post-consent based upon the indicative PRoW Management Plan. Safety of the public is a top priority, and the PRoW Management Plan sets out appropriate measures that will be implemented to ensure that safe accessibility to recreational routes and PRoW, is maintained throughout construction, with temporary crossings and minor managed diversions to routes provided where required where routes cross the proposed cable corridor to ensure PRoW routes remain accessible and operational throughout.	Yes (<i>Draft PRoW Management Plan (Application Document 6.11)</i>).
Unexploded Ordnance (UXO) assessment	In order to reduce risk from unexploded ordnance, prior to works commencing the Contractor will undertake proportionate UXO assessment. This will include, but may not be limited to, areas with a 'moderate' identified risk from UXO.	No
Habitat Management Plan	To be developed by the Contractor post-consent based upon the strategy included in the <i>Draft Biodiversity Net Gain (BNG) Strategy (Application Document 6.7)</i> . The Habitat Management Plan will provide a practical guide to ensure BNG is achieved.	No

6 Consents and Licences

6.1.1 A schedule of the currently known consents and licences required for the Proposed Development are provided within the *Consents and Agreements Position Statement (Application Document 7.2)*. The Contractor will be responsible for identifying any further statutory consents required for the construction, pre-commissioning, and re-instatement of

the Proposed Development. Where the Contractor applies for consents or licences, the Applicant will be provided with copies of them as soon as possible after receipt. The relevant commitments and conditions on consents and licenses will be transferred to the Mitigation Register to ensure they are delivered, and their implementation is monitored.

- 6.1.2 A record will be kept of all the consultations with statutory and non-statutory organisations and all correspondence (sent and received), and meeting notes copied to the Applicant. An index of the correspondence is required to be kept for ease of access on a consultation schedule. This schedule may also make a record of all communications with third parties, including telephone conversations and site visits.

7 Draft Mitigation Register

- 7.1.1 As part of the ES development, a draft Mitigation Register has been developed which outlines all of the currently identified environmental commitments, mitigation measures, and measures to ensure compliance with legislation and requirements of Statutory Environmental Bodies and monitoring programmes.
- 7.1.2 The draft Mitigation Register identifies the project-specific commitments with reference to any relevant documentation and provides a framework within which all parties are aware of their responsibilities. It also provides a means of establishing a checklist of measures and the requirement for Method Statements and environmental risk assessments to be produced. The draft Mitigation Register will detail the responsible party for each commitment and mitigation measure to be undertaken. As the Proposed Development develops, the Register will be continually reviewed.
- 7.1.3 The draft Mitigation Register will be used to inform the environmental procedures and provide a tool for construction teams when preparing construction Method Statements or field briefings. It will be regularly updated throughout the construction phase, with actions outstanding and completed to be noted as evidence is collated.
- 7.1.4 The draft Mitigation Register will identify whether or not a Method Statement or Risk Assessment is required for each environmental commitment. Where one is required, work will not proceed on that element, or on other work that will affect that element, until it has been signed off at the appropriate level.
- 7.1.5 The Contractor is responsible for advising the Project Manager on any changes to Method Statements or the planned construction work as these may result in changes to the Final CEMP and Mitigation Register or require additional consultation with Statutory Environmental Bodies.
- 7.1.6 In addition to the Mitigation Register below, the Contractor is also responsible for implementing good environmental practice on site, in line with their own Environmental Management Systems, including but not limited to typical issues such as:
- Any working hour restrictions;
 - Dust suppression measures;
 - Environmental Aspects and Impacts Register;
 - Traffic management (further details contained within the Final TMP);
 - Site waste management;
 - Materials management;
 - Site Water Management;

- Vehicle maintenance and management;
- Pollution prevention and control (including storage, refuelling and incident response);
- Response procedures (e.g., services strike, contaminated land);
- Hazardous materials handling and storage;
- Noise management;
- Securing and delineation of working areas including signage;
- Energy reduction; and
- Soil management.

7.1.7 The draft Mitigation Register is split into the pre-construction, construction and post construction stages and identifies responsible personnel for each action, refer to **Table 3** below. The draft Mitigation Register will be reviewed and finalised by the contractor to enable the Environmental Manager to report on the progress of each item and record completion dates once each measure is achieved or implemented.

Table 3: Draft Mitigation Register (Construction Phase)

Ref Number	Commitment	Responsible Person	Project Stage
A – General Environmental Management			
A1	Finalise Draft CEMP into Final CEMP prior to construction commencing.	Contractor	Pre-construction
A2*	Appoint a Contractor Environmental Manager to manage all environmental issues during construction.	Contractor	Pre-construction
A3*	Develop and implement a stakeholder communications plan that includes community engagement before work commences on site.	The Applicant's Communications Advisor	Pre-construction
A4*	If appropriate, bio-security measures will be implemented through liaison with Defra's Animal Health and Veterinary Laboratories Agency.	Contractor	Pre-construction
A5*	All statutory consents, permits or licenses required for the construction (those that do not form part of the DCO) should be obtained. Any conditions included should be documented in the updated CEMP and considered as part of the planning, design, and construction process.	Contractor	Pre-construction
A6*	A separate project specific Safety Health and Environment (SHE) Plan would be produced in accordance with relevant legislation.	Contractor	Pre-construction
A7*	Maintain an Environmental Incident Response Team for immediate response and attendance at environmental incidents or aspects. Out of hours contact names and telephone numbers for the Environment Incident Response Team should be made available.	Contractor	Construction
A8*	Provide all employees, site operatives and personnel with pollution awareness induction training and regular toolbox talks covering environmental issues.	Contractor	Construction
A9*	Review Final CEMP on a monthly basis and update and reissue as required.	Contractor	Construction
A10*	Identify good practices on a regular basis and submit to the Applicant for consideration and wider circulation.	Contractor	Construction

Ref Number	Commitment	Responsible Person	Project Stage
A11*	For each method statement prepare an Environmental Risk Assessment.	Contractor	Construction
A12*	Adequately protect the Project area from vandalism, theft, and fly-tipping by fencing and locking access gates to discourage unauthorised access. Any occurrence of tipping on the site will be reported to the site management who will then inform the local environmental authority and the police if necessary.	Contractor	Construction
A13*	Consult with local police on security proposals and review arrangements throughout the period of the contract.	Contractor	Construction
A14*	Ensure that construction compounds including offices are adequately secured to protect the public and prevent unauthorised entry to or exit from the site; and will ensure that plant, equipment, and materials are stored in such a manner so as to not attract opportunist thieves.	Contractor	Construction
A15*	Undertake site-specific assessments of the security and trespass risk and ensure that suitable security arrangements are implemented to prevent unauthorised access to the sites. Access to the construction compounds will be limited to specified entry points only and personnel entries/ exits will be recorded and monitored for both security and health and safety purposes, the gates will be kept secure unless they are being used.	Contractor	Construction
A16	Topsoil and subsoil from excavation / working areas will be stripped and stored areas as detailed in the <i>Outline Soil Management Plan (SMP) (ES Volume IV Appendix 10-1 (Application Document 6.4.10.1))</i> . Working areas will also be cleared of scrub/vegetation prior to works commencing as appropriate.	Contractor	Construction

Ref Number	Commitment	Responsible Person	Project Stage
A17*	<p>Ensure high standards of housekeeping are maintained to control nuisance such as windblown litter and potential health effects through the attraction of vermin. Housekeeping will be included at induction and as part of scheduled Toolbox Talks. Levels of housekeeping will be monitored daily by the HSE Team. Litter picking will be undertaken, when necessary, both within and outside of the site should this become necessary. Burning of rubbish, other waste or organic material will be prohibited.</p>	Contractor	Construction
A18*	<p>Construction lighting at the AGIs and Block Valve Stations will not generally be required as the main works are scheduled to occur between April and September. However, where they are required, the installed lighting will follow BS EN 124646 (Parts 1 and 2) and guidance notes from the Institution of Lighting Professionals, GN01 and GN08. The following mitigation measures will be adopted for construction phase lighting:</p> <ul style="list-style-type: none"> • Adopt the lowest safe lighting levels possible for task being undertaken; • Limit the hours of lighting where practicable; • Use a luminaire with good optical control; • Use the lowest possible mounting for the luminaire based on the required level of illumination needed for the task being undertaken; • Direct luminaires into the area to be lit (light from the boundary inwards) and ensure they are mounted horizontally, avoiding any tilt; • If required, make use of manufacturers supplied custom louvres; and • Provide local control for the lighting, so it may be switched off when not required. 	Contractor	Construction
A19*	<p>The Environment and Sustainability File (or equivalent) must be prepared and finalised for submission to the Applicant's Project Manager</p>	Contractor	Post-Construction
A20*	<p>The location and design of site offices and welfare facilities should be so to limit the overlooking of residential properties; locating designated smoking/vaping areas to avoid significant nuisance to neighbours</p>	Contractor	Post-Construction

Ref Number	Commitment	Responsible Person	Project Stage
A21*	The Final CEMP Mitigation Register must be completed (achievement criteria and dates achieved) and issued to the Applicant's Project Manager.	Contractor	Post-Construction
A22	The contractor will register with the Considerate Constructors Scheme, or equivalent.	Contractor	Pre-Construction / Construction
B – Ecology and Biodiversity			
B1*	An Invasive Species Management Plan should be developed (this will form part of the Final CEMP), identifying relevant invasive non-native species within the area to ensure that all necessary precautions are taken to prevent their spread.	The Applicant's Project Manager	Pre-construction
B2*	Undertake pre-construction ecology surveys (species specific surveys will be determined for the next iteration of this Draft CEMP).	The Applicant's Project Manager	Pre-construction
B3*	Establish a Construction Exclusion Zone (CEZ) to define working areas and protect habitats outside of the Project boundary and retained habitats within, throughout development. The CEZ may need to be extended beyond 10m for certain Important Ecological Features, such as woodlands and trees, for example to protect root protection zones. The location of CEZ's will be defined within the Final CEMP and informed by a pre-construction ecological walkover (to identify any changes to the baseline and a tree survey (to BS 5837:2012)).	Contractor	Pre-construction

Ref Number	Commitment	Responsible Person	Project Stage
B4	<p>Undertake any small-scale hedgerow removal for access purposes within the construction site outside of the breeding bird season (March – September). This will prevent birds nesting within the proposed construction works prior to construction.</p> <p>If scrub or hedgerow clearance is undertaken during the bird breeding season, then a breeding bird check should be undertaken by an experienced ecologist prior to any removal. If a nest is found, a suitable buffer will be erected and works will be required to stop within the vicinity until the young fledge.</p> <p>Ground nesting species may be dissuaded from nesting in construction/site access routes by removing the surface vegetation from the desired area before the breeding season commences. Where this is not possible bird deterrent measures will be deployed to deter birds from nesting, followed by the completion of a pre works survey to check for presence of nests.</p> <p>Any works that occur during the breeding season will comply with the Wildlife and Countryside Act 1981 (as amended). An Environmental Advisor/Ecological Clerk of Works (ECoW) will be appointed to monitor construction operations during the breeding bird season. If Schedule 1 species are found breeding within the working area, works will stop immediately and Natural England advised</p>	Contractor	Pre-construction
B5*	<p>Develop a method statement to ensure that site clearance is undertaken in a sensitive manner to allow the temporary displacement of reptiles, hedgehogs, and brown hare.</p>	The Applicant's Project Manager	Pre-construction
B6	<p>Develop a method statement to ensure works within watercourse crossings include suitable measures to allow the passage of otters, water vole and fish throughout construction (i.e. during fluctuating water levels).</p>	The Applicant's Project Manager	Pre-construction
B7*	<p>Ensure accordance with details within Important Ecological Features (IEF) specific method statements which may include monitoring of some of the IEF's before the construction phase.</p>	Contractor	Pre-construction

Ref Number	Commitment	Responsible Person	Project Stage
B8	Where temporary habitat is removed, these are to be reinstated. For habitats identified as IEF's, reinstatement will be to a condition of ecological value equal to or above the baseline conditions.	Contractor	Construction
B9	Hedgerows temporarily lost during construction are to be reinstated and, where appropriate, improved from their baseline condition: defunct or species-poor hedges will be replanted so as to achieve species-rich and continuous hedgerows, once re-established. Where possible, hedgerow removal is to be kept to 15m to minimise habitat loss.	Contractor	Construction
B10	The working width would be reduced to the minimum necessary to enable plant to cross the boundary and for the pipeline to be laid safely, whilst only removing the minimum length of hedgerow required. Where possible, hedgerow removal is to be kept to 15 m to minimise habitat loss.	Contractor	Construction
B11	Within the DCO Site Boundary, and taking account of other local considerations, the detailed design will select the least impactful point at which to cross, taking advantage of gaps within existing hedgerows or reducing the number of trees removed where possible. For example, if there is a tree within the hedgerow, the tree will be retained, if possible, by positioning the working area to the side. Similarly, utilising existing gaps or entrances already within the hedgerow will reduce the amount of vegetation to be removed.	The Applicant's Project Manager	Pre-Construction
B12*	A minimum buffer of 10 m (where practicable) will be retained around retained IEF's to reduce any potential direct or indirect impacts on the species and habitats associated with them.	Contractor	Construction
B13	Where there is the loss of any tree with bat roost suitability, this is to be replaced on a 2:1 ratio; for each bat box installed, an equivalent number of bird boxes are to also be installed at the same location, where feasible.	Contractor	Construction

Ref Number	Commitment	Responsible Person	Project Stage
B14*	A suitably qualified ecologist is to be available for the duration of the construction period to resolve any uncertainties regarding ecological issues and to monitor compliance with good practice mitigation measures (as defined in the Final CEMP). The ecologist will undertake all necessary surveys (e.g., for breeding birds) during the construction period to ensure up-to-date information is available.	The Applicant	Construction
B15*	Standard good practice and pollution control measures will be implemented during vegetation clearance.	Contractor	Construction
B16*	Topsoil stripping should be undertaken outside of the winter period (October to March inclusive) where possible. If there is more than 15 millimetres (mm) of rain over 24hr period then topsoil stripping should cease until the soil is dry or 24 hours has passed, whichever is the sooner, or as agreed with Lands Officer.	Contractor	Construction
B17*	Habitat loss should be compensated with the creation of replacement habitats and habitat management on site.	Contractor	Construction
B18*	Implementation of European Protected Species Mitigation licences where necessary, including (for example) district level licensing for great crested newt, licences to permit the disturbance of bats or creation of alternative habitat features (e.g., bat roosts), if required.	Contractor	Construction
B19*	Monitoring of some of the IEF's may also be necessary during the construction phase, which will be detailed within IEF specific method statements.	Contractor	Construction
B20*	On completion of the works, dead hedging will be installed at all hedgerow removal locations to restore ecological connectivity until permanent reinstatement can be undertaken.	Contractor	Construction
B21*	Trees with confirmed bat roosts, which are also veteran trees, will be retained and protected. A minimum buffer of 10 m from the edge of the canopy will be applied to avoid disturbance and lighting of roost features will be avoided.	Contractor	Construction

Ref Number	Commitment	Responsible Person	Project Stage
B22*	A 10 m working width at watercourse crossings will be adopted, as far as practicable, to minimise potential impacts of open cut watercourse crossings.	Contractor	Construction
B23	All entry and exit pits for all trenchless crossings will be sited a minimum of 10 m away from any main riverbank tops. Stand-off distances around watercourses will be implemented prior to the commencement of works and clearly demarcated through the use of physical barriers (fencing, tape or similar). With regards the trenchless crossings under watercourses, these will be a minimum of 2 m and a maximum of 20 m below the true bottom of the watercourse and designed to avoid impacts upon watercourses.	Contractor	Construction
B24	Plant, personnel, and site traffic will be constrained to a prescribed working corridor through the use of temporary barriers, where practicable, to firstly avoid and secondly minimise damage to habitats, encroachment of the construction easement, and potential direct mortality and/or disturbance of fauna located within and adjacent to the construction corridor.	Contractor	Construction
B24a	Loss of woodland will be avoided as far as practicable.	Contractor	Construction
B25	A pre-construction check survey would be undertaken by an ornithologist checking on the location and suitability of any acoustic screening/fencing.	Contractor	Construction
Ecology and Biodiversity mitigation specifically to avoid disturbance of SSSI and SPA birds (if required)			
B25*	Visual screening of works within sensitive areas that regularly support qualifying features of the Sites of Special Scientific Interest (SSSI) and Special Protection Areas (SPAs).	Contractor	Construction
B26*	The use of noise abatement/reduction measures (such as acoustic fencing or other barriers) in such areas; including in relation to the breeding and wintering bird assemblages at Rosper Road Pools and the Coastal Grazing Marshes within fields east of the former TGT site at Theddlethorpe.	Contractor	Construction

Ref Number	Commitment	Responsible Person	Project Stage
B27*	Careful lighting design to minimise light spill onto adjacent habitats from working areas at above ground installations; and to limit use of artificial lighting.	Contractor	Construction
B28*	Employing an Ecological Clerk of Works (ECoW) to supervise works, with an agreed threshold of disturbance response beyond which working practices/locations can be amended as required, or if necessary, works can be temporarily halted, under advisement of the ECoW and where safe to do so.	Contractor	Construction

Ref Number	Commitment	Responsible Person	Project Stage
B29	<p>Barn Owl, A30 – Barnoldby Le Beck Park:</p> <ul style="list-style-type: none"> Undertake all the site clearance and pipeline construction works that are required within a 175m radius of the A30 barn owl nest box outside of the breeding bird season (March – October). This will avoid contravention of the Wildlife and Countryside Act 1981 (as amended) by avoiding disturbance to the active barn owl nest which is located within the DCO Site Boundary. Barn owl can, on rare occasions, breed outside the aforementioned March-October period. Therefore, a pre-construction survey should be undertaken by a suitably experienced and licensed ornithologist prior to the construction phase, with the purpose of determining the breeding status of barn owl prior to works commencing. The A30 tree which supports the barn owl nest box will be avoided with the aim of avoiding destruction and loss of the barn owl nest site. Micro-siting will be used to ensure that the tree is retained during construction and that the working width is located outside the root protection zone of the tree, as determined by a suitably experienced arboriculturist. However, should the tree be required to be felled/cleared in order to facilitate the works, it is recommended that two replacement nest boxes are erected within 200m from the DCO Site Boundary at its closest point to the nest site tree and within 500 m of each other, where possible; these should also be located at a minimum distance of 175m from the construction footprint. The replacement boxes should be erected at least 30 days prior to works commencing in accordance with guidance from The Barn Owl Trust. The barn owl boxes would be ideally erected within a building in an area free from irregular loud disturbance. However, should this not be possible, tree- or pole-mounted boxes at least 3 m from the ground would provide suitable nesting and roosting opportunities. An experienced ornithologist should be consulted to advise on the most suitable location, design and aspect of the boxes. 	Contractor	Construction

Ref Number	Commitment	Responsible Person	Project Stage
B30	<p>Barn Owl, WCP4, WCP7, WCP8, A1 – the Crofts, A6 – Highfield House Farm, A7 – Corner Farm, A31 Wildacres and A15 – Railway Farm:</p> <ul style="list-style-type: none"> • Undertake all the site clearance and pipeline construction works that are required within a 175m radius of these barn owl nesting sites outside of the breeding bird season (March – October). This will avoid contravention of the Wildlife and Countryside Act 1981 (as amended) by avoiding disturbance to these barn owl nest sites located adjacent to the DCO Site Boundary. • If site clearance and/or construction works are within or close to the breeding season at these locations, then appropriate mitigation should be implemented to ensure that nesting barn owl will not be disturbed prior to any works commencing within 175m of an active barn owl nest site. A suitably experienced ornithologist should carry out a breeding barn owl survey prior to works, with the aim of determining the breeding status of known nests. An Ecological Clerk of Works (ECoW) should be appointed to supervise operations during the breeding bird season, with an agreed threshold of disturbance response beyond which working practices/locations can be amended as required, or if necessary, works can be temporarily halted, under advisement of the ECoW and where safe to do so. If barn owl is found breeding within 175m of the DCO Site Boundary, works should stop immediately and advice sought from Natural England to agree suitable mitigation measures. Suitable mitigation measures to ensure legal compliance might include erection of an environmental barrier between the nest site and the construction footprint to prevent any noise and visual disturbance to nesting barn owl. 	Contractor	Construction

Ref Number	Commitment	Responsible Person	Project Stage
B31	<p>Peregrine - at pylon [TA19550 09181] and at pylon [TA17066 11885]:</p> <ul style="list-style-type: none"> • Undertake all the site clearance and pipeline construction works that are required within a 500m radius of these nesting sites outside of the breeding bird season (March – September). This will avoid contravention of the Wildlife and Countryside Act 1981 (as amended) by avoiding disturbance to these peregrine nest sites which are located adjacent to the DCO Site Boundary. • If site clearance and/or construction works are within or close to the breeding season at these locations, then appropriate mitigation should be implemented to ensure that nesting peregrine will not be disturbed prior to any works commencing within 500m of an active nest site. A suitably experienced ornithologist should carry out a breeding survey prior to works, with the aim of determining the breeding status of known peregrine nests. An Ecological Clerk of Works (ECoW) should be appointed to supervise operations during the breeding bird season, with an agreed threshold of disturbance response beyond which working practices/locations can be amended as required, or if necessary, works can be temporarily halted, under advisement of the ECoW and where safe to do so. If peregrine is found breeding within 500m of the DCO Site Boundary, works should stop immediately and advice sought from Natural England to agree suitable mitigation measures. Suitable mitigation measures to ensure legal compliance might include erection of an environmental barrier between the nest site and the construction footprint to prevent any noise and visual disturbance to nesting peregrine. 	Contractor	Construction

Ref Number	Commitment	Responsible Person	Project Stage
B32	<p>Hobby (Oak Plantation [TF32300 93570]):</p> <ul style="list-style-type: none"> • Undertake all the site clearance and pipeline construction works that are required within a 200m radius of Oak Plantation outside of the hobby breeding season (April – September). This will avoid contravention of the Wildlife and Countryside Act 1981 (as amended) by avoiding disturbance to breeding hobby. • If site clearance and/or construction works are within or close to the hobby breeding season at this location, then appropriate mitigation should be implemented to ensure that nesting hobby will not be disturbed prior to any works commencing within 200m of an active nest site. A suitably experienced ornithologist should carry out a breeding survey prior to works, with the aim of determining the breeding status of hobby at Oak Plantation. An Ecological Clerk of Works (ECoW) should be appointed to supervise operations during the breeding bird season, with an agreed threshold of disturbance response beyond which working practices/locations can be amended as required, or if necessary, works can be temporarily halted, under advisement of the ECoW and where safe to do so. If hobby is found breeding within 200m of the DCO Site Boundary, works should stop immediately and advice sought from Natural England to agree suitable mitigation measures. Suitable mitigation measures to ensure legal compliance might include erection of an environmental barrier between the nest site and the construction footprint to prevent any noise and visual disturbance to nesting hobby. 	Contractor	Construction

Ref Number	Commitment	Responsible Person	Project Stage
B33*	<p>Avocet, Theddlethorpe Facility Option 1:</p> <ul style="list-style-type: none"> • Site clearance and ground preparation works should be completed outside of the main breeding bird season (that is, March 1st to 31st August inclusive). As avocet has been recorded breeding at TGT this approach is necessary to ensure compliance with the legal requirements of the Wildlife and Countryside Act 1981 (as amended) for this Schedule 1 species. • If site clearance and/or construction works are carried out during the breeding bird season a suitably experienced ecologist should carry out breeding bird surveys prior to works, with the aim of determining the breeding status of nesting avocet. An Ecological Clerk of Works (ECoW) should be appointed to supervise operations during the breeding bird season, with an agreed threshold of disturbance response beyond which working practices/locations can be amended as required, or if necessary, works can be temporarily halted, under advisement of the ECoW and where safe to do so. If avocet is found breeding within or next to the proposed development site, construction works should stop immediately and Natural England be contacted to determine the appropriate course of action. • Measures to reduce the attractiveness of the habitat to ground nesting waders within and surrounding the construction area should be put in place during the non-breeding season. These could include (but are not necessarily limited to): removing the stony substrate/bare areas, or artificially covering these open habitats; reducing the open-ness of the habitat with visual barriers (solid panel fencing) that close off sight lines between potential nesting habitats and the surrounding area; installing a system of noise and visual deterrents (scarers) to deter nesting attempts. 	Contractor	Construction

Ref Number	Commitment	Responsible Person	Project Stage
B34*	<p>Avocet - Rosper Road Pools & Grazing marshes east of former Theddlethorpe Gas Terminal for Theddlethorpe Facility: Option 1:</p> <ul style="list-style-type: none"> • Undertake all the site clearance and construction works required at Immingham and TGT outside of the breeding bird season (March – September). This will avoid contravention of the Wildlife and Countryside Act 1981 (as amended) by avoiding disturbance to breeding avocet (if present) breeding outside the construction footprint. • If site clearance and/or construction works are within or close to the breeding season at these locations, then appropriate mitigation should be implemented to ensure that nesting avocet is not disturbed prior to any works commencing. A suitably experienced ornithologist should carry out a breeding bird survey prior to works, with the aim of determining the breeding status and location of avocet. An Ecological Clerk of Works (ECoW) should be appointed to supervise operations during the breeding bird season, with an agreed threshold of disturbance response beyond which working practices/locations can be amended as required, or if necessary, works can be temporarily halted, under advisement of the ECoW and where safe to do so. If avocet is found breeding, works should stop immediately and advice sought from Natural England to agree suitable mitigation measures. Suitable mitigation measures to ensure legal compliance might include erection of an environmental barrier between the nest site and the construction footprint to prevent any noise and visual disturbance to nesting avocet. 	Contractor	Construction

Ref Number	Commitment	Responsible Person	Project Stage
B35*	<p>Little Ringed Plover - Immingham Facility & Theddlethorpe Facility: (Option 1):</p> <ul style="list-style-type: none"> • Site clearance and ground preparation works should be completed outside of the main breeding bird season (that is, March 1 to 31 August inclusive). As little ringed plover has been recorded breeding at these locations, this approach is necessary to ensure compliance with the legal requirements of the Wildlife and Countryside Act 1981 (as amended) for this Schedule 1 species. • If site clearance and/or construction works are carried out during the breeding bird season a suitably experienced ecologist should carry out breeding bird surveys prior to works, with the aim of determining the breeding status of little ringed plover. An Ecological Clerk of Works (ECoW) should be appointed to supervise operations during the breeding bird season with an agreed threshold of disturbance response beyond which working practices/locations can be amended as required, or, if necessary, works can be temporarily halted, under advisement of the ECoW and where safe to do so. If little ringed plover is found breeding within or next to the proposed development site construction, works should stop immediately and Natural England Wales advised. • Removing the stony substrate/bare areas, or artificially covering these open habitats, prior to the start of the breeding season would reduce the attractiveness of the proposed construction area for ground nesting birds, e.g., waders (including little ringed plover). 	Contractor	Construction

Ref Number	Commitment	Responsible Person	Project Stage
B36*	<p>B36 Cetti’s Warbler - Rosper Road Pools & Waithe Beck:</p> <ul style="list-style-type: none"> • Undertake all the site clearance and construction works outside of the breeding bird season (March – September). This will avoid contravention of the Wildlife and Countryside Act 1981 (as amended) by avoiding disturbance to breeding Cetti’s warbler breeding outside the construction footprint. • If site clearance and/or construction works are within or close to the breeding season at these locations, then appropriate mitigation should be implemented to ensure that nesting Cetti’s warbler is not disturbed prior to any works commencing. A suitably experienced ornithologist should carry out a breeding bird survey prior to works, with the aim of determining the breeding status and location of Cetti’s warbler at Waithe Beck. An Ecological Clerk of Works (ECoW) should be appointed to supervise operations during the breeding bird season, with an agreed threshold of disturbance response beyond which working practices/locations can be amended as required, or if necessary, works can be temporarily halted, under advisement of the ECoW and where safe to do so. If Cetti’s warbler is found breeding, works should stop immediately and advice sought from Natural England to agree suitable mitigation measures. Suitable mitigation measures to ensure legal compliance might include erection of an environmental barrier between the nest site and the construction footprint to prevent any noise and visual disturbance to nesting avocet. 	Contractor	Construction
B37*	<p>Noise fencing will be included for works within 500m of the relevant survey fields, to minimise the area of noise exposure. The relevant fields are survey fields 27a and 54 (Appendix E Figure 2; FLL North), which supported more than 1% of the Humber Estuary SPA / Ramsar population of non-breeding curlew, and survey fields 86, 92, 94, 95a and 96a which supported more than 1% of the Humber Estuary SPA / Ramsar population of pink-footed goose) at the Theddlethorpe end of the Proposed Development (FLL South) (see Appendix E of document 6.7 <i>Report to Inform HRA (Application Document 6.7)</i>)</p>	Contractor	Construction

Ref Number	Commitment	Responsible Person	Project Stage
B38	<p>Avocet – Fields West of the former TGT site.</p> <p>The electrical connection to the Dune Valve will be installed using a mole plough. This will create a small slit in the turf in which the cable duct will be immediately installed, and the turf closed behind by a small mini digger. No wetland features in this area will be directly affected.</p> <p>Installation is expected to be undertaken in one pass in a single day. Works at the Dune Valve could also provide disturbance to nesting avocet. Therefore, all works at Viking Fields will need to be undertaken during August/September when avocets are no longer likely to be breeding and non-breeding numbers are still low.</p>	Contractor	Construction
C – Landscape and Visual			
C1	Adoption of a maximum working width for the open-cut pipeline construction corridor of 30 m except for trenchless crossings where the maximum working width will be 50 m, sufficient to excavate the trench, store topsoil and subsoil separately and facilitate machinery and vehicle access (but avoiding additional land take).	Contractor	Construction
C2	Adoption of cut and cover along the pipeline route and subsequent reinstatement to original ground profiles. As per <i>ES Volume II Chapter 3: Description of the Proposed Development (Application Document 6.2.3)</i> , the approximately 2.4 km of pipeline within the Lincolnshire Wolds AONB will be installed sequentially with the original land profiles reinstated within 9 months, subject to installation methods and complexity.	Contractor	Construction
C3	Placement of topsoil to one side of the trench and subsoil to the other, with the additional height of the subsoil storage used on the side requiring the greater screening benefit where pipeline routeing allows.	Contractor	Construction
C4*	Positioning temporary construction compounds in less visually conspicuous locations along the route, as far as practicable, without compromising efficient working, for example away from the AONB or village locations or settlements.	Contractor	Construction

Ref Number	Commitment	Responsible Person	Project Stage
C5*	Employing standard good practice construction techniques, such as minimising vegetation clearance, installing tree protection measures around retained trees and hedgerows, separation and storage of subsoil and topsoil to ensure no degradation in quality, and reinstatement undertaken as soon as possible after completion of construction of each section/area of works. A high standard of soil management and reinstatement will achieve better integration of the pipeline post reinstatement, reducing contrast with adjacent agricultural land and mitigating visual scarring through the landscape and along the pipeline route.	Contractor	Construction
C6*	Reinstatement of hedgerows/ field boundaries crossed by the route, with native (and species-rich where appropriate) species planted to reduce or mitigate effects on landscape character and the visual awareness of the pipeline route within and across the landscape in the short to medium term.	Contractor	Construction
C7*	Landscape maintenance will be put in place to maintain any new planting	Contractor	Construction
C8	Reinstatement of agricultural land such that there is no long-term change in land use along the pipeline route.	Contractor	Construction
C9	Opportunities to reduce impacts of nearby highly sensitive visual receptors should be sought through sensitive design of construction compounds e.g., organising compound features and using earthworks / fencing to screen internal activities during the construction phase.	Contractor	Pre-Construction
D – Historic Environment			
D1	Ongoing discussion and engagement with the County Archaeologist (or equivalent) relating to the archaeological mitigation strategy.	The Applicant's Project Manager	Pre-construction

Ref Number	Commitment	Responsible Person	Project Stage
D2	<p>Develop and implement a detailed archaeological mitigation strategy in consultation with the County Archaeologist (or equivalent), likely to include archaeological mitigation measures such as: 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 advance of construction; targeted archaeological monitoring during construction works; geoarchaeological investigation; and protection of remains within working areas and preservation of archaeological remains in situ. Mitigation will be carried out in accordance with a Written Scheme of Investigation which will be produced in consultation with the County Archaeologist (or equivalent).</p>	The Applicant's Project Manager	Pre-construction
D3	<p>Targeted archaeological monitoring would be undertaken in areas where prior archaeological evaluation indicates this approach is appropriate, and/or in areas where archaeological investigation and recording in advance of construction are not feasible due to safety or logistical considerations, or undesirable due to environmental or engineering constraints. The works contractor's preferred method of working would be controlled as necessary by the supervising archaeologist to allow archaeological recording to take place to the required standard.</p>	Contractor	Construction
D4	<p>In the event of human remains being found during the course of archaeological monitoring of construction works, works should stop, the local coroner, Project Manager and Country Archaeologist (or equivalent) should be notified immediately. The local area around the remains should be immediately isolated and protected by the Contractor. Work in this area should not recommence without the prior acceptance of the Project Manager and a Ministry of Justice (exhumation) licence being in place prior to their removal.</p>	Contractor	Construction

Ref Number	Commitment	Responsible Person	Project Stage
D5	If archaeological finds are discovered during archaeological monitoring of construction works, the Applicant's Project Manager will be informed, and appropriate steps undertaken, in consultation with the County Archaeologist (or equivalent), to excavate and record the finds prior to construction works continuing.	Contractor	Construction
D6	<p>Ensure all written records of the archaeological investigations undertaken are completed and submitted in a timely manner. A copy of any analysis, reporting or publication required as part of the Mitigation Strategy should be deposited with the relevant local authority repositories as part of the Proposed Development archives within 1 year of completion of the Proposed Development or such other period as may be agreed in writing by the relevant planning authority. Archive should be deposited with an appropriate museum as listed below:</p> <ul style="list-style-type: none"> • West Lindsey and East Lindsey District Councils: Lincolnshire County Council Heritage Service; • North Lincolnshire Council: North Lincolnshire Museums; and • North East Lincolnshire Council 	Contractor	Post-Construction
D7	Upstanding earthworks, including ridge and furrow earthworks, that are impacted by the Project would be reinstated post-construction to restore their form and character, based on pre-commencement topographic survey of the features.	Contractor	Post-Construction
D8	Raising the awareness of construction workers and operatives of any control and reporting procedures to be followed, should archaeological deposits be encountered during the works, for example through toolbox talks and regular briefings.	Contractor	Construction
D9	The protection of built heritage assets and archaeological sites during construction, for example through the demarcation of buffer zones around such interests with fencing and signage.	Contractor	Construction

Ref Number	Commitment	Responsible Person	Project Stage
D10*	The control of light spillage, noise and dust within construction compounds and working areas, for example by adhering to working hours and through good site layout and working practices, to minimise impacts on the setting of heritage assets.	Contractor	Construction
D11	A programme of outreach/public engagement to raise awareness of the cultural heritage of the scheme.	Contractor	Pre-Construction
D12	Limiting stripping for construction compounds, laydown, welfare and parking areas, haul roads and other associated works in areas where archaeology is recorded to avoid disturbance, and instead using geotextile and stone over topsoil.	Contractor	Construction
E – Geology and Hydrogeology			
E1	<p>An appropriate intrusive ground investigation of selected areas of the DCO Site Boundary will be undertaken in accordance with all relevant guidance and legislation including BS 10175:2011, Environment Agency/DEFRA Land Contamination Risk Management (LCRM) series of reports.</p> <p>The ground investigation will be undertaken to achieve the following objectives:</p> <ul style="list-style-type: none"> • Determine the ground conditions to allow design of foundations and structures; • Assess the nature, extent and magnitude of soil and groundwater contamination present; • Assessment of artesian groundwater conditions and identification of where unique groundwater features could occur within the DCO Site Boundary; • Assess the risks (if any) from potential contaminants to human health and Controlled Waters; and • Assess the ground gas regime. <p>If areas of the DCO Site Boundary are shown to pose a risk, if feasible, infrastructure would be moved to a different location. However, if it is not</p>	The Applicant's Project Manager	Pre-construction

Ref Number	Commitment	Responsible Person	Project Stage
	possible to move the infrastructure in contact with the ground, remedial measures would be implemented.		
E2*	A remediation strategy will be devised and discussed with the regulatory authorities (including relevant local authorities and the Environment Agency) prior to any remedial works. Contaminated material that is considered to pose a risk would be remediated in line with the remediation strategy or disposed of appropriately.	The Applicant's Project Manager	Pre-construction
E3	A detailed hydrogeological risk assessment will be undertaken at FEED stage where trenchless techniques or dewatering is required in high sensitivity groundwater environments. Where dewatering is required, a dewatering scheme will also be developed prior to construction (in consultation with the Environment Agency and appropriate public water abstraction companies) to demonstrate that there is an effective strategy to manage water arising from the operations and, where required, sufficient proposals to treat the water prior to controlled discharge. Any such assessment will consider the effects of any draw down or impacts on nearby abstractions or resources. This will include consultation with the EA as work progresses on a case-by-case basis assessment, and will ensure that appropriate site-specific mitigation measures are in place prior to the works commencing.	The Applicant's Project Manager	Pre-construction
E4*	Produce an environmental emergency response plan which will detail such measures as making appropriate equipment (e.g., spill kits, absorption mats) easily accessible on-site and training personnel in using them. The plan should include clear protocols and communication channels to ensure that any spillages are dealt with immediately and adequately. This will prevent large areas of soil / geology potentially becoming contaminated and in turn protect surface water quality.	Contractor	Pre-construction

Ref Number	Commitment	Responsible Person	Project Stage
E5*	Prepare a SWMP following the protocols within the Contaminated Land Application in the Real Environment (CL: AIRE) Definition of Waste: Development Industry Code of Practice to ensure that excavated materials are re-used appropriately, sustainably and remain outside the waste hierarchy.	Contractor	Pre-construction
E6	Pre-entry meetings will be held with landowners / occupiers during which any requirements for temporary fencing, accesses, monitoring of water supplies and reinstatement will be discussed.	The Applicant's Project Manager	Pre-construction
E7	A watching brief will be maintained during construction works to confirm the absence of potential sources of contamination such as Made Ground, visual or olfactory evidence of hydrocarbons etc. If identified, these areas of potentially contaminated ground and/ or water will be sampled and undergo appropriate sampling and laboratory analysis.	Contractor	Pre-construction
E8	A dynamic risk assessment will be undertaken in accordance with the Environment Agency report Land Contamination Risk Management (LCRM) to identify if these areas of potential contaminants pose a risk to construction workers or site operators and Controlled Waters. If areas of the site are shown to pose a risk, remedial measures required will be implemented. A discovery and disposal strategy will be devised and agreed with the regulatory authorities prior to construction works to outline this process to allow the dealing of risks in a timely manner.	Contractor	Pre-construction
E9*	Should contaminated material that poses a risk be identified, it will be treated and/ or disposed of appropriately.	Contractor	Pre-construction
E10	Undertake proportionate UXO assessment including, but not limited to, areas with a 'moderate' identified risk from UXO.	Contractor	Pre-construction

Ref Number	Commitment	Responsible Person	Project Stage
E11*	Within the construction compounds specific areas will be designated for the storage of chemicals, waste oils and fuel and refuelling activities and will be placed on secondary containment e.g., double walled tanks or bunded areas with a capacity of 110% of the maximum stored volume. Refuelling on the pipeline spread will be undertaken using plant nappies and be at least 30 m away from watercourses and vehicles and plant will not be left unattended during refuelling.	Contractor	Construction
E12*	Designated fuel transfer areas are to be established and used for the transfer of fuel or other potentially contaminating liquids. Drip trays are to be provided.	Contractor	Construction
E13*	All persons engaged in site construction works will be made aware of any potential contaminated material. To prevent risks from exposure to any contaminants the appropriate Personal Protective Equipment and Respiratory Protective Equipment will be made available.	Contractor	Construction
E14*	A repeat baseline survey to be undertaken once the construction is complete and the temporary construction compounds reinstated to demonstrate the area has been returned to its previous state	Contractor	Post-Construction
E15	On completion of the works there will be reinstatement of all land in agreement with landowners.	Contractor and Lands Team	Post-Construction
E16*	Risk assessments in accordance with the Health and Safety at Work Act to restrict exposure to potentially harmful substances to a safe level for construction workers. Construction Design and Management practices will be applied.	Contractor	Pre-Construction

Ref Number	Commitment	Responsible Person	Project Stage
E17	<p>Piling Risk Assessment: Where piled foundations are proposed (i.e., the Immingham and Theddlethorpe Facilities and Block Valve Stations), they will be designed in accordance with the EA guidance document 'Piling and Penetrative Ground Improvement Methods on Land Affected by Contamination: Guidance on Pollution Prevention' which includes preventing piles acting as preferential pathways for vertical migration of contaminants to groundwater.</p>	Contractor	Construction
E18	<p>Any material imported to site, such as for supporting foundations, will be natural quarried stone or, if recycled, the material will undergo chemical testing. The suite of contaminants and site use criteria will be agreed with regulatory authorities, in order to demonstrate that the material is suitable for use on site and does not pose a risk to construction workers or the environment.</p>	Contractor	Construction
E19	<p>During ground investigation surveys, ground water levels will be recorded, and piezometers installed in boreholes at identified locations to allow groundwater levels to be monitored. This is to record the level changes throughout the year to inform design. From these records, groundwater profiles will be derived and along with excavation methods and other hydrogeological conditions, from which the requirements for de-watering will be identified</p>	Contractor	Construction
E20	<p>During the detailed design phase of the Proposed Development, investigations will be completed to identify all private water supplies that may be affected by the Proposed Development. Where identified and deemed necessary, questionnaires will be circulated to obtain further information. Following this, a risk assessment will be conducted to assess whether these water supplies could be affected by construction activities. Selected private water supplies will then be monitored before, during and after construction, with water quality testing completed where required, to protect the affected private water supply.</p>	Contractor	Construction

Ref Number	Commitment	Responsible Person	Project Stage
E21*	Storage and Handling: Oil/ diesel storage (including fixed tanks, Intermediate Bulk Containers (IBC's), mobile bowsers and generators) will be placed at least 20m from any watercourse and 50 m from any borehole/ well. Spill kits and drip trays will be provided for all equipment with liquid storage. Drip trays will be checked and emptied daily and will retain at least 10% of the volume being handled. Daily inspections will be undertaken of plant using hydraulic oils. Storage containers will be correctly labelled. Storage areas will be kept secure to prevent acts of vandalism which may result in leaks/ spills. There would be no storage of chemicals within a SPZ 1 or 2 (shown on <i>ES Volume III Figure 9-7 (Application Document 6.3.9.7)</i> including the default SPZ 1 around the private groundwater abstractions identified in Section 5.	Contractor	Construction
E22*	Unless essential (e.g., for safety at road crossings), vehicle washing will not take place within the SPZ 2 (shown on ES Volume III Figure 9-7). Where vehicle washing does take place, this will be undertaken in designated areas in which the arising effluent can be captured and managed appropriately.	Contractor	Construction
E23*	A Water Management Plan (WMP) will be in place to mitigate potential impacts to identified receptors by ensuring surface water runoff quality and quantity is managed effectively. This includes intercepting surface run-off from the works areas by filters and 'header' drains running along the edge of the temporary haul roads, which will lead to attenuation ponds prior to being discharged to appropriate surface watercourses (subject to agreement from the relevant IDB).	Contractor	Construction
E24	Ground Gas Risk Assessment: Should ground gas investigations and the GGRA determine that the site is at risk from of a hazardous ground gas regime then there may be a requirement for ground gas protection measures for any manned buildings, such as the Immingham Facility. The requirement for ground gas protection measures will be assessed in line with British Standard 8485:2015+A1:2019 - Code of Practice for the Design of Protective Measures for Methane and Carbon Dioxide Ground Gases for New Buildings.	Contractor	Construction

Ref Number	Commitment	Responsible Person	Project Stage
E25	<p>Potential impact on human health from contaminated soils: A Generic Quantitative Risk Assessment (GQRA) will be undertaken in line with LCRM guidance to identify potential risks to identified human health and groundwater receptors from soil, soil vapour and groundwater contamination. Although the CEMP assumes a GQRA will be undertaken in line with LCRM, this is particularly pertinent at the Immingham and Theddlethorpe Facilities where permanent above-ground, potentially manned buildings will be present. A remediation strategy will be devised and agreed with the regulatory authorities prior to any remedial works, if required. The determination of the risks through ground investigation and risk assessment, and the potential remediation of areas may result in the reduction of the significance, or even removal, of some of the potential effects identified.</p>	Contractor	Construction
E26*	<p>Additional assessment may also be required in relation to handling of potentially contaminated spoil, for example at HDD launch pits. Depending on the findings of such an assessment, this may include additional measures to reduce the potential risk to construction workers and groundwater (e.g., segregation of materials, validation testing and additional personal protective equipment), over and above the standard 'best practice' measures included in the Draft CEMP for the rest of the Proposed Development. If areas of the proposed redevelopment are shown to pose a risk, remedial measures will be implemented. If handling of contaminated soils is required, risk assessments will be in place in accordance with the Health and Safety at Work Act to restrict exposure to potentially harmful substances to a safe level for construction workers.</p>	Contractor	Construction

Ref Number	Commitment	Responsible Person	Project Stage
E27	Where sand and gravel lenses are identified, with lesser thicknesses of Glacial Till, additional mitigation measures may be required for deeper excavation for the HDD crossings to prevent contamination of the underlying chalk Principal Aquifer. Clean drilling will be undertaken if visual or olfactory evidence of contamination is identified, using a bentonite seal to seal off the contamination, followed by a reduction in drilling casing beyond the seal if this contamination cannot be treated.	Contractor	Construction
E28	Based on local geological features previously identified in the Immingham area and close to the coastline, such as blow wells, there is a possibility that groundwater will be artesian in the chalk. The drilling depth of HDD will be minimised wherever possible to avoid the possibility of entering the chalk Principal aquifer. However, if drilling into the chalk Principal Aquifer is required due to engineering or technical reasons, the EA would be consulted to ensure appropriate mitigation measures (e.g., clean drilling as described above) are in place prior to the works commencing and to ensure no delays. Ground investigation data, including geological, hydrogeological and contamination data, will be obtained prior to commencement of construction and appropriate measures required as a result of the findings of the ground investigation and associated risk assessments will be incorporated into the final CEMP.	Contractor	Construction
E29	The drilling fluid within the annular space between the installed pipe and the HDD bore will be left in-situ on completion of the pipe pull back. Any surplus drilling fluid will be removed off-site for recycling and/or disposal. Contingency plans will be in place to deal with any indications of drilling fluid release.	Contractor	Construction
E30	Measures for appropriate temporary storage of soil. In addition, future ground investigation will include chemical testing and risk assessment to identify potential risks to groundwater from mobilisation of contaminants, if present, present within soil in the SPZ 2.	Contractor	Construction

Ref Number	Commitment	Responsible Person	Project Stage
E31*	Inspection and maintenance of plant and equipment, and the provision of spill kits on site in order to mitigate the potential risk of spills or losses (e.g., of fuel, hydraulic oil) to identified receptors.	Contractor	Construction
E32*	No storage of fuel, or refuelling of plant and equipment, within the SPZ 1 or 2. Refuelling will be restricted to designated areas within construction compounds, of which none are to be located within the SPZ 1 or 2.	Contractor	Construction
E33	Where ground instability risks have been identified in sections 1 and 5, (generally mapped Tidal Flat Deposits) and are proven by ground investigation, in-situ ground improvement measures combined with dewatering may be required.	Contractor	Construction
E34	Prior to commencement of any horizontal directional drilling (HDD) work, a Bentonite Breakout Management Plan will be produced. All HDD work will be undertaken in accordance with the measures set out in the BBMP	Contractor	Pre-construction
F – Agriculture and Soils			
F1	Prepare a detailed Soil Management Plan following the guidance in the Defra (2009) Construction Code of Practice for the Sustainable Use of Soils on Construction Sites (or updated version thereof) and other relevant documents such as The Institute of Quarrying’s Good Practice Guide for Handling Soils in Mineral Workings. This plan will be based upon the Outline Soil Management Plan presented within <i>ES Volume IV: Appendix 10.1</i> , (<i>Application Document 6.4.10.1</i>).	Contractor	Pre-construction
F2	Soil handling operations will be undertaken in line with the Soil Management Plan and appropriately supervised to ensure that they are suitable for re-use within the Project. Stockpiles will be placed away from watercourse to avoid runoff. The appropriate management of soil resources will maintain soil volumes and quality to prevent loss/lowering of Agricultural Land Classification (ALC) grade between pre- and post-construction and thus potential loss of Best and Most Versatile (BMV) status.	Contractor	Construction

Ref Number	Commitment	Responsible Person	Project Stage
F3	Access to agricultural lands will be maintained throughout the construction process, as far as is practicable.	Contractor	Construction
F4	Damage to the agricultural capability of soils will be avoided by the use of best practice in soil stripping, handling and storage of soil materials.	Contractor	Construction
F5	Existing field drainage systems will be re-instated to ensure that land capability is maintained, and drainage related to flooding issues will not be worsened.	Contractor	Construction
F6	Access to water supplies for all fields will be maintained where possible.	Contractor	Construction
F7	Where a pre-existing problem with eelworm or other pests or diseases is identified tests will be taken before entry and the analysis results sent to The Applicant's / landowner prior to entry.	Contractor	Construction
F8*	Where required pests and diseases tests will be carried out on any imported topsoil before it comes on Site and the analysis results sent to The Applicant's / landowner.	Contractor	Construction
F9*	Soil testing of any imported soils to the relevant British Standard for topsoil (BS3882:2015) or subsoil (BS8601:2013) will be undertaken to ensure similarity to the in-situ soils and its suitability for reuse.	Contractor	Construction
F10	Following completion of construction operations all agricultural land taken temporarily would be fully reinstated as near as practically possible to its former condition. Topsoil would be prepared and, where required (for example for the reestablishment of permanent pasture), sown using an appropriate seed mix as agreed by the landowner.	Contractor	Construction
F11	To ensure that the maximum area of productive land remains in agricultural use during the construction period pipeline routeing and access tracks will be directed to the edge of fields, in field boundaries, or through less productive areas of individual fields wherever practicable, taking into account other environmental, socio-economic, and engineering constraints.	Contractor	Pre-construction

Ref Number	Commitment	Responsible Person	Project Stage
F12	Targeted pre-commencement soil and ALC surveys on land that will be subject to direct disturbance to aid in the production of and implementation of the Soil Management Plan, as well as providing baseline land quality data for the success of reinstatement within the pipeline working corridor to be measured against.	Contractor	Pre-construction
F13	Temporary land-take areas will be reinstated to agricultural use, unless otherwise identified for habitat enhancement - any agreed controls over the exact post-reinstatement land use (either set out in the ES or through landowner consultation) will be clearly identified.	Contractor	Pre-construction and Construction
F14	All BMV agricultural land (land of Grades 1, 2 or Subgrade 3a) which is temporarily disturbed during construction will be returned to its original ALC grade by the end of the five-year aftercare period.	Contractor	Construction and post-construction
G – Water Environment			
G1*	Prepare a Flood Warning and Evacuation Plan which contains information on flood emergency response actions, including the locations of safe refuge provision.	Contractor and Applicant	Pre-construction and post-construction
G2	The location and condition of existing land drainage will be established, and a record compiled. Subject to landowner/occupier agreement, existing drains should be restored, or new drains established to help prevent damage to soil structure, maintain work areas in a dry condition and to enable current drainage systems to continue to operate through the construction period.	Contractor	Pre-construction
G3	The design of these drainage schemes will be agreed by The Applicant's, the Contractor(s), and the landowners / occupiers. A specialist drainage contractor in most instances will carry out the work. Permanent records of the land drainage locations will be produced.	The Applicant's Project Manager	Pre-construction
G4*	Seek the relevant permits / consents where required from the Environment Agency and Lead Local Flood Authority where necessary.	Contractor	Pre-construction

Ref Number	Commitment	Responsible Person	Project Stage
G5	Water quality monitoring will be undertaken pre, during and post-construction on all watercourses alongside daily inspections. Where effects are identified through monitoring then additional mitigation should be identified.	Contractor	Pre-construction
G6	A pre-construction Hydromorphological Survey of all proposed open-cut watercourse crossings will be undertaken to inform a Channel Reinstatement Scheme. This will ensure that the channel is reinstated as found or better, with riparian bankside treatments to return to watercourse corridor to at least its original condition.	Contractor	Pre-construction
G7	All temporary works including construction of compounds, haul roads, earthworks, pipeline crossings of watercourses etc. will be undertaken in accordance with good practice guidance to prevent pollution of water features and / or physical impacts. In England the UK Government has published general advice on the Gov.uk website (https://www.gov.uk/guidance/pollution-prevention-for-businesses). Although prepared by the environmental agencies for the UK Devolved Administrations, the Guidance on Pollution Prevention advice notes provide relevant good practice for pollution prevention (https://www.netregs.org.uk/environmental-topics/guidance-for-pollution-prevention-gpp-documents/). Further good practice information is available in various Construction Industry Research and Information Association (CIRIA) publications including CIRIA Report C750 'Groundwater Control: Design and Practice', C648 'Control of Water Pollution from Linear Construction Projects', and C741 Environmental good practice on site guide (fourth edition).	Contractor	Construction
G8	Watercourse crossing locations will be micro-sited to make the crossing as close to perpendicular to the watercourse as reasonably practicable, ensuring the crossing is as short as possible and for open cut / temporary access crossings reducing the risk of localised scour at the embankments.	Contractor	Construction

Ref Number	Commitment	Responsible Person	Project Stage
G9	The temporary watercourse crossings will be designed to maintain downstream flows and to allow continued and unobstructed passage for aquatic organisms and mammals (otter and water vole) using river corridors. An EPS licence will exclude water vole from the area if present and if an otter holt is identified, this would be covered by the license also.	Contractor	Construction
G10	Flumes will be sized to maintain the current land drainage regime and the existing flow, following a study to understand the hydrology of the watercourse being crossed in order to assess the range of flows likely during the temporary works.	Contractor	Construction
G11	Following installation of the CO ₂ pipeline, topsoil and excavated material will be reinstated and a post-construction drainage system installed to ensure no detriment to the existing land drainage regime.	Contractor	Construction
G12*	Hazardous liquids such as diesel fuel will be securely stored on flat hardstanding with interception of surface water drainage so that it can be treated prior to discharge (using either SuDS or proprietary measures). Fuel will be protected either by double-walled tanks or stored in a bunded area with a capacity of 110% of the maximum stored volume. Smaller quantities of chemicals will be stored in lockable containers. Spill kits would be located nearby.	Contractor	Construction
G13*	Appropriate equipment (e.g., spill kits) will be made available for all items of plant on site to deal with accidental spillages and the Pollution Prevention Plan will provide a full list of protocols and communication channels with the Environment Agency in the event of an accidental pollution incident.	Contractor	Construction
G14	Surface water runoff from the pipeline spread will be managed to prevent discharge of silted or contaminated water into any surface water feature or land drain. Details to be included in the Water Management Plan.	Contractor	Construction

Ref Number	Commitment	Responsible Person	Project Stage
G15*	Where practicable, plant to be filled with biodegradable oil, in line with the plant manufacturer's instruction, to reduce the potential for pollution to watercourses in the event of a hydraulic oil pipe failure.	Contractor	Construction
G16*	Watercourses near work sites would be inspected daily when work activity is being carried out. Inspections will need to consider locations upstream (control) and downstream of the working area so comparisons can be made. The Contractor should familiarise themselves with any other potential sources of contamination in advance of the works starting. During inspections any signs of pollution should be considered using visual and olfactory observations and in-situ water quality testing using hand-held water quality meters (that may include temperature, dissolved oxygen, pH, turbidity, and electrical conductivity). Evidence of water pollution may include, but not limited to, siltation, deposits of aggregates and other materials or litter, turbidity, oil sheens, odours, dis-colourisation, surface foam and scum. Monitoring should continue daily for the duration of the works affecting each watercourse. Work site drainage and any interception, containment or treatment measures would also be regularly inspected and maintained as required during the works, so that it continues to operate to their design standard.	Contractor	Construction
G17	If a wheel washing system is proposed (rather than regular road sweeping), the wash down of construction vehicles and equipment will take place in designated washdown areas within construction compounds. Waste wash water should be prevented from passing untreated into watercourses or groundwater. Appropriate measures will include use of sediment traps.	Contractor	Construction

Ref Number	Commitment	Responsible Person	Project Stage
G18	<p>Implement working methods that reduce water consumption and measures that improve water-use efficiency on site including:</p> <ul style="list-style-type: none"> • Undertake water audits that identify all water-using processes, activities, and equipment on Site (these will be updated periodically to reflect any significant changes in site activities through the Project life cycle). • Develop an action plan, including staff engagement and training for relevant staff, to reduce water consumption by all water-using processes, activities, and equipment on site. • Undertake monitoring regime to assess the effectiveness of water conservation measures in the action plan. • Establish a reporting regime to advise on the effectiveness of the action plan (which will be completed at a minimum of annually). 	Contractor	Construction
G19	<p>Any water abstracted due to dewatering would be treated and then returned to the watercourse to prevent any losses of water from the system, this would be subject to a contamination assessment.</p>	Contractor	Construction

Ref Number	Commitment	Responsible Person	Project Stage
G20	<p>Topsoil and subsoil will not be stored directly adjacent to the watercourse but will be stored a minimum of 20m from the watercourse, with additional mitigation such as silt fences installed if there is a risk of sediment entering the watercourse.</p> <p>Where site constraints mean that it is not possible to maintain a 20m buffer from a water body, additional mitigation measures will be implemented to provide an adequate barrier between the potential source of contaminated runoff and the receptor. Smaller stockpiles could be created, reducing the pile height.</p> <p>No topsoil or subsoil will be stored within a surface water flood zone (flood zone 2 and 3) unless supported by a risk assessment (i.e., consideration of weather forecast and duration of storage) and additional mitigation (i.e., drainage bypass channel for overland flow).</p> <p>It is the project aspiration to avoid storage of materials within the fluvial floodplain during construction. In areas where fluvial floodplains are clearly mapped by the EA (e.g. Sections 2, 3 and 4), there will be no storage of materials within these mapped floodplains. In areas where the EA flood map for planning shows combined tidal and fluvial floodplains (Section 1 and 5), and fluvial floodplains cannot be identified separately from available flood maps, a reasonable set back will be provided where there will be no for the storage of materials, subject to further discussions with the EA (for Main Rivers) or the LLFA/Internal Drainage Board (for Ordinary Watercourses) at the project design evolves through the FEED stage .</p> <p>Note that sections of pipes may be located within the fluvial floodplain at open cut watercourse crossing locations whilst the pipeline is being laid out and welded in place. This is not considered storage, as it is part of the construction process. These activities will take place during the summer months to avoid times of higher flows.</p>	Contractor	Construction

Ref Number	Commitment	Responsible Person	Project Stage
G21	A 'frac-out' (the unintentional return of drilling fluids to the surface) is a potential risk when HDD techniques is used in sensitive habitats and water environments. Frac-out during a trenchless operation can happen due to various reasons. To minimise the potential risk and potential impacts of a frac-out, risk assessments and contingency plans should be prepared.	Contractor	Pre Construction, Construction
G22	To mitigate the impacts against falling aggregate from haul trucks, the culverts (flumes) crossing waterbodies should be wider than the haul road themselves (approximately 1-2 m either side of the culvert).	Contractor	Construction
G23	Pea shingle/gravel to be used instead of sandbags. It is a larger aggregate that does not erode as quickly as sand. It is also easier to remove from a water feature than sand.	Contractor	Construction
G24	Where temporary crossings and open-cut crossings of drains connect to chalk streams, additional sediment management should be used such as straw bales being placed downstream of the crossing prior to flume removal. These will trap suspended sediment while allowing water to pass through the bales.	Contractor	Construction
G25	For water features that are being flumed, a phased approach of flume removal should be undertaken to remove the risk of large sediment plumes. There are multiple watercourses which drain into sensitive receptors which have the potential to increase the cumulative effects on the water features, particularly through sediment inputs. A phased approach of removal would ensure that water features would not be impacted by multiple sources of sediment from upstream receptors simultaneously.	Contractor	Construction
G26	In the event that construction activities, including watercourse crossings, result in deposition of sediment within watercourses resulting in siltation of riverbeds, changes to morphology or result in loss of channel capacity, post-works restoration will be applied.	Contractor	Construction and Post Construction

Ref Number	Commitment	Responsible Person	Project Stage
G27	Critical electrical equipment should be raised a minimum of 300mm above the 2115 0.1% AEP breach depth. Achieved by raising infrastructure or locating vulnerable infrastructure within a watertight surround.	Contractor	Construction and Post Construction
G28	Use of flood resistant and resilient construction materials.	Contractor	Construction and Post Construction
G29	Facility users to sign up to the EA Flood Warning Service to receive flood warnings.	Contractor and Applicant	Construction and Post Construction
G30	No maintenance visits during periods when a Flood Warning is in force.	Contractor and Applicant	Construction and Post Construction
G31	Prepare a Water Efficiency Management Plan documenting measures to reduce water consumption by all water-using processes, activities, and equipment on site. It will also include details of staff engagement and training for relevant staff as well as setting out monitoring and reporting requirements (as per CEMP) and how these will be implemented.	Contractor	Pre-Construction
G32*	Where it is necessary to remove vegetation, establish new/replacement vegetation (using local and/or reputable sources) as soon as practicable. Until vegetation is fully re-established, temporary protection of the soil may be necessary.	Contractor	Post Construction
G33*	Produce an Environmental Emergency Response Plan documenting measures to prevent pollutants infiltrating into the soils beneath the site and reaching surface and groundwater receptors.	Contractor	Pre-Construction
G34	For sensitive water crossings, the Working Width will be reduced to 10 metres, where possible.	Contractor	Construction
G35	Specific crossing locations will be micro-sited to make the crossing as close to perpendicular to the watercourse as reasonably practicable, ensuring the crossing is as short as possible and for open cut / temporary access crossings reducing the risk of localised scour at the structures.	Contractor	Pre-Construction

Ref Number	Commitment	Responsible Person	Project Stage
G36	Topsoil will be placed at least 20m away from water features and further or with added barrier protection such as silt fences if the terrain is sloping subject to on-site risk assessment.		
G37	The length of flume pipes will be oversized (by a 1-2 m) either side of the length of watercourse being temporarily crossed for access to provide protection from material that may fall into the channel from the haul road. The diameter of the pipes will be estimated based on an assessment of flow characteristics of the watercourse under peak flow conditions. The assessment of this will be undertaken pre-construction.	The Applicant's Project Manager	Pre-Construction

Ref Number	Commitment	Responsible Person	Project Stage
H – Traffic and Transport			
H1*	<p>Produce a Detailed Construction Traffic Management Plan (CTMP) to establish construction vehicle routeing, safe access and egress to construction compounds and pipe storage areas in consultation with the Highways Authorities. This will be based upon the Outline CTMP (<i>Application Document 6.4.12.7</i>) and include such items as:</p> <ul style="list-style-type: none"> • The necessary agreements and timing restrictions for construction traffic for example Monday – Saturday working, prohibition during school drop-off and pick-up times (this will be managed by appropriate measures in the Construction Traffic Management Plan (CTMP) which will likely prohibit movements during busy network periods), and prohibition during loading times at commercial premises; • Proposals for monitoring and agreeing maintenance costs; • Escort arrangements for abnormal loads; • Route signing; • Details of the advanced notification to the general public, warning of any construction transport movements, specifically Abnormal Indivisible Loads (AILs); • Details of information and road signage warning road users of forthcoming AIL transport and construction traffic movements; • Arrangements for regular road maintenance and cleaning, e.g., road sweeping in the vicinity of the site access point as necessary, drain clearing, wheel cleaning / dirt control arrangements; • Arrangements for winter road maintenance e.g., de-icing and snow clearing; • Construction Contractor speed limits; and • Community and emergency services liaison details. 	Contractor	Pre-construction
H2*	Produce a Construction Logistics Plan to manage sustainable delivery of goods and materials	Contractor	Construction

Ref Number	Commitment	Responsible Person	Project Stage
H3*	Implement a Construction Worker Travel Plan that supports and encourages sustainable travel by workers (public transport, cycling, walking, and car-sharing)	Contractor	Construction
H4	Pipeline road crossings at the two access roads into Autby House Materials Recycling Facility/JA Young Plastics would be by Auger Bore and no roads would be closed. Plant and materials would be moved from one side of the road to the other with a banksman controlling traffic who would stop construction vehicles if an emergency vehicle needed access. Access to the Autby House Materials Recycling Facility/JA Young Plastics would be maintained at all times, for emergency vehicle use.	Contractor	Construction
H5	All access points that require the creation of a junction bellmouth will be designed based on the relevant standard from DMRB CD 123 Geometric Design of at grade priority and signal-controlled junctions and in consultation with the LHA.	FEED Contractor	FEED Design
H6*	Heavy Goods Vehicle (HGV) movements to and from the site (excluding abnormal loads) during construction of the pipeline will be limited to 07.00 to 19.00 Monday to Friday, and 07.00 to 16.00 on Saturdays, with no HGV movements taking place on Sundays or on national public holidays, unless agreed in advance with the relevant Local Authority.	Contractor	Construction
H7	A condition (dilapidation) survey will be carried out prior to construction. The final CEMP will include a requirement for the contractor to undertake inspection surveys of key routes throughout construction. Any damage identified that has been caused by construction traffic will be rectified. The final CEMP, including these measures, will be agreed with the local highways authority.	Contractor	Pre-construction/ Construction

Ref Number	Commitment	Responsible Person	Project Stage
H8	In relation to the movement of heavy plant at road crossings, road surface prevention normally comprises of placing rubber tyres, mats or similar material onto the road surface during the short period it will take to complete the plant movement across the road. Such protection will then be removed to the inside of the working width access gates. Qualified NRSWA supervision will be on hand to ensure traffic is controlled in a safe and timely manner at haul traffic access points and during operations on the public highway.	Contractor	Construction
H9	The Contractor will further develop the construction schedule and the proposed use of construction access routes to better 'smooth out' peaks in construction traffic with the aim of reducing all potential effects to minor or negligible.	Contractor	Pre-construction/ Construction
H10	Community bulletins will be provided to local residents and other stakeholders to keep them informed of any upcoming construction activities where an increase in HGV movements is likely, such as pipe and stone deliveries.	Contractor	Construction
H11	Use of Thoroughfare by HGVs will be limited to vehicles required to construct the Block Valve Station. No pipeline deliveries will be made via Thoroughfare.	Contractor	Construction
H12	Should the FEED design work identify a need for any Abnormal Indivisible Loads (AILs), an AIL Management Plan will be prepared and agreed with the relevant Local Highways Authority.	Contractor	Pre-construction
H13	An HGV booking system will be implemented that will enable a daily profile of deliveries to be managed to ensure that the required deliveries are planned. This will assist in managing HGV volumes to reduce the level of predicted traffic-associated environmental effects.	Contractor	Construction
I – Noise and Vibration			

Ref Number	Commitment	Responsible Person	Project Stage
I1	Pre-construction noise monitoring surveys will be undertaken as agreed with the relevant local authorities to establish a pre-construction baseline for the derivation of construction noise limits.	Contractor	Pre-construction
I2	Following any changes to the design, the Contractor would ensure that an updated noise assessment has been carried out to ensure there would be no new or different significant effects on nearby receptors. Any additional mitigation required to avoid new or different significant effects would be secured in the Final CEMP, to which the updated noise assessment would also be appended. Noise monitoring, secured in the Final CEMP, would be undertaken at sensitive receptors to confirm that mitigation measures adopted are sufficient to avoid significant effects. The Final CEMP will require the approval of relevant local authorities.	Contractor	Pre-construction
I3*	The majority of works activities would be completed under normal working hours/ restrictions as follows: Monday to Saturday: 07:00 to 19:00 and no working on Sundays, or Bank Holidays unless otherwise agreed with the relevant local authority. The agreed working hours will be set out in the Final CEMP.	Contractor	Construction
I4*	The Contractor would be responsible for notifying the local residents of particularly noisy work prior to commencement of those works. Effective communication should be established, keeping residents informed of the type and timing of works involved.	Contractor	Construction
I5*	A set of generic best practice working methods referred to as Best Practicable Means (BPM) would be employed during the construction phase. Typical BPM are outlined in the following commitments.	Contractor	Construction
I6*	Closed board fencing would be installed around the construction compounds.	Contractor	Construction

Ref Number	Commitment	Responsible Person	Project Stage
I7*	Provision of contact details for a site representative in the event that disturbance due to noise or vibration from the construction works occurs; ensuring that any complaints are dealt with pro-actively and that subsequent resolutions are communicated to the complainant.	Contractor	Construction
I8	Site access routes would be in good condition and well maintained with no potholes or other significant surface irregularities.	Contractor	Construction
I9*	Plant machinery would be turned off when not in use.	Contractor	Construction
I10*	All vehicles and mobile plant would be well maintained such that loose body fittings or exhausts do not rattle or vibrate.	Contractor	Construction
I11*	Silenced equipment would be used where possible, in particular silenced power generators and pumps.	Contractor	Construction
I12*	All equipment used would be properly maintained and operated by trained staff.	Contractor	Construction
I13*	Plant and equipment covers/hatches would be properly secured and there would be no loose fixings causing rattling.	Contractor	Construction
I14*	Static noisy plant, including generators, would be located as far away from noise sensitive receptors as is feasible for the particular activity.	Contractor	Construction
I15*	On site speed limits would be in place to reduce the effect of construction traffic noise. Speed limits would be enforceable within the main works sites, with all non-surfaced roads restricted to 10 miles per hour (mph) and any surfaced roads restricted to 15 mph.	Contractor	Construction
I16*	To minimise vibration from HGV movements, there would be monthly condition assessments to inspect for defects such as potholes which could cause an increase in noise levels. Existing potholes would need to be considered by a condition assessment prior to the commencement of works.	Contractor	Construction

Ref Number	Commitment	Responsible Person	Project Stage
I17*	As part of the plant selection process the contractor should adopt a procedure to ensure the quietest plant and equipment, techniques and working practices available would be selected and used.	Contractor	Construction
I18*	No music or radios would be played on site.	Contractor	Construction
I19*	The applicant will submit an application for prior consent to carry out noisy work under Section 61 of the CoPA to demonstrate that noise and vibration has been minimised as far as reasonably practicable. The Section 61 application will set out the specific method of working, calculations of noise levels at nearby receptors, the actual working hours required, noise monitoring locations, details of communication measures and the mitigation measures implemented to minimise noise and vibration impacts.	Applicant	Pre-construction
I20	Where practicable, avoid HDD works within 280 m (the distance at which significant effects are predicted at night) of residential receptors, otherwise measure I22 will be applied (although this will depend on the results of the GI survey).	Contractor	Construction
I21*	The potential for the use of quieter equipment than listed in <i>ES Volume IV: Appendix 13-2 (Application Document 6.4.13.2)</i> will be explored by the Contractor.	Contractor	Construction
I22	Depending on the location, plant and timing of works, acoustic fencing will be installed around the HDD site boundary to screen receptors from noise emission. This mitigation could provide up to 10 dB of attenuation when the fencing screens the sources from the receiver. The use of localised screening around high noise sources will be considered and confirmed in the relevant Section 61 application.	Contractor	Construction
I23	Where practicable, avoid hydrostatic pump testing works within 280 m (the distance at which significant effects are predicted at night) of residential receptors.	Contractor	Construction

Ref Number	Commitment	Responsible Person	Project Stage
I24*	The potential for the use of quieter equipment than listed in Section 13.7.50 of <i>ES Chapter 13 Noise and Vibration (Application Document 6.2.13)</i> will be explored.	Contractor	Construction
I25	Depending on the location, plant and timing of works, acoustic fencing will be installed around the hydrostatic pump test site boundary to screen receptors from noise emission. This mitigation could provide up to 10 dB of attenuation when the fencing screens the sources from the receiver. The use of localised screening around high noise sources will be considered and confirmed in the relevant Section 61 application.	Contractor	Construction
I26	Should hydrostatic testing plant need to be located within 280m of a residential property, appropriate mitigation will be developed and agreed in advance with the local authority.	Contractor	Pre-Construction/ Construction
I27*	Noise monitoring would be undertaken at sensitive receptors, with their agreement, to confirm that mitigation measures adopted are sufficient to avoid significant effects. Any requirement for noise monitoring would be confirmed in the relevant Section 61 application. Where agreed noise thresholds are exceeded, additional mitigation measures will be explored.	Contractor	Construction
I28	Where practicable pipeline construction activities will be avoided within 35m of residential receptors and RoW preparation works will be avoided within 45m. Where works are required within these distances, acoustic barriers will be used to screen receptors from noise emission. This mitigation could provide up to 10 dB of attenuation when the fencing screens the sources from the receiver. The use of localised screening around high noise sources will be considered and confirmed in the relevant Section 61 application.	Contractor	Construction
I29	Noise from loading and unloading of pipes in compounds will be minimised through careful handling of pipes, which is also required to avoid any potential damage to pipe sections.	Contractor	Construction

J – Air Quality

Ref Number	Commitment	Responsible Person	Project Stage
J1*	Plan site layout so that machinery and dust causing activities are located away from receptors, as far as is possible.	Contractor	Pre-construction
J2*	Develop a Dust Management Plan, which includes measures to control other emissions. This will form part of the Final CEMP.	Contractor	Pre-construction
J3*	Display the name and contact details of person(s) accountable for air quality and dust issues on the construction compound fence. This may be the environment manager/engineer or the site manager.	Contractor	Construction
J4*	Display the head or regional office contact information of the main contractor on site.	Contractor	Construction
J5*	Record all dust and air quality complaints, identify cause(s), take appropriate measures to reduce emissions in a timely manner, and record the measures taken.	Contractor	Construction
J6*	Make the complaints log available to the local authorities when asked.	Contractor	Construction
J7*	Record any exceptional incidents that cause dust and/or air emissions, either on or off-site, and the action taken to resolve the situation in a logbook.	Contractor	Construction
J8*	Undertake daily on-site and off-site inspection (including roads), where receptors are nearby, to monitor dust, record inspection results, and make the log available to the Local Authority when asked.	Contractor	Construction
J9*	Carry out regular site inspections to monitor compliance with the Dust Management Plan commitments, record inspection results, and make an inspection log available to the Local Authorities when asked.	Contractor	Construction
J10*	Increase the frequency of site inspections by the person accountable for air quality and dust issues on site when activities with a high potential to produce dust are being carried out and during prolonged dry or windy conditions.	Contractor	Construction

Ref Number	Commitment	Responsible Person	Project Stage
J11*	Remove materials that have a potential to produce dust from site as soon as possible, unless being re-used on site. If they are being re-used on-site, cover.	Contractor	Construction
J12*	Ensure all vehicles switch off engines when stationary - no idling vehicles.	Contractor	Construction
J13*	Sustainable power sources (solar panels etc) to be used where practicable. Generators are to be low emission with hybrid battery systems (or to current best practice).	Contractor	Construction
J14*	Impose and signpost a maximum-speed-limit on surfaced roads and in work areas.	Contractor	Construction
J15*	Use cutting, grinding, or sawing equipment fitted or in conjunction with suitable dust suppression techniques such as water sprays or local extraction, e.g., suitable local exhaust ventilation systems.	Contractor	Construction
J16*	Ensure an adequate water supply on the site for effective dust/particulate matter suppression/mitigation, using non-potable water where possible and appropriate.	Contractor	Construction
J17*	Use enclosed chutes and conveyors (if used) and covered skips.	Contractor	Construction
J18*	Ensure equipment is readily available on site to clean any dry spillages and clean up spillages as soon as reasonably practicable after the event using wet cleaning methods.	Contractor	Construction
J19*	No bonfires and burning of waste materials.	Contractor	Construction
J20*	Use water-assisted dust sweeper(s) on the access and local roads, to remove, as necessary, any material tracked out of the site. This may require the sweeper being continuously in use.	Contractor	Construction
J21*	Avoid dry sweeping of large areas.	Contractor	Construction
J22*	Ensure vehicles entering and leaving sites are covered to prevent escape of materials during transport.	Contractor	Construction

Ref Number	Commitment	Responsible Person	Project Stage
J23	Inspect on-site haul routes for integrity and instigate necessary repairs to the surface as soon as reasonably practicable	Contractor	Construction
J24	Record all inspections of haul routes and any subsequent action in a site logbook.	Contractor	Construction
J25	Implement a wheel washing system (with rumble grids to dislodge accumulated dust and mud prior to leaving the site) where reasonably practicable).	Contractor	Construction
J26*	Agree dust deposition, dust flux, or real-time PM ₁₀ continuous monitoring locations with the Local Authority. Where possible commence baseline monitoring at least three months before work commences on site or, if it a large site, before work on a phase commences.	Contractor	Construction
J27*	Erect solid screens or barriers around dusty activities or the site boundary that are at least as high as any stockpiles on site.	Contractor	Construction
J28*	Fully enclose site or specific operations where there is a high potential for dust production and the site is active for a long period.	Contractor	Construction
J29*	Avoid site runoff of water or mud.	Contractor	Construction
J30*	Keep site fencing, barriers and scaffolding clean using wet methods.	Contractor	Construction
J31	Cover, seed, or fence stockpiles to prevent wind whipping.	Contractor	Construction
J32*	Avoid the use of diesel- or petrol-powered generators and use mains electricity or battery powered equipment where practicable.	Contractor	Construction
J33*	Minimise drop heights from conveyors, loading shovels, hoppers and other loading or handling equipment and use fine water sprays on such equipment wherever appropriate.	Contractor	Construction
J34	Re-vegetate earthworks and exposed areas/soil stockpiles to stabilise surfaces as soon as practicable	Contractor	Construction

Ref Number	Commitment	Responsible Person	Project Stage
J35*	Use Hessian, mulches or trackifiers where it is not possible to re-vegetate or cover with topsoil, as soon as practicable	Contractor	Construction
J36*	Only remove the cover in small areas during work and not all at once	Contractor	Construction
J37*	Avoid scabbling (roughening of concrete surfaces) if possible	Contractor	Construction
J38	Ensure sand and other aggregates are stored in bunded areas and are not allowed to dry out, unless this is required for a particular process, in which case ensure that appropriate additional control measures are in place	Contractor	Construction
J39	Ensure bulk cement and other fine powder materials are delivered in enclosed tankers and stored in silos with suitable emission control systems to prevent escape of material and overfilling during delivery	Contractor	Construction
J40	For smaller supplies of fine power materials ensure bags are sealed after use and stored appropriately to prevent dust	Contractor	Construction
J41	Install hard surfaced haul routes, which are regularly damped down with fixed or mobile sprinkler systems, or mobile water bowsers and regularly cleaned	Contractor	Construction
J42	Ensure there is an adequate area of hard surfaced road between the wheel wash facility and the site exit, wherever site size and layout permits	Contractor	Construction
J43	Access gates to be located at least 10 m from receptors where possible	Contractor	Construction
K – Climate Change			
K1*	Develop and adopt an Energy Reduction Plan which includes measures to identify and implement all cost-effective energy efficiency measures. This will form part of the Final CEMP.	Contractor	Pre-construction
K2	A cost benefit analysis is to be undertaken to better understand whether it is more efficient to hire one or two generators (one larger for daytime use, and a second smaller generator for night-time use) for all construction activities where grid connections are not possible, including hydrotesting. This can be considered as part of the Energy Reduction Management Plan.	Contractor	Pre-construction

Ref Number	Commitment	Responsible Person	Project Stage
K3	Develop a Sustainable Procurement Plan to identify the risks and opportunities of procurement against a broad range of social, environmental, and economic issues. This will form part of the Final CEMP.	Contractor	Pre-construction
K4	Develop a Materials Management Plan which includes best practice measures on suitability for use, certainty of use and quantities required.	Contractor	Pre-construction
K5*	Develop the outline Site Waste Management Plan attached to the Draft CEMP. This will be required to include measures to ensure waste produced or held on a site is disposed of safely, efficiently, and lawfully, and meets 90% total waste diverted from landfill.	Contractor	Pre-construction
K6	When designing the Project in detail, ensure sufficient shading is provided where equipment/machinery is stored.	Contractor	Pre-construction
K7	Key access roads should be designed with materials that can withstand future temperature increases.	Contractor	Pre-construction
L - Socioeconomics			
L1	The Contractor will develop a Skills, Employment and Supply Chain Plan in liaison with the four Local Authorities, which will identify measures by which the potential economic benefits of the Proposed Development for local people and businesses might be maximised. This will include seeking to develop links with education and employment establishments in the locality if appropriate (for example, schools, colleges, employment agencies, and business groups). This will increase the potential for the Proposed Development to have a beneficial effect on the provision of training and apprenticeships and the local workforce.	Contractor	Pre-construction

Ref Number	Commitment	Responsible Person	Project Stage
L2	The Contractor will develop the Draft PRow Management Plan (<i>Application Document 6.13</i>) which has been established in order to reduce the adverse impacts of potential temporary PRow closures/diversions and ensure safety of users of PRow during construction works. The Plan sets out the nature, length, and duration of potential temporary closures/diversions such that access to PRow impacted by the construction works is minimised as far as possible.	Contractor	Pre-construction
M – Materials and Waste			
M1	Adopting the Considerate Constructors Scheme to assist in reducing pollution, including GHGs, from the Project by employing best practice measures which go beyond the statutory requirements.	Contractor	Pre-construction
M2*	Appoint a Waste Manager or Champion who would oversee the implementation of the waste control strategy and the handling of any waste material.	Contractor	Pre-construction
M3	Wherever possible, ensure the procurement process orders material resources so that the timing of the delivery (e.g., 'just in time' deliveries), the quantities delivered, and the storage are optimised to reduce the potential for oversupply and damage onsite.	Contractor	Pre-construction
M4	Develop sustainability targets and monitor during construction.	Contractor	Pre-construction / construction
M5*	Sort and segregate waste into different waste streams (where technically and economically feasible).	Contractor	Pre-construction
M6	Wherever possible and where specification allows, construction materials would include a measurable recycled content in their manufacture.	Contractor	Pre-construction
M7	Wherever possible, standardisation of materials and elements would be incorporated in order to minimise required material resources and the production of waste. For example, the use of prefabricated components.	Contractor	Pre-construction

Ref Number	Commitment	Responsible Person	Project Stage
M8	Consider using local sources for aggregate supplies and explore agreements with suppliers to reduce the amount of packaging used to protect materials or to participate in a packaging take back scheme.	Contractor	Pre-construction
M9*	Promote opportunities for the potential reusing and recycling of all material resources and waste.	Contractor	Construction
M10	Manage material use to maximise the environmental and Project benefits from the use of surplus materials.	Contractor	Construction
M11	Excavated material would be targeted for fill and landscaping where this is feasible, and the material is suitable. Excavated materials, such as soils, would be carefully stored in segregated piles for subsequent reuse on the site, where possible. If the material is contaminated then it would be kept separate from clean material and sent for either treatment, recycling, or recovery, where appropriate, or disposal at appropriately permitted facilities.	Contractor	Construction
M12*	Surplus inert excavated materials (e.g., soils, stone, bricks, clay, rubble, rock) may be suitable for use in land reclamation projects. This would require compliance with the criteria and thresholds for an exemption or a permit under the Environmental Permitting Regulations 2010 (as amended). The CL: AIRE DoWCoP1 may also be applicable for the reuse of this material.	Contractor	Construction
M13	The waste management area would be established within the main construction compound to handle incoming waste from construction activities. This would be designed to facilitate the segregation of key waste streams to maximise the opportunity to reuse, recycle and return wastes generated onsite.	Contractor	Construction
M14*	The waste management contractors will be consulted in order to determine the best techniques for managing waste and ensure a high level of recovery of materials for recycling. An area would be established for spoil classification at the DCO Site Boundary.	Contractor	Construction

Ref Number	Commitment	Responsible Person	Project Stage
M15*	Shelter would be provided to prevent materials such as cardboard and paper from deteriorating while being sorted or awaiting collection. Space would be provided to accommodate skips and the storage of reusable materials.	Contractor	Construction
M16	A Materials Management Plan (MMP) will be developed under the CL: AIRE Definition of Waste: Development Industry Code of Practice (Ref 18.27) by the construction contractor to support the re-use of excavated materials, minimise off-site disposal; and to demonstrate the necessary lines of evidence to support the proper reuse/offsite disposal of materials and ensure compliance with regulatory guidance. The Contractor would be responsible for preparing the MMP prior to the commencement of construction and for obtaining all necessary approvals.	Contractor	Construction
M17*	Develop a detailed Site Waste Management Plan (SWMP) based on the <i>Outline SWMP (Application Document 6.4.18.1)</i> . This will be required to include measures to ensure waste produced or held on a site is disposed of safely, efficiently, and lawfully, and meets all of Harbour Energy's environmental targets.	Contractor	Construction
M18*	Targets for materials and waste for the Proposed Development are at least 90% (by weight) recovery of non-hazardous C&D waste. The target specifically excludes naturally occurring materials with EWC Code 17 05 04 (17 05 04 soil and stones other than those mentioned in 17 05 03* (soils and stone containing dangerous substances)). Recovery is deemed to include reuse, recycling, and other recovery e.g., energy recovery; and	Contractor	Construction
M19*	Targets for materials and waste for the Proposed Development are at least 25% (by weight) of materials imported to site for use within the Proposed Development will comprise alternative (reused, recycled or secondary) content, for those applications where it is technically and economically feasible to substitute these alternatives to primary materials.	Contractor	Construction

Ref Number	Commitment	Responsible Person	Project Stage
M20	Pipeline road crossings at the two access roads into Autby House Materials Recycling Facility/JA Young Plastics would be by Auger Bore and no roads would be closed. Plant and materials would be moved from one side of the road to the other with a banksman controlling traffic who would stop construction vehicles if an emergency vehicle needed access. Access to the Autby House Materials Recycling Facility/JA Young Plastics would be maintained at all times, for emergency vehicle use.	Contractor	Construction
N – Major Accidents and Disasters			
N1	The safety lifecycle requirements demanded by industry best practices such as IEC 61508/61511 standards (implemented in the UK as BS EN 61508/61511) will be followed	Contractor	Construction
N2*	Adhere to applicable legislation (such as The Avian Influenza (H5N1 in Wild Birds) (England) Order 2006, amended in 2021))	Contractor	Construction
N3*	Follow the current guidelines in place with regards to notification of finding dead birds, including notifying DEFRA (via their helpline 03459335577).	Contractor	Construction
N4	Refer to the additional information provided within the “Stop the Spread” webinars, located at: https://www.gov.uk/government/publications/avian-influenza-bird-flu-stop-the-spread-webinars/stop-the-spread-webinars	Contractor	Construction
N5	Compliance with the Pressure Equipment (Safety) Regulations 2016 and the Pipelines Safety Regulations (PSR) (HSE, 1996).	Contractor	Construction
N6	Pipeline safety systems and leak detection systems to be installed along with operational controls and monitoring.	Contractor	Construction
N7	Detailed emergency plans will be produced for the installation in accordance with all applicable Regulations. Construction methods would include risk assessments.	Contractor	Construction
N8*	Implementation of a permit to work system.	Contractor	Construction

Ref Number	Commitment	Responsible Person	Project Stage
N9	Close coordination and communication between other nearby operators would be undertaken to ensure all relevant emergency procedures are made available to the Proposed Development.	Contractor/ Applicant	Pre-construction / Construction
N10	Close coordination and communication between other pipeline operators to ensure the Proposed Development can be constructed safely.	Contractor	Pre-construction
N11	Fire detection and fire protection systems will be installed at other developments, and at the Proposed Development.	Contractor	Construction
N12	Implement measures to minimise storage volumes of high hazard materials.	Contractor	Construction
N13	Compliance with Pipeline Safety Regulations (HSE, 1996) and additional specific safety measures for CO ₂ pipelines will apply.	Contractor	Construction
O - Arboriculture			
O1	No veteran trees are to be removed	Contractor	Construction
O2	Where possible the detailed design will be developed to avoid or minimise impacts to trees.	Contractor/ Applicant	Pre-construction
O3*	All tree work is to follow the principles of <i>BS3998: 2010 Treework – Recommendations</i> and must be carried out by suitably qualified and insured contractors. The Arboricultural Association provides a list of contractors who meet these requirements which can be found at www.trees.org.uk .	Contractor	Construction
O4*	Should the requirement for additional tree works be identified, this will be discussed with an arboriculturist, and no works will be undertaken without the consent of the Local Planning Authority (LPA).	Contractor	Pre-construction / Construction
O5*	An Arboricultural Method Statement will be developed to address the detailed design, to set out the phasing of site operations, the finalised tree protection measures for the Proposed Development and to provide detail on how sensitive elements of work are to be achieved in proximity to retained trees.	Contractor	Pre-construction

Ref Number	Commitment	Responsible Person	Project Stage
O6*	<p>Where existing services become redundant within the RPA of a retained tree, the default position must be that they be decommissioned and left in situ. Where this is not feasible the following principles are to be observed:</p> <ul style="list-style-type: none"> Existing services are to be removed by winching out from an access/inspection chamber located outside of an RPA. It may be acceptable to fill redundant pipe work with an inert material or undertake pipe bursting where necessary within the RPA of retained trees; Excavation to install services has the potential to result in unacceptable root severance which could result in instability, dysfunction, or the death of trees. Repeated incursions are particularly damaging and must be avoided by bundling services wherever possible; The default position will therefore be that all services be routed outside of the RPA of retained trees. The following general principles will apply and where services must be routed within the RPA of a retained tree this process will be subject to a detailed method statement with approval from the LPA. The principles of the National Joint Utilities Group (NJUG) Volume 4 guidance must be adhered to; All services must be bundled as far as possible and installed within RPAs using hand/compressed air excavation (e.g., for shallow service runs where all roots >25mm diameter can be retained and worked around) or trenchless techniques such as Horizontal Directional Drilling (HDD) or impact moling (thrust boring) with all access pits and inspection chambers being located outside of the RPA. The route must run as far from the main stem of a retained tree as possible and must be at a minimum depth so that the upper 2m of the soil profile is undisturbed. The depth of the run may need to be adjusted to account for soil type and species variation and this must be determined subject to the advice of an arboriculturist. 	Contractor	Construction
O7*	When necessary, tree felling, and hedgerow removal will be undertaken by a specialist contractor	Contractor	Construction

Ref Number	Commitment	Responsible Person	Project Stage
O8	Fencing of the working width will be continuous when crossing a hedgerow, creating a barrier between the retained hedge and the working width, and taking account of relevant Tree Protection Zones (TPZs) where practicable	Contractor	Construction
O9	Topsoil will be stripped from the working width. If the haul road crosses the TPZ of a retained hedge, appropriate ground protection such as matting will be used	Contractor	Construction
O10	Where there is the loss of any tree this is to be replaced on a 2:1 ratio.	Contractor	Construction
P – Flood Risk Assessment			
P1	A surface water drainage system (refer to Drainage Strategy in <i>ES Volume IV Chapter Appendix 11.3 (Application Document 6.4.11.3)</i>) is required to intercept and attenuate all runoff up to and including the 1% AEP + 40% climate change allowance via methods such as via infiltration into an infiltration trench, filter drains or detention basin, with discharge rates	Contractor	Pre-Construction

Ref Number	Commitment	Responsible Person	Project Stage
P2	<p>Appropriate construction practices will need to be adhered to in order to manage the risk of surface water run-off, such as temporary drainage provisions and pumping. Temporary surface water drainage measures will be included to intercept and attenuate all runoff to prevent increased surface water runoff to the receive environment.</p> <p>For construction compound and laydown areas, temporary drainage strategies will be developed, utilising SuDS techniques such as infiltration, swales and attenuation basins. These will be designed by a suitably qualified engineer.</p> <p>The drainage system will be designed and installed during site setup including:</p> <ul style="list-style-type: none"> • Regular inspection/maintenance during the construction phase to prevent blockages; • Inclusion of appropriate erosion and sediment control measures to minimize the sediment run off; • Regular inspections to ensure drainage performance is not compromised by construction activities and remedial action taken if so; • Coordinating the installation with other construction activities to prevent conflicts or delays; • Inclusions of SuDS, including swales and attenuation ponds, if required; and • The drainage of the construction compounds will be designed, following ground investigations, by the contractors suitably qualified engineer. 	Contractor	Pre-Construction

Ref Number	Commitment	Responsible Person	Project Stage
P3	<p>Immingham Facility and Theddlethorpe Facility (Flood Zone 3): Critical electrical equipment will be raised 300mm above the 2100 0.1% AEP breach depth or to the extreme sea level for 2100 (whichever is lower). This could be achieved by raising infrastructure on a table or if this is not possible then vulnerable infrastructure should be located within a watertight surround (P13). The EA modelled breach depths (2115 scenario) are used as a proxy for the 2100 0.1% AEP breach depth.</p>	Contractor	Construction
P4	<p>Flood resistant and resilient construction materials to be used as far as practicable.</p>	Contractor	Construction
P5	<p>During the construction phase the Immingham Facility is at risk of flooding from the South Killingholme Drain. This drain will be diverted in association with the Humber Zero project. To mitigate the impact of the construction phase on watercourses that will be crossed by the pipeline throughout the DCO Site Boundary, the following mitigation measures are recommended:</p> <ul style="list-style-type: none"> • Water from de-watering will not be pumped into a watercourse, be allowed to directly enter a watercourse, or be discharged to ground; and • Flume pipes will be sized to reflect the span width and the estimated flow characteristics of the watercourse under peak flow conditions. 	Contractor	Construction
P6	<p>During the watercourse crossings with flood defences in Sections 3, 4 and 5 of the DCO Site Boundary:</p> <ul style="list-style-type: none"> • The integrity of the flood defences will be maintained by only using trenchless techniques for main rivers crossings and installing any temporary crossings for Ordinary Watercourses bank top to bank top; • Access will be maintained to allow the EA/IDB/LLFA to continue defence maintenance activities. 	Contractor	Construction

Ref Number	Commitment	Responsible Person	Project Stage
P7	<p>The mitigate the risk of impacting flows and displacing floodwater:</p> <ul style="list-style-type: none"> • Consent from the North East Lindsey IDB/LLFA Works will be sought for construction works within the easement of IDB drains and ordinary watercourses; • Construction works would not be undertaken during periods of heavy rainfall; • Weather forecasts and Flood Warnings should be monitored regularly during the construction phase; • Minimal storage of materials/plant in the floodplain; and • A surface water drainage system to intercept and attenuate all runoff generated for permanent and temporary works (refer to the Drainage Strategy in <i>ES Volume IV Appendix 11.3 (Application Document 6.4.11.3)</i> for permanent works). 	Contractor	Construction
P8*	Weather forecasts and Flood Warnings should be monitored regularly during the construction phase	Contractor	Construction
P9*	There should be minimal storage of materials/plant in the floodplain	Contractor	Construction
P10	During the installation of trenchless crossings, a Hydrological Impact Appraisal will be undertaken for each drilling pit prior to works taking place to ensure that there are no impacts on flows within adjacent watercourses;	Contractor	Construction

- 7.1.8 The Proposed Development has an initial design life of 25 years and when appropriate, the pipeline and associated infrastructure would be decommissioned. A Decommissioning Environmental Management Plan (DEMP) will be produced prior to the decommissioning phase. The DEMP would be developed based on the legislation and best practice at the time and largely resemble the Draft CEMP. Those measures marked with an asterisk (*) in Table 3: Draft Mitigation Register (Construction Phase) Table 3 are likely to also be required in the DEMP in some form.
- 7.1.9 **Table 4** includes an additional measure to the construction draft mitigation register which would be incorporated into the DEMP as appropriate.

Table 4: Preliminary Mitigation Register (Decommissioning Phase)

Ref Number	Commitment	Responsible Person
Decom1	A check for INNS will be completed at least one year prior to decommissioning to inform the decommissioning plan.	The Applicant

8 Communications, Inductions and Training

8.1 Overview

- 8.1.1 This section of the Draft CEMP covers the draft communication protocols for the following, which will be reviewed and updated for the Final CEMP by the Contractor:
- the CEMP;
 - environmental issues;
 - weekly SHE meetings;
 - public communication and liaison;
 - communication with other construction sites; and
 - inductions and training.

8.2 The CEMP

- 8.2.1 To ensure that all parties involved in the construction are aware of the environmental mitigation requirements, controls and reporting requirements as agreed within the Final CEMPs, the final document will be circulated to:
- the Client (Harbour Energy);
 - the Contractor (including all subcontractors);
 - Local Planning Authorities; and
 - statutory and non-statutory consultees, as required.
- 8.2.2 This document will be maintained within the SHE management system and a hard copy kept within the site office.

8.3 Environmental Issues

8.3.1 Environmental issues will be further communicated to all relevant parties by means such as the following:

- Environmental Policy Statement (to be displayed on a dedicated Environmental Notices Board as a minimum);
- Project Environmental Plan, including site specific EMP's, and associated documents (for example Site Waste and Material Management Plan);
- Key environmental constraints maps, including exclusion zones to be displayed on site notice boards (whilst maintaining confidentiality of sensitive species and/or landowner requirements);
- RAMS (risk assessments and method statements);
- Site Coordination Meetings;
- Management Review Meetings;
- Environmental briefings and Toolbox Talks (including the presentation of a weekly environmental log that includes a look ahead to the activities required in the following week and the specific mitigation required);
- Site induction and training sessions;
- Audits;
- Consultation with Local Authorities and other regulatory bodies;
- Advance notification to residents advising of project works;
- Project Enquiry/Complaints line; and
- KPI reporting to Harbour Energy, Contractor and other third parties as required.

8.3.2 It is also anticipated that staff will be provided with project Contact Cards, to pass out if questioned or approached by public. The cards would include relevant project contact information, such as the contact details of key site personnel dealing with the complaints and/ or the complaints helpline (details of which will be confirmed within the detailed CEMPs), and links to sources of information such as the project website.

8.4 Weekly SHE meetings

8.4.1 Weekly SHE meetings will be held, which the HSE Manager/ Advisor and ECoW will attend. These meetings will communicate, discuss, and consult any change in conditions, working practices, health, safety and environmental arrangements, procedures, and overall environmental performance. The meetings will include any near misses or hazards that have been identified and any residual risks that have been identified in conjunction with the implemented environmental protection measures. The meetings will be minuted, will include attendance records, and will be distributed to all relevant parties for reference.

8.4.2 The weekly SHE meetings will be augmented by additional meetings at intervals dictated by the requirements of the contract or at key stages of the works. Minutes of all such meetings will be produced and held on file for record purposes, with copies supplied to all relevant parties. The Project Manager will ensure that lessons learnt on one element of the Viking CCS Pipeline (for example, at the Immingham Facility) are communicated to other areas to ensure best practice across the Proposed Development.

8.5 Public Communication and Liaison

- 8.5.1 Prior to commencing works on site, the Contractor will develop and implement a Stakeholder Communications Plan that includes community engagement. All public communications will be co-ordinated through and agreed in advance with Harbour Energy.
- 8.5.2 The Contractor will provide details (postal and email address) of the named contacts to which all written complaints should be addressed and will also be responsible for the implementation of an appropriate system for logging and recording any complaints received. This log must be made available to the local authorities if requested. A 24-hour free telephone complaints helpline and a project website may also be established. The key contact details and the head or regional office contact information of the Contractor/construction company will be visible on boards placed around the perimeter of the construction site(s) in appropriate locations where they would be visible to the public. These details will also be provided to relevant departments of the local authorities.
- 8.5.3 If members of the public directly approach a member of site staff and raise a concern regarding the site works, the staff member will direct them, via a Contact Card or similar, to the key site personnel dealing with the complaints and/or the complaints helpline as well as recording details. In all cases, staff will inform the Site Manager and Project Manager as soon as possible and always respect landowners' and residents' concerns. If the situation escalates members of staff will leave site until the situation has been resolved, making sure that the working area is left in a safe condition.
- 8.5.4 Any complaints received will be acknowledged within 24 hours during all hours when works, including deliveries, are taking place. The Contractor will ensure that all complaints receive a written response, including details of any action undertaken (if such action is deemed appropriate). The Contractor will provide Harbour Energy with a monthly report that details all complaints, who they were filed by, and the actions taken.
- 8.5.5 Where required, in addition to ensuring that the public is fully informed of the proposed programme of works (including working hours), the Contractor will ensure that procedures are established for notifying the public in advance of planned works. It should also be noted that the agreed period of advanced notification will similarly apply to any alterations in the construction programme or working hours that have been agreed with the Contractor and the relevant departments at the local authorities.
- 8.5.6 Any environmental complaints received will be investigated, with appropriate action taken and recorded, so that a full audit trail is available should the complainant raise the issue(s) with the appropriate local authority. The complainant would be provided with a response outlining the results of the investigation and any action taken.

8.6 Communication with Other Construction Sites

- 8.6.1 The Contractor must ensure that regular liaison and coordination meetings are held with developers/ contractors of other projects in the vicinity of the Proposed Development. The meetings should ensure that activities are coordinated, and environmental impacts (for example dust and particulate matter emissions) are reduced as far as possible. It is also important to understand the interactions of the off-site transport/ deliveries which might be using the same strategic road network routes.

8.7 Inductions and Training

- 8.7.1 The Contractor will develop an environmental communication and training plan prior to physical works. It will include training requirements for all employees, sub-contractors, suppliers and other visitors to promote environmental awareness throughout the Proposed

Development. Details of the proposed training will be provided to Harbour Energy prior to commencement of construction works. Additional training/ toolbox talks may be required outside of this based on circumstances such as unforeseen risks, repeated observation of bad practices, perceived lack of awareness, pollution event, etc. A record of all training and attendees will be maintained within the SHE management system.

- 8.7.2 All construction personnel will be required to hold a current valid Construction Skills Certification Scheme (CSCS) Card or equivalent and to have received a site-specific induction, prior to gaining regular access. Site specific logistics, safety and environmental information will be provided at the induction, so that all personnel including visitors are aware of the potential environmental issues. The induction will also include measures required to be undertaken to respect the local community and to outline any risks and preventative measures associated with their operations.
- 8.7.3 Information from the site induction will be displayed prominently on noticeboards at suitable locations around the site, such as the site canteen and reception, so that all personnel and visitors are reminded and informed of any changes to the existing systems and informed of any new procedures.
- 8.7.4 The induction should include the following topics, as a minimum:
- Company/Project Environmental Policy
 - Waste management;
 - Concrete management;
 - Ecology (including species and/or habitat protection);
 - Tree Root Protection Areas;
 - De-watering of excavations;
 - Working in or near watercourses;
 - Surface water and groundwater pollution and control;
 - Chemical handling and storage;
 - Pollution protocol and spill response;
 - Earthworks and Excavations (risks of exposing contamination);
 - Sediment and dust management;
 - Noise management (prevention of nuisance);
 - Archaeology;
 - Defined Materials Storage area (excavated and imported);
 - Defined waste areas – Domestic and construction materials;
 - Wheel wash – road sweeping;
 - Soil management including ground stability as well as stripping and storage;
 - Reporting of environmental observations and suggestions;
 - Warning signs;
 - Site traffic protocols and routes in the Traffic Management Plan – haul routes, staff travel to site plan;
 - Site organisation, key personnel responsibilities and contact details;

- Emergency Response Plan(s) for addressing Safety and Environmental issues;
- Communication Systems on site – dealing with the public, incident and near miss reporting inclusive of environment;
- Environmental incident and emergency response procedures (see below); and
- Reinstatement techniques.

8.7.5 Delivery drivers will also be required to undergo a site induction; however, this may be reduced in scope/ detail due to the nature of their works on site.

8.7.6 In addition to the site induction, the Contractor will ensure all personnel are suitably trained on general site good practice and emergency procedures. Training will be provided by a suitably qualified person on a regular basis. Training and awareness raising will include, but will not be limited to:

- Briefing staff on the Plans through presentations;
- Toolbox Talks on site specific issues (further details provided below);
- Method Statements are to include environmental elements including, but not limited to, (as appropriate) surface water management (including appropriate sediment control methods), task specific risk assessments, biosecurity, and reinstatement methods;
- Pollution prevention training to include practical element for site-based staff (including the practical use of spill kits and training on the consideration and selection of appropriate sediment mitigation installation); and
- Emergency training to include fire prevention techniques particularly for land cable operators.

8.7.7 In order to provide on-going reinforcement and awareness training, the topics outlined in the site induction, along with any other environmental issues which arise on site, will be discussed at regular Toolbox Talks, which will be site specific where required. The SHE Manager/ Advisor will maintain a schedule of Toolbox Talks. The proposed schedule - to be considered as a live document - will be coordinated with the programme of works such that relevant training is presented in a manner timely to the risks presented by upcoming (or on-going) operations. Additional Toolbox Talks will be added to the schedule as required based on circumstances such as unforeseen risks, repeated observation of bad practices, perceived lack of awareness, pollution event, etc. Toolbox talks will be provided by the SHE Advisor/ Manager and ECoW (or other relevant specialist such as archaeological clerk of works) throughout construction of the Proposed Development to provide on-going reinforcement and awareness training of environmental sensitivities and issues likely to be encountered.

8.7.8 Appropriate personnel (such as site foremen and machine operators) will also receive additional environmental training in order to ensure project work is carried out with due regard to environmental protection and to minimise on environmental impact of the Proposed Development. For example, specific refuelling training for named refuellers, waste management/ Duty of Care training for any staff with responsibility for waste management.

8.7.9 An environmental risk map, showing all sensitive areas, exclusion zones, wash out areas, watercourses, refuelling locations and waste management facilities will be displayed on the site notice board(s). The map will remain 'live' and will be updated throughout the lifetime of the Proposed Development and re-issued as required. As well as being prominently displayed, it will be provided to site staff, for example foremen, as required. It is expected that an electronic version will be accessible to all site staff via a shared project site.

- Update and maintain site specific toolbox talks or advisory sheets relevant to the Proposed Development.

8.8 Toolbox talks and induction supporting materials

8.8.1 Toolbox talks would be posted within common use areas such as welfare units and office reception areas. Key environmental issues linked to the programme would be targeted on the notice board as an aide memoir to all staff on site for example seasonal environmental constraints such as bird nesting seasons.

8.9 Environmental Competencies

8.9.1 The Contractor would ensure all personnel conducting environmental tasks are suitably qualified or experienced for the roles and responsibilities that they are employed to undertake.

8.9.2 The Contractor would monitor and record that all staff have attended the relevant environmental induction or training as listed above (including updated or new training) prior to undertaking any activities on site.

9 Environmental Monitoring and Reporting

9.1 Overview

9.1.1 This section's detail the Contractor's programme of audit and inspections to check that site operations are in compliance with the CEMP, current procedures, and legislation, are using best practice; and that the mitigation measures are being effectively implemented. This will be reviewed and updated by the Contractor for the Final CEMP. The audit and inspections will comprise:

- Pre-Construction Audit;
- Daily Site Checks;
- Weekly Site Inspections; and
- Monthly Site Audits.

9.1.2 The procedure for records and document control will also be detailed in this section.

9.2 Pre-Construction Audit

9.2.1 Prior to construction a pre-construction audit will be undertaken by the ECoW to ensure that any specific requirements of this CEMP and relevant legislation, licenses and consents have been met. This audit will determine the adequacy of the system set up for management, mitigation and monitoring measures related to waste, pollution, and the environment.

9.3 Daily Site Checks

9.3.1 Daily site checks will be carried out of the construction compounds and other working areas as required, including access roads and cable route working width. Checks will be undertaken by the SHE Manager/ Advisor and/or ECoW, or other suitably qualified staff. Any actions resulting from these checks will be reported at weekly progress meetings.

9.4 Weekly Site Inspections

9.4.1 A weekly site inspection will be carried out by the SHE Manager/Advisor and/or ECoW to identify any breaches and/or environmental incidents and identify suitable corrective measures. A report will be written for each inspection documenting the findings and any corrective measures suggested to be implemented.

9.5 Monthly Site Audits

9.5.1 Monthly environmental audits will be undertaken by the SHE Manager or designated auditor. The audit will evaluate compliance with environmental legislation, requirements of the CEMP, best practice and any other NGET or scheme-specific requirements. A report will be written for each audit documenting the findings and any corrective measures suggested to be implemented.

10 Records

10.1 EMS and QMS

10.1.1 The Contractor's Quality Manager/Administrator would ensure there is a central filing system in place for any checklists, reports and monitoring consistent with the project QMS and EMS. Records of compliance with the requirements of the EMP, derived from audits and other inspections, would be held at the Contractor's site office. These would be available for inspection by representatives of any internal or external audit team and the Environment Agency in their statutory role.

10.1.2 The following records will be maintained to demonstrate conformance to the CEMP:

- Induction and training records;
- Site inspection reports;
- Incident Reports;
- Supplier and contractor records;
- Audit reports on 3rd parties;
- Drainage consents;
- Licences/ Permits; and
- Superseded copies of Environmental Plans.

10.2 Environmental Documents and Files

10.2.1 The required environmental documents and files for the Proposed Development include:

- Handover documents (produced all stages of design completion) which would be continually updated that collates together all the relevant information on environmental issues and effects that must be forwarded on to the construction phase of the Proposed Development;
- a Project Environmental System complying with Harbour Energy procedures (to be established at the main construction compound);

- A comprehensive photographic archive of the Proposed Development (to be maintained prior to, and during the construction phase); and
- A Project Environmental and Sustainability File or equivalent (a record of information for Harbour Energy which focuses on environmental aspects and effects that will need to be dealt with during maintenance, repair or further construction works/operations or decommissioning and abandonment of equipment). The contents of the Project Environmental and Sustainability File form the main part of the environmental handover documents).

10.3 Document control

10.3.1 A document management system will be used by the Contractor to process and manage documents associated with the Proposed Development. The system should process documents throughout their life cycle from inception through creation, review, storage, and distribution, archiving or destruction.

11 Design Changes

11.1.1 In the event of a material change to the Proposed Development's design then a review should be undertaken to determine whether the modification will lead to a change in the significance of the environmental effects reported in the Environmental Statement (*ES Volume II-IV (Application Document 6.2 – 6.4)*).

11.1.2 The following procedure should be followed:

- Identify the design change and confirm if appropriate for further consideration with Harbour Energy from an engineering and design perspective;
- Undertake a review of the design change against the Environmental Statement (*ES Volume II-IV (Application Document 6.2 - 6.4)*) by topic to scope the risk of there being a change to the effects reported;
- For those topics where there is a potential risk of change to the effects reported, undertake further environmental assessment e.g. appropriate modelling and report results to Harbour Energy for review;
- A register should be maintained of all design changes considered and the accompanying document assessing the effects of these changes; and
- Ensure that any commitments in this Draft CEMP (and the Contractor's Final CEMP) are updated accordingly and where relevant supply a Good Practice to Harbour Energy.

11.1.3 The Harbour Energy Design Coordinator is responsible for change control and will monitor adherence to this procedure.