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Northern Endurance Partnership | Humber Carbon Capture Pipeline

Humber Carbon Capture Pipeline
Trial Horizontal Directional Drill (HDD)

Compound and Access Track Planning and Design & Access Statement – North Lincolnshire Council

Document Ref: 30181090 -ARC-XX-XX-RP-TP-0009-1

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1 Introduction

1.1 Overview

1.1.1 This Planning and Design & Access Statement (PDAS) has been prepared by Arcadis Consulting (UK) Limited (Arcadis) for The Net Zero North Sea Storage Ltd (the Applicant) which is the promoting entity of the Northern Endurance Partnership (NEP), seeking full planning permission for a temporary compound, associated access tracks, and engineering works required to facilitate a Trial Horizontal Directional Drill (HDD) on agricultural land near Goxhill, North Lincolnshire (hereafter referred to as the 'Application Site' or 'the Site'). The scheme is referred to as the Humber Trial HDD South Compound (hereafter referred to as 'the Proposed Development'). The Site is shown on the Site Location Plan (Drawing Reference: NS051-CV-LAY-527-00043-001).

1.1.2 The Proposed Development comprises an approximately 4.1 hectare (ha) construction compound and temporary access tracks on the south side of the Humber River near Goxhill, within the administrative area of North Lincolnshire. The Proposed Development would make up part of the southern component of the Trial HDD project. This planning application forms one of two planning applications submitted to North Lincolnshire Council (NLC) for the Trial HDD project. This application relates to the above ground elements of the Trial HDD (compound and access tracks). A second application, submitted in tandem with this application, relates to the below ground engineering works required as part of site investigation works (the Trial HDD itself).

1.1.3 Two planning applications have also been submitted to East Riding of Yorkshire Council, one for a compound and access track, and a second for underground works forming the northern component of the Trial HDD.

1.1.4 The key features of the Proposed Development are an approximately 4.1ha construction compound and temporary access tracks on agricultural land near Goxhill.

1.1.5 The application is located within the administrative area of NLC. The Application Site comprises part of an agricultural field to the north of Skitter Beck and west of the Humber River, including an existing private unadopted track and a bridge over Skitter Beck.

1.1.6 This application is submitted to NLC as the Local Planning Authority (LPA) under the Town and Country Planning Act 1990 (as amended) and the Town

and Country Planning (Development Management Procedure) (England) Order 2015.

1.1.7 The Applicant submitted an Environmental Impact Assessment (EIA) Screening Opinion Request in accordance with the Town and Country Planning (Environmental Impact Assessment) Regulations 2017 and The Marine Works (Environmental Impact Assessment) Regulations 2007 to NLC, East Riding of Yorkshire Council and the Marine Management Organisation on 29th September 2025 (Document Reference: 30181090-ARC-XX-XX-RP-ZA-0006-1-EIA Screening Opinion Request) alongside a request for detailed pre-application advice (Reference Number: PRE/2025/136). The request for detailed pre-application advice is subsequent to an initial request for pre-application advice commenting on the scope of assessments and surveys proposed to support the planning application (Reference Number: PRE/2025/66). An EIA Screening Opinion (Reference Number: PA/SCR/2025/1454) is pending issue by North Lincolnshire LPA.

1.1.8 The application has been submitted following extensive pre-application engagement with North Lincolnshire Council, as outlined above, and also surrounding authorities, landowners, stakeholders, and local residents. The application is supported by a Community Involvement Statement (CIS) (Document Reference: 30181090 -ARC-XX-XX-RP-ZZ-0004-1-Community Involvement Statement - North Lincolnshire), which details the engagement carried out prior to submitting the application together with the feedback received during pre-application engagement and how the design of the Proposed Development has evolved in response to consultation feedback.

1.2 Supporting Documents

1.2.1 This Planning and Design & Access Statement (PDAS) should be read in conjunction with the following supporting application documents:

- Application Form including Ownership and Agricultural Holdings Certificates
- Covering Letter (Document Reference: 30181090 -ARC-XX-XX-CO-TC-0002-1)
- Pro Forma (Document Reference: 30181090 -ARC-XX-XX-RP-TC-0012-1)
- Community Involvement Statement (Document Reference: (Document Reference: 30181090 ARC-XX-XX-RP-ZZ-0004-1-Community Involvement Statement - North Lincolnshire)
- Transport Appraisal (Document Reference: 30181090 -ARC-XX-XX-RP-TP-0004-1 V2)

- Flood Risk Assessment (Document Reference: 30181090 -ARC-XX-XX-RP-EN-0002-1-Flood Risk Assessment- North Lincolnshire)
- Noise and Vibration Impact Assessment (Document Reference: 30181090 -ARC-XX-XX-RP-ZA-0007-1-Noise and Vibration Impact Assessment)
- Ecological Appraisal and Biodiversity Net Gain Assessment (Document Reference: 30181090 -ARC-XX-XX-RP-ZB-0001-1-Preliminary Ecological Appraisal - North Lincolnshire)
- Habitat Regulations Assessment (Appropriate assessment) (Document Reference: 30181090 -ARC-XX-XX-RP-ZB-0003-1)
- Biodiversity Net Gain (DEFRABNG) Statutory Metric Compound and Access (Document Reference: (Document Reference: 3018-XX-XX-RP-ZB-0011-DEFRA Metric Works Site – Compound and Access – North Lincolnshire
- Cultural Heritage Desk Based Assessment (Document Reference: 30181090 -ARC-XX-XX-RP-ZA-0003-1 V3-1-Cultural Heritage Desk-Based Assessment)
- Archaeological Evaluation Report (Document reference: 30181090 -ARC-XX-XX-RP-ZA-0009-1-Archaeological Evaluation Report North Lincolnshire)
- Agriculture and Soils Desk Based Assessment (Document Reference: 30181090 -ARC-XX-XX-RP-ZA-0004-1-Soils Desk Based Assessment (South))
- Surface Water Drainage Strategy (Document Reference: 30181090 -ARC-XX-XX-RP-DE-0001-1)
- Construction Phase Surface Water Management Plan (Document Reference: 30181090 -ARC-XX-XX-RP-ZZ-0005-1-Construction Phase Surface Water Management Plan)
- Outline Soils Management Plan (Document Reference: 30181090 -ARC-XX-XX-RP-ZZ-0001-1-Outline Soil Management Plan)
- Geo-Environmental Phase 1 Study (Document Reference: 30181090 -ARC-XX-XX-RP-EN-0004-1-Geo-Environmental Phase 1 Study – North Lincolnshire)
- Outline Construction Environmental Management Plan (OCEMP) (Document Reference: 181090 -ARC-XX-XX-RP-ZZ-0002-1 Outline Construction Environmental Management Plan)
- Outline Construction Traffic Management Plan (Document Reference: 30181090 -ARC-XX-XX-RP-TP-0002-1-Outline Construction Traffic Management Plan - North Lincolnshire)
- Landscape and Visual Appraisal (Document Reference: 30181090 -ARC-XX-XX-RP-LA-0001-1-Landscape and Visual Appraisal - North Lincolnshire)

- Groundwater Assessment (Document Reference: 30181090 -ARC-XX-XX-RP-GL-0003-1-Groundwater Assessment)
- Site Location Plan (Drawing Reference: NS051-CV-LAY-527-00043-001)
- Site Layout Plan – South Compound and Access (Document Reference: NS051-CV-PPL-527-00003-001)
- Proposed Cross Section – South Compound (Drawing Reference: NS051-CV-LAY-527-00014-001)
- Proposed Detailed Compound Plan (Equipment Plan) – South Compound and Access (Drawing Reference: NS051-CV-LAY-527-00045-001)
- Laydown Area – South Compound and Access (Drawing Reference: NS051-CV-LAY-527-00045-002)
- Proposed Elevations – South Compound and Access (Sheet 1) (Drawing Reference: NS051-CV-LAY-527-00047-00)
- Proposed Elevations – South Compound and Access (Sheet 2) (Drawing Reference: NS051-CV-LAY-527-00047-002)
- Site Access Tracks Upgrades (South Compound) (Drawing Reference: NS051-CV-LAY-527-00054-001)
- Skitter Access Track – Widening and Land Raising Details (Drawing Reference: NS051-CV-LAY-527-00061-001)
- Proposed Access Track Details – South Compound (Drawing Reference: NS051-CV-DTL-527-00016-001)
- Boundary Treatment Plan – South Compound and Access (Drawing Reference: NS051-CV-DTL-527-00018-001)
- Drainage Details – South Compound (Drawing Reference: NS051-CV-DTL-527-00020-001)
- Fence Details (Drawing Reference: NS051-CV-DTL-527-00026-001)
- Typical Office and Welfare Building (Drawing Reference: NS051-CV-TYP-527-00001-001)

1.2.2 A Whole Project Layout Plan (Drawing Reference: NS051-CV-LAY-527-00042-001) has been submitted for information but does not form part of the application.

1.3 Purpose and Structure of this Document

1.3.1 This PDAS explains how the Proposed Development satisfies the requirements of National and Local planning policies and why permission should be granted.

1.3.2 This PDAS structure is as follows:

- **Chapter 2** sets out the background and context for the Proposed Development (including its context in relation to the Development Consent Order);
- **Chapter 3** outlines the relevant physical context of the Application Site;
- **Chapter 4** outlines the key characteristics of the Proposed Development to be considered in the planning balance for decision making, and how the potential impacts of the proposed development would be managed and mitigated;
- **Chapter 5** sets out the planning policy relevant to the Site and the proposed development;
- **Chapter 6** provides an appraisal of how the proposed development complies with relevant local and national planning policy and guidance; and
- **Chapter 7** provides a summary and conclusion for the key points outlined within this PDAS.

2 Background

2.1 Background

2.1.1 The Applicant, defined as the carbon dioxide (CO_2) transportation and storage company, will deliver the onshore and offshore infrastructure needed to capture carbon from a range of emitters across the Humber region and transport to an offshore storage facility under the North Sea.

2.1.2 The Applicant intends to progress with an application for a Development Consent Order (DCO) for the Humber Carbon Capture Pipeline (HCCP) reflecting the UK Government's decision on the next phase of the UK Government's Cluster Sequencing Process to select carbon capture projects which could connect to the pipeline. HCCP would be a Nationally Significant Infrastructure Project (NSIP) under the Planning Act 2008 requiring a DCO. The DCO submission is currently expected to be submitted in early 2027 and has recently undertaken a statutory consultation exercise between October and December 2025.

2.1.3 Consent would be sought under the DCO for the following:

- An onshore CO_2 transportation pipeline from the Drax area in North Yorkshire to Easington in East Riding. It is expected to include a buried pipeline; spur line connections to emitters; approximately 13 Above Ground Installations (AGIs) and a Pump Facility at Easington;
- Crossings beneath the Humber River and the River Trent, including launch and receiving arrangements; and
- Extending to Mean Low Water Springs (MLWS) at Easington, where the CO2 transportation pipeline infrastructure will transition from the onshore to the offshore pipeline and onwards to its connection into the offshore storage facility under the North Sea. The offshore pipeline and secure storage would be the subject of a separate consent.

Early Investigation Works (Trial HDD) for the HCCP

2.1.4 In advance of the proposed DCO submission, the Applicant proposes to undertake some early investigation works to test ground conditions, with the key aim of understanding the feasibility of using an HDD method for the construction of the pipeline crossing under the Humber River, as an alternative to a traditional tunnelling method. Based on its current understanding, HDD would be the Applicant's preferred construction method as it is anticipated that it would be likely to significantly reduce environmental effects and deliver

programme benefits in comparison to the tunnelling method. The HDD construction method would take less time and would reduce community and environmental impacts in comparison with using a tunnelling method to complete the crossing of the Humber River.

2.1.5 Early investigations are proposed in advance of the DCO submission. The activities consist of:

- On-land non-intrusive survey located on both sides of the Humber River;
- Over-water non-intrusive survey on the Humber River;
- In-River boreholes (intrusive Works) and investigations including archaeological trial trenching; and
- A Trial HDD under the Humber River, with temporary launch pit compound areas and associated accesses on both sides of the River.

2.1.6 The Trial HDD is scheduled to commence in the second quarter of 2026 and to be completed in the second quarter 2027.

2.1.7 Geophysical surveys over the Humber River are proposed in Q1 2026. All survey work would be undertaken with landowner agreement and subject to any consents required.

2.2 Relationship with Surrounding Developments

2.2.1 The Trial HDD will involve drilling a bore, known as a pilot hole, to assess the ground conditions. The Trial HDD would be launched towards the centre of the Humber River from two compounds located on each side of the Humber River from compounds at Humber South (near Goxhill, North Lincolnshire; the subject of this application) and Humber North (near Paull, East Riding of Yorkshire). If possible, the two drill holes will intersect, or they may stop short of each other, depending on the conditions experienced once the works commence. Whether the drills intersect or not would not result in any additional environmental impacts. If the drills were to intersect this may provide an option to reuse the Trial HDD bore during the HCCP pipeline installation subject to DCO consent.

2.2.2 This application relates to the above ground elements of the Trial HDD. A second application, submitted in tandem with this application, relates to the below ground engineering works (the Trial HDD itself). Two planning applications have also been submitted to East Riding of Yorkshire in relation to the equivalent works on the north side of the Humber River.

2.2.3 The approach of splitting the overground and underground works has been agreed with the respective LPAs. The principle of splitting the applications relates to the mandatory requirement for all planning applications in England to achieve 10% Biodiversity Net Gain (BNG) on all affected habitats within the application boundary. If the overground and underground works were applied for in a single application, the boundaries would include a mix of impacted and non-impacted habitats, but the way the BNG guidance is written means the applicant would become liable to provide 10% net gain on all habitats within the application area, not just the affected habitats. The underground works would not impact directly on habitats. Therefore, splitting the application into two separate applications enables the works to be considered exempt (on the basis of being de minimis) from BNG requirements under the BNG Guidance.

2.2.4 This application should therefore be read in conjunction with the tandem application for the underground works associated with the Trial HDD.

3 Site Context

3.1 The Application Site and Surroundings

3.1.1 The Humber South Application Site ("the Application Site"; "Humber South"; "the Site") subject to this planning application is on the south side of the Humber River and comprises part of an agricultural field (Grade 3). The Application Site is shown on the Site Location Plan (Drawing Reference: NS051-CV-LAY-527-00043-001).

3.1.2 A flood embankment is located to the east of the Application Site, running northwest to southeast and bounding an area of mudflats and marsh along the River Humber. An access track runs parallel to the flood defence embankment along its western side, running along the east and north boundaries of the agricultural field. The access track provides maintenance access for the Environment Agency and connects to Skitter Road in the southeast corner of the Application Site, providing access to the site from the A160 to the south.

3.1.3 A Main Drain runs along the southern field boundary. Beyond this, Skitter Beck, a Main River and tributary to the Humber River, passes under the access track in the southeast corner of the agricultural field. The access track adjacent to the flood defence embankment continues on to Skitter Road passing over an Environment Agency owned bridge and weir. Skitter Beck and the Main Drain run broadly parallel to the southern field boundary.

3.1.4 There is a Scheduled Monument; a Second World War bombing decoy site known as East Halton (ref: 1431904), located off East Marsh Road, approximately 450m to the northwest of the Application Site.

3.1.5 Land uses surrounding the Application Site are predominantly agricultural, with irregular shaped fields intersected by drainage ditches. The land beyond the field boundaries is also agricultural (Grade 3).

3.1.6 To the east of the Site, beyond the raised flood embankment is the coastal saltmarsh and intertidal mudflats of the Humber River. The entire Application Site is within Flood Zone 3 (Tidal Flood Plain for the Humber River).

3.1.7 The Humber River is a Ramsar Wetland of International Importance, a Special Protection Area (SPA), a Special Area of Conservation (SAC), and a Site of Special Scientific Interest (SSSI). The proposed Application Site lies within a SSSI Impact Risk Zone.

3.1.8 The closest residential property to the Site is Fir Tree Farm, approximately 800m to the northwest of the Site.

3.2 Planning History

3.2.1 A planning history search of the Site and surroundings has been undertaken using the NLC planning search function. There does not appear to have been any previous planning applications associated with the Site. There are several previous or current planning applications in the wider area surrounding the site, but none of these would be considered relevant or conflict with the Trial HDD proposals.

3.3 Pre-Application Engagement

3.3.1 The proposals follow pre-application engagement with stakeholders and the community. The CIS (Document Reference: 30181090 -ARC-XX-XX-RP-ZZ-0004-1-Community Involvement Statement - North Lincolnshire) submitted with this planning application provides further details of the pre-application engagement that has been undertaken, the feedback received, and how the design of the Proposed Development has evolved following this engagement.

3.4 Overview of Stakeholder Engagement

3.4.1 The Applicant recognises that the National Planning Policy Framework (NPPF) places significant importance on pre-application consultation and encourages meaningful involvement in the pre-application engagement / consultation process. The Proposed Development has been developed in a consultative and iterative manner informed by various phases of engagement / consultation with a wide range of stakeholders, linking to the existing engagement approach being taken for the HCCP DCO application.

3.4.2 Technical stakeholders were engaged via email, in-person, and online discussions and presentations. The stakeholders have been kept informed of relevant programme developments and they were all duly invited to the public engagement events and online engagement exercises. Full details of the engagement undertaken by the applicant with technical stakeholders is summarised in the CIS.

4 Proposed Development

4.1 The Proposed Development

4.1.1 This application seeks full planning permission for the following development on the Humber South Site:

- A proposed hardstanding and compound of approximately 21,060m^2 (2.1ha) for welfare, equipment laydown, drill entry point, retention pond, topsoil and subsoil storage bunds, anchor block, fluid containment pit, parking and associated access tracks;
- A temporary laydown area adjacent to the proposed access track close to the existing private unadopted access track that will be used to access the nearest public highway at the junction of East Marsh Road and Chapel Field Road;
- An area of underground development within the compound that incorporates the permanent insertion of approximately 50m of 42-inch diameter metal casing to guide the drill through unstable soils, of which 35m is proposed to be underground within this compound and access tracks planning application boundaries, with the remaining 15m forming part of a separate planning application for the underground works associated with the HDD; and
- Permanent installation of an approximately 35m section of 3-to-4.5-inch (outer diameter) steel pipe sleeve which will be installed through the whole length of the HDD under the Humber River. A 700m section of the HDD/sleeve pipe forms part of a separate planning application for the underground works associated with the HDD.

4.1.2 In some instances, the conditions encountered on site could result in a failed drill. If this occurs, subsequent attempts would be undertaken within the submitted red line boundary of the planning permission. If further attempts are made, this may require additional metal casing and anchor block to be installed in addition to any already installed during the first drill attempt.

4.1.3 The proposed site layout is shown on the Site Layout Plan (Drawing Reference: NS051-CV-PPL-527-00003-001). The application boundary covers an area of 41,347m^2 (4.13ha) as shown on the Proposed Site Location Plan (Drawing Reference: NS051-CV-LAY-527-00043-001).

Temporary Compound

4.1.4 The temporary compound would provide single storey office and welfare cabins, parking for operatives, a lined water-holding retention pond (divided into two compartments, one to store water to supply the drill process, and the second to store surface water/ waste drill arisings), topsoil storage, the Trial HDD launch pits, and any other associated plant and equipment required to facilitate the Trial HDD. The fenced compound would be approximately 178m long and 124m wide. The individual components of the compound are described below.

Hardstanding

4.1.5 Within the compound area, topsoil and subsoil would be removed to formation level. The hardstanding pad would be raised approximately 200mm above existing ground levels. The hardstanding will include a subgrade compacted to a minimum dry density of 95%, and any re-levelling, soft spots or fill would be compacted to 6F2 aggregate. The surface would be Department for Transport approved (MOT) Type 1 hardcore with a minimum median particle of 10mm compacted.

Temporary Buildings

4.1.6 The proposed welfare cabin would be erected in the eastern area of the compound and will provide a sheltered area and toilet facilities for members of staff and construction workers. The building would be flat roofed, with corrugated steel walls, painted green, with PVC windows. The welfare cabin would be 3m in height, 15m long, and 10m wide, with a total area of 150m^2. The cabin would be raised by 400mm above the compound hardstanding using concrete supports to ensure protection from flooding. This is detailed further in the Flood Risk Assessment (Document Reference: 30181090 -ARC-XX-XX-RP-EN-0002-1-Flood Risk Assessment- North Lincolnshire).

4.1.7 The proposals also include a small security cabin at the Site entrance. The dimensions of this would be 3m in height, 5m long, and 5m wide with a total area of 25m^2.

Topsoil Storage

4.1.8 Topsoil stripping will be carried out over the full extent of the proposed construction compound footprint and the proposed temporary access tracks. The topsoil stripped from the compound area will be stored as bunds in dedicated locations within the compound. Topsoil bunds will not exceed 2m in height.

4.1.9 To create the retention ponds, excavation beyond the initial topsoil layer will be required. The underlying materials are expected to be a mix of subsoils, clay and other potential materials, to be classed generally as 'spoil'. Topsoil and spoil/subsoils will be stored separately. Spoil will also be stored in bunds limited to no more than 3m high from existing ground level.

4.1.10 Topsoil excavated for the construction of the access tracks and the laydown areas will be evenly distributed in a continuous bund alongside the access tracks. The bunds will be 1.5m high by 4m wide at the base.

4.1.11 When the sites are fully reinstated, the spoil and subsoils will be used to infill the retention ponds, it will then be finished with topsoil. The remaining topsoil will be spread across the remainder of the compound site.

4.1.12 The topsoil and soil/subsoil bunds will be seeded to protect the bunds from water ingress, run off and wind impacts to retain the bunds for reuse. The Outline Soil Management Plan identifies measures to ensure the materials generated by the development are suitable for use in the reinstatement of the site.

4.1.13 All soil handling works would be undertaken in accordance with good practice. The exact placement of the bunds and management approaches have been discussed with the Environment Agency due to the works being carried out in Flood Zone 3a. The exact locations of the bunds are shown on the Site Layout Plan (Drawing Reference NS051-CV-PPL-527-00003-001).

Fencing

4.1.14 Site fencing and security measures would be installed around the boundary of the construction compound. The fencing would be approximately 2m in height consisting of anti-climb fence panels. The site will feature two vehicle and pedestrian gates measuring approximately 6m wide and 2.4m high, with 2.5mm square mesh fitted to the gate. The gates would be flanked by long concrete barriers.

4.1.15 For pedestrian access, there will also be a heavy-duty gate and fire escapes. Fencing details are shown on the Fence Details Plan (Drawing Reference: NS051-CV-DTL-527-00026-001).

4.1.16 The compound fencing and gates will be covered with an opaque covering to provide screening of the compounds.

4.1.17 The access tracks will be fenced using 1.2m high post and wire fencing.

Lighting

4.1.18 Lighting would be required throughout the duration of the works.

4.1.19 During the drill process, where 24-hour working is required, lighting would be required through the night to ensure the safety of all staff present at the site but would be minimised and localised to specific tasks and areas of the site as far as possible.

4.1.20 At all other times, such as during the site establishment, access track construction, and demobilisation, work would be undertaken in daytime hours 8.00am to 6:00pm only, and lighting would be turned off when the site is not in use.

4.1.21 The lighting is likely to consist of self-contained units with a generator included for power. The lighting canopies are likely to be at a maximum height of 4.5 m and will include a hood to ensure lighting is angled downwards to avoid light spill during hours of darkness.

Water Supply

4.1.22 A supply of water is required to operate the HDD, amounting to a maximum of 600m^3 of water required for each day of drilling. It should also be noted that if the drill fails, further attempts would be made, and this would therefore increase the duration of water required and associated road tanker movements would therefore be over a longer period.

4.1.23 A Water Supply Strategy for the Trial HDD has been developed to establish the most appropriate method of sourcing the water supply to keep the water retention pond (described above) full for the duration of the drill.

4.1.24 The principal driver for undertaking the Water Supply Strategy has been to understand the best option for sourcing water whilst minimising impacts as far as possible on the surrounding environment and local community. Consultation on the HCCP project has indicated that the local community are concerned about the generation of additional traffic through any development proposals in the area.

4.1.25 The Water Supply Strategy considers alternatives including abstraction from water courses and groundwater, supply from local water mains, and transporting water to site via non road options such as by barge. The source of the water supply has been determined through consultation with various

stakeholders including the Environment Agency, the Local Highway Authorities, Yorkshire Water and Anglian Water.

4.1.26 Options to abstract from the local watercourses and groundwater sources, and to draw water from local mains, along with other options, have been ruled out due to environmental and reliability factors.

4.1.27 It is therefore proposed that the water supply would be road tankered to the site for the Trial HDD project. The road tankers will deliver water to a water retention pond, which is described below. The Water Supply Strategy is provided as an Appendix to this PDAS and provides more detail on the options assessed and how the preferred option was selected.

4.1.28 It should be noted that for the main HCCP project, a separate Water Supply Strategy would be developed, and the decision making around water supply for the Trial HDD does not influence the findings of the wider HCCP Water Supply Strategy.

Retention Ponds

4.1.29 As mentioned above, a continuous supply of water is required during the drilling operations to mix the drilling lubricant and wash out drill arisings from the bore. This proposed water supply would be held in a membrane lined retention pond inside the temporary compound. The membrane prevents loss of liquid to the underlying soil layers.

4.1.30 The retention pond is divided into two main compartments, one storing water to supply the drilling process and a separate compartment for surface rainwater runoff and drill return water. To create the retention pond area, topsoil and subsoils will be excavated to a depth of approximately 1.5m, and the retention pond sides will be bunded to a maximum of 3m above existing ground level. Entry pit(s), retention ponds and drilling mud holding areas have been designed with sufficient capacity to account for rainfall over the duration of works to prevent flooding / over topping.

Water Retention Pond

4.1.31 The water retention pond would have a holding capacity of approximately 2750m^3 and would be topped up daily during the drilling operation to ensure there is a continuous supply available. Road tankers will deliver water to the retention pond, and where possible deliveries of water will be restricted to within daytime working hours. The proposed compound layout includes an internal site road with a layby adjacent to the water retention pond. The layby allows road

tankers to pull in and wait whilst the water is pumped into the retention pond. Once the drilling operations are complete, there would be a volume of water remaining in the retention pond that will need to be emptied as part of the demobilisation from the site. This would be removed from site by road tankers to a suitable disposal facility.

Surface Water and Waste Water Retention Pond

4.1.32 The drilling cuttings (containing drilling debris such as stone, chalk, silt and Bentonite) once brought to the surface, is processed through dedicated mobile treatment equipment. Drilling solids from the treatment equipment is automatically deposited into a dedicated skip prior to being transported off site to a registered local waste disposal facility. Minor fragments of cutting waste and drilling fluid are returned to surface water and waste water retention pond for settling and then passed through drilling fluid recycling equipment for recirculation in the drill process. The surface water and wastewater retention pond has a holding volume of approximately 1000 $m^{3.}$

4.1.33 Overall, the holding volume of the ponds on the site is approximately 3750m^3. The retention ponds would be sufficiently sized to accommodate the volumes with an additional allowance of 200mm freeboard to prevent water overtopping through wave creation in high winds or during heaving rain periods.

4.1.34 A component of drilling fluid would be lost to the ground formation during drilling. This is inert fluid and will disperse quickly. This loss is offset by further pumping from the freshwater retention pond. Measures to ensure drilling slurry does not enter the water supply area would be designed in, and the retention ponds are bunded with additional freeboard included to prevent overtopping.

Temporary Access Tracks

4.1.35 Two access tracks are proposed at the Humber South Compound, one for access from the north and one for egress to the south, as well as improvements to an existing unadopted track which links from East Marsh Road to the Application Site. The access track linking the compound to the unadopted private track from East Marsh Road crosses several existing buried pipelines and additional protection and cover depths would be provided at the crossings, in accordance with the asset owners requirements.

4.1.36 The preferred access route to and from the South Compound site for Heavy Goods Vehicles (HGVs) is via a proposed one-way system accessed from the north, travelling through Goxhill via Ferry Road and down East Marsh Road. HGVs will exit the site over a bridge over Skitter Beck, then travel south via

Skitter Road and through East Halton to the A160. Other vehicles such as Light Goods Vehicles and cars will access and egress the Site in either direction as shown on the Site Context Plan (Drawing Reference: NS051-CV-LAY-527-00037-001 Rev B01).

4.1.37 An exception to this is during the initial construction of the access road construction. During this period there would be two-way HGV traffic travelling via East Marsh Road through Goxhill for a period of approximately two weeks whilst the access track between East Marsh Road / the private access track is constructed. Two-way traffic would also be required along Skitter Road and through East Halton for a second two-week period whilst the access track between the compound and Skitter Road is constructed. Once the access tracks are constructed, the one-way system for HGV's would be implemented.

4.1.38 The tracks are for the purposes of access for operatives, deliveries of plant and machinery, and road tankers bringing water to the Site. The temporary access road from the northern access point of the Site has a total area of 10,600m^2. The temporary access road from the southern access point of the Site would have a total area of 2,150m^2. The access track will require a topsoil strip and placement of MOT Type 1 hardcore gravel to create the access road.

4.1.39 Options to access the sites from the major road network are limited due to the semi-rural nature of the area. Many of the roads are narrow with no pavements or verges or raised grass verges. Due to the temporary nature of the project the preference is to use existing roads where possible. Several route options were considered and discussed with the highway's teams at NLC. It was agreed when selecting them that additional works would be required to provide additional passing places and these are discussed further below.

4.1.40 A small number of deliveries to the sites may constitute Abnormal Indivisible Loads (AILs). This is likely be less than five deliveries over the construction period. It is likely that the size and weight of these deliveries will exceed the weight limits of the bridge over Skitter Beck. AILs may therefore need to deviate from the one-way system described above to exit the site on to East Marsh Road and return through Goxhill, subject to agreement with the Local Highways Authority. National Highways notifications would be undertaken as required.

4.1.41 No Public Rights of Way (PRoWs) are intended to be closed or temporarily diverted. However, it should be noted that there are numerous PRoWs along the construction routes. In particular it should be noted that the PRoW - Footpath FP/GOXH/50 – routes over Skitter Beck bridge, which forms part of the construction traffic access. It is proposed that this PRoW will remain open

and appropriate management would be put in place to mitigate the impacts on PRoW users following consultation with the North Lincolnshire Council PRoW officer. This would be set out in the final Traffic Management Plan and CEMP.

4.1.42 The proposed ditch crossings would be subject to agreement with the Internal Drainage Board as the ditches are designated as Ordinary Water Courses.

Access Track Widening near Skitter Beck

4.1.43 The proposed egress / access road works on the north side of Skitter Bridge would require an area of land raising to provide a wider section of access track for HGVs to achieve the necessary swept paths to cross Skitter Bridge. In this location an existing field drain is culverted under the track, and the existing track running alongside the flood embankment needs to be widened.

4.1.44 The additional raised ground would consist of imported consolidated infill, geotextile membrane and MOT Type 1&2 crushed stone material to create the vehicle wearing surface. The raised ground would be approximately 1m high and stabilised with an inclined embankment. Following completion of the works the consolidated infill, geotextile membrane and wearing surfaces would be removed and the ground reprofiled to match the original profile (if necessary) and the topsoil reinstated.

4.1.45 The raised land and widened track would be left in place until the site is fully reinstated.

Temporary Laydown Area

4.1.46 To enable the construction of the access tracks, a temporary laydown area would be required. This would be established immediately to the south of the access track close to where the access track would link to East Marsh Road. The laydown area would only be used during the construction of the access track for a period of approximately four weeks.

4.1.47 The laydown area would consist of MOT Type 2 or Type 1 stone being laid on matting to provide a firm surface for temporary welfare cabins, parking and equipment lay down. The areas would be fenced and temporary lighting would be required. The laydowns area would be semi permeable, and as such no drainage would be installed. There is natural sloping at the site and the laydown area would be designed to ensure water runs off to the surrounding ground.

4.1.48 The area required for the laydown area is approximately 45m by 12m.

4.1.49 Following the construction of the access track, the laydown area would be removed and reinstated.

Passing Places

Image 4-1 – The proposed Heavy Goods Vehicle and Light Goods Vehicle access Routes

4.1.50 It was agreed with NLC Highways Authority when selecting the proposed access routes to the site, that additional works would be required to provide additional passing places, and in some cases to upgrade existing passing places. NLC Highway Authority agreed that these passing places would be installed prior to the commencement of the construction of the access tracks and compound for the Trial HDD.

4.1.51 As the proposed works are required to mitigate adverse impacts of traffic using the local road network, the project has agreed that the highway authorities will

carry out the work to install the passing places prior to the Trial HDD works starting and to meet the required highways standards at the expense of the applicant. The Highways Authorities can install these works without the need for planning permission under Section 55 (2) (b) of the Town and Country Planning Act 1990 and Class A of The Town and Country Planning (General Permitted Development Order) 1995. The applicant will enter a legal agreement with the North Lincolnshire Highways Authority. The passing places therefore fall outside of the scope of the Proposed Development, - i.e. they will not be included in the red line boundary of the planning applications - but are considered as necessary mitigation in the Traffic and Transport section.

4.1.52 The passing place locations require minor removals of hedgerows and grass verge, and do not result in significant impacts. It is expected that the installation of the passing places would be controlled via planning conditions worded to ensure that no development within the red line boundary of the planning applications takes place until the passing places are installed and authorisation to use has been received from the Local Highways Authority.

4.2 Horizontal Directional Drill

4.2.1 The Trial HDD will involve drilling a bore, known as a pilot hole, to assess the ground conditions. As mentioned previously, the Trial HDD would be launched towards the centre of the Humber River from the two compounds located on each side of the Humber River. If possible, the two drill holes will intersect, or they may stop short of each other, this will depend on the conditions experienced once the works commence. Whether the drills intersect or not would not result in any additional environmental impacts. If the drills were to intersect this may provide an option to reuse the Trial HDD bore during the HCCP pipeline installation subject to DCO consent.

4.2.2 Following the construction of the compound, access tracks, retention ponds and site set up, the drilling contractor will mobilise to site. This will include bringing in key plant and machinery required to perform the drill. This period will take around two months. Once the drill set up is established, the drilling can commence. The drill is expected to be in operation for between approximately 30 to 50 days on each side of the River and is expected to be carried out in tandem. A single drill attempt could take approximately 30 days, however a worst case of 50 days is assumed to allow for additional attempts if required.

4.2.3 Each pilot hole for the Trial HDD is expected to involve the drilling of a 12-18 inch bore between the HDD entry point on the surface and a target point approximately 2-3km from the entry point towards the centre of the Humber

River at a depth of between 20m and 80m. The HDD entry pit and the HDD Drill rig and the metal casing to be installed to guide the drill through unstable soils is within the proposed Humber South Compound and forms part of this planning application.

4.2.4 The section of the HDD bore outside of the proposed site compound is the subject of a separate planning application. The section of the HDD bore within the site compound will be down to approximately 5m depth. The remainder of the HDD, between the compound and MLWS, is the subject of a separate planning application. For information, further details about the HDD works can be found at Appendix B.

Anchor Block

4.2.5 Owing to the length of the proposed HDD and the size of the equipment, the drill rig would require an anchor block to be placed in front of the drilling rig to prevent movement and optimize equipment use. A T-shaped anchor block would be used, with sheet piling to create a sturdy structure. It is expected that a total area of approximately 10m x 5m would be required to install the sheet piled anchor block. The sheet piling is expected to be installed to a depth of approximately 10m using a vibratory hammer. Sheet piling would take a maximum of two weeks to install the anchor block. The anchor block will be removed from site after the drilling period as part of demobilisation works. The sheet piles to stabilise the block will also be removed if possible, otherwise the piles will be cut to 2m below ground.

Fluid Containment Pit

4.2.6 The HDD requires an excavated fluid containment pit at the entry point of the drill. The fluid containment pit would be approximately 4m x 5m and 3m deep. The pit would be lined with impermeable membrane. Sheet piling would be required to support the containment pit and would be installed to a depth of approximately 6m and would take approximately a week to install.

4.2.7 The fluid containment pit would be linked to the overall fluid recycling system separating the silt/soils and water from the drill to enable an amount of water to be re-used in the drilling process; this would prevent it from overtopping. As drilling progresses, drilling fluid and cuttings (soil and rock fragments) flow back to the surface, through the space between the borehole and drill pipe, and discharge into the fluid containment pit. The pit allows these returns to slow down and settle slightly. Pumps or hoses would circulate the fluid mixture back to the mud recycling unit. The cleaned water-based drilling fluid is then recycled back into the system and pumped again downhole.

4.2.8 Sheet piling for the anchor block and fluid containment pit would be undertaken in the day time only. The sheet will be removed if possible following completion of the drill, otherwise the piles will be cut to 2m below ground.

Preservation Method for Pilot Hole (Pipe Insertion)

4.2.9 There is potential to reuse the Trial HDD bore during the HCCP pipeline installation subject to DCO consent. Preserving the pilot hole for future reuse during the Trial HDD works across the River Humber is technically challenging, particularly due to the geological nature of the chalk formation.

4.2.10 Chalk is prone to collapse, swelling, and degradation over time when exposed, especially in the absence of continuous support or pressurised fluid. Therefore, if the pilot hole is left open and either unfilled or with no structural support inserted, the hole would likely collapse either partially or fully, making it difficult to reuse.

4.2.11 To enable the potential future use of the pilot hole, a pipe sleeve would be installed. The pipe sleeve would consist of a 3-to-4.5-inch (outside diameter) steel pipe. The pipe would be constructed using sections of 10m long pipe with threaded ends which would be connected by being screwed together and potentially welded at the joints. The pipe would be pulled through the bore from either the north or south compound and would be left in place.

4.2.12 The sleeve acts as a physical placeholder that can prevent collapse or deformation of the bore and enable accurate re-entry and the potential to enlarge the bore while maintaining its original path.

4.2.13 The preferred method to preserve the pilot hole for future reuse is the installation of a pipe sleeve, if the bores intersect. This approach provides a practical, low-risk solution to maintain bore alignment and stability in chalk, allowing for efficient re-entry when the mainline phase proceeds.

4.2.14 The drill pipe would be continually assembled within the existing temporary compound and guided through the pilot hole using the same HDD rigs used to undertake the drilling of the bore. The outer metal casing will then be capped off as mentioned earlier. The pipe sleeve would be left in place permanently or may be removed if the HCCP pipeline can utilise the same bore. As discussed previously, any outer metal casing installed to guide a drill through unstable soils would be left permanently and would be capped off 2m below grade with a cement plug (or similar sealed enclosure) (1-2m) to prevent bentonite leakage from the bore.

4.2.15 Should the insertion of a pipe sleeve not be possible, the alternative would be to leave the bore filled with bentonite (inert clay like material) or a similar solution.

4.3 Reinstatement

4.3.1 If the Trial HDD confirms that HDD may be a suitable method for installing the main HCCP pipeline, partial reinstatement of the compound sites would be undertaken. Some of the infrastructure would remain to be utilised as a compound in the future should the proposed DCO for the HCCP be granted following examination and consideration by the Secretary of State. This would likely consist of the hardstanding compound surface, and access tracks. The retention ponds would be infilled with the stored subsoils and topsoil that was bunded during site clearance. The Trial HDD drill entry points would be capped of at 2m below ground level and backfilled for safety and security. All other structures, fencing, plant and machinery would be removed. All that would remain visible above ground is the compound hardstanding and the access tracks.

4.3.2 Should a DCO be granted for the HCCP, the compound areas would be re-established for a further temporary period, with full reinstatement (pursuant to the requirements of the DCO) to be undertaken after the completion of the main HCCP river crossing. It is envisaged this would include the removal of all hardstanding and access tracks to restore the sites back to agricultural fields.

4.3.3 The Applicant anticipates a planning condition that requires reinstatement of the site within a defined time period (for example 2 years) to ensure reinstatement of the site is complete without interdependency on the HCCP works, for example should the DCO not be granted.

4.3.4 The metal casing pipes that would be inserted to guide the drill through unstable soils are to be left in the ground after the Trial HDD operations are complete. This is due to the level of disruption and technical difficulty in removing the casing once installed. If the Trial HDD provides understanding that HDD is suitable for the HCCP pipeline crossing, the metal casing pipe would be cut and capped off at 2m below local ground level and made safe. The capped off area would be within the compound hardstanding area, and if the works described above are retained for use under the DCO for the HCCP project the final surfacing of this area would be undertaken as part of the final reinstatement of the site following the HCCP works.

4.3.5 Leaving the compound and access tracks in place for a temporary period up to the point when any DCO for the HCCP might be approved and the HCCP works

can thereafter be completed reduces the impact from traffic movements associated with removal and then re-establishing the site in approximately 2-3 years' time. It is considered that this is a more sustainable option and one that minimises disruption from traffic movements for residents in the surrounding area.

4.3.6 If the Trial HDD provides understanding that HDD is not suitable for the HCCP Humber Crossing, or if the HCCP DCO is not granted consent, all hardstanding associated with the compound and access tracks would be removed and the site and associated drainage would be restored to its original condition after the completion of the Trial HDD.

5 Planning Policy Context

5.1 Introduction

5.1.1 In accordance with Section 70 of the Town and Country Planning Act 1990 and Section 38(6) of the Planning and Compulsory Purchase Act 2004 (PCPA), planning applications must be decided in accordance with the Development Plan unless material considerations indicate otherwise.

5.1.2 The Application Site is located within the North Lincolnshire Council administrative area.

5.1.3 The statutory Development Plan for the area comprises the North Lincolnshire Local Development Framework ('NLLDF') (adopted in 2011) and the Saved Policies from the North Lincolnshire Local Plan ('NLLP') (2003). Other documents to consider for the Proposed Development include:

- The Core Strategy (adopted 2011);
- Housing and Employment Land Allocations Development Plan Document (DPD) (adopted 2016);
- Planning for Renewable Energy Development – Supplementary Planning Document (Adopted 2011);
- Planning for Health and Wellbeing 2016 – Supplementary Planning Document (Adopted July 2016);
- National Planning Policy Framework (NPPF);
- The Lincolnshire Lakes Area Action Plan (AAP) (adopted 2016); and
- The Overall National Policy Statement for Energy (EN-1); and
- The National Policy Statement for Natural Gas Supply Infrastructure and Gas and Oil Pipelines (EN-4).

5.1.4 North Lincolnshire Council is preparing a new, single Local Plan for North Lincolnshire which, when adopted, will replace the saved policies of the 2003 Local Plan, the 2011 Core Strategy, the 2016 Housing and Employment Land Allocations DPD, and the Lincolnshire Lakes AAP.

5.2 North Lincolnshire Local Development Framework

5.2.1 This section states the overarching policies that are relevant to the Trial HDD project.

5.2.2 **Policy CS1: Spatial Strategy for North Lincolnshire** outlines the future development requirements for North Lincolnshire. It states that all change will be managed in an environmentally sustainable way by avoiding / minimising or mitigating development pressure on the area's natural and built environment, its existing utilities and associated infrastructure and areas at risk of flooding. Where development unavoidably has an environmental impact adequate mitigation measure should be used for the development to be acceptable.

5.2.3 **Policy CS2: Delivering More Sustainable Development** states that all development in North Lincolnshire is required to contribute towards achieving sustainable development. By doing so, it requires development to comply with the following sustainable development principles:

- Where large freight movements are involved, the use of rail and water transport should be maximised;
- Contribute to achieving sustainable economic development to support a competitive industrial sector;
- Ensure the appropriate provision of services, facilities, and infrastructure to meet the needs of the development;
- Deliver development which is constructed and operated using minimal non-renewable resources;
- Take account of environmental capacity; and
- Be designed to a high standard and use sustainable construction techniques.

5.2.4 **Policy CS5: Delivering Quality Design in North Lincolnshire** states that all new development in North Lincolnshire should be well designed and appropriate for their context. Design requirements for development in North Lincolnshire are set out within the policy including:

- Incorporating the principles of sustainable development throughout the whole design process;
- Creating safe and secure environments;
- Consideration of the relationship between any buildings and the spaces around them, and how they interact with each other as well as the surrounding area;

5.2.5 **Policy CS6: Historic Environment** supports development proposals which preserve and enhance North Lincolnshire's local character, distinctiveness and historic environment including historic building, conservation, listed building, registered parks & gardens, scheduled monuments and archaeological remains.

5.2.6 **Policy CS16: North Lincolnshire's Landscape, Greenspace & Waterscape** requires development proposals to protect, enhance and support North Lincolnshire's landscape, greenspace, and waterscape.

5.2.7 **Policy CS17: Biodiversity** requires development proposals to promote effective stewardship of wildlife by safeguarding national and international protected sites for nature conservation, give appropriate consideration to European and nationally important habitats and species, and ensuring development retains protects, and enhances features of biological and geological interest and provides for the appropriate management of these features.

5.2.8 **Policy CS18: Sustainable Resource Use and Climate Change** states that development proposals would be supported where they utilise natural resources as efficiently and sustainably as possible. This includes meeting high water efficiency standards; ensuring development and land use helps to protect people and the environment from unsafe, unhealthy, and polluted environments by protecting and improving the quality of the air, land, and water; and supports new technology and development for carbon capture, particularly in relation to the heavy industrial uses in North Lincolnshire to help reduce CO2 emissions.

5.2.9 **Policy CS19: Flood Risk** supports development proposals which do not increase the risk of flooding. Development in areas of high flood risk must demonstrate that it provides wider sustainability benefits to the community and the area which outweighs flood risk and are accompanied by a flood risk assessment to demonstrate it would be safe without increasing flood risk elsewhere.

5.2.10 **Policy CS20: Sustainable Waste Management** promotes sustainable waste management by requiring major developments to produce Site Waste Management Plans and integrate facilities for waste minimisation, re-use, recycling and composting.

5.2.11 **Policy CS25: Promoting Sustainable Transport** states that development would be supported where they:

- Introduce appropriate demand management measures;
- Integrate transport provision into the design of the development; and
- Support the development of a freight strategy to include lorry parking sites, HGV route management and provision of facilities for transferring freight delivery from road to rail/water transport wherever practical.

5.3 Key Saved Policies from the North Lincolnshire Local Plan (2003)

5.3.1 **Policy RD1: Development involving High Quality Agricultural Land** states that proposals for the development or change of use of agricultural land will only be permitted where this would not result in the loss of the best and most versatile land (Grades 1, 2 and 3a) unless it can be demonstrated that the proposed development cannot be accommodated on:

- Land within settlement boundaries; or
- Land which is allocated for development; or
- Previously developed land; or
- Land of a lower agricultural grade.

5.3.2 For development to be permitted on higher grades of land there must be an overriding need for the development.

5.3.3 **Policy RD2: Development in the Open Countryside** requires development in the open countryside to be strictly controlled. Development should take place only where it is considered the only appropriate location and cannot be reasonably accommodated within the defined development boundaries, accords with local policy, would not be detrimental to the character and appearance of the countryside, nor to highway safety or residential amenity, account for being able to be served by public transport, and is sited to make the best use of existing and new landscaping.

5.3.4 **Policy T2: Access to Development** states that development must be provided with satisfactory access.

5.3.5 **Policy T15: Highway Improvements and New Highway Construction** supports proposals where new highways infrastructure is included as an element of a development proposal when they consider the optimum ease and safety of movement for public transport, pedestrians, and cyclists, and to conserve the landscape and natural environment.

5.3.6 **Policy T18: Traffic Management** requires development proposals to introduce measures such as accident and speed reduction schemes and traffic regulation orders to minimise danger and nuisance caused by traffic in the residential and other sensitive areas, to concentrate traffic onto the most suitable roads, and to minimise the problems caused by parking conflicts.

5.3.7 **Policy T19: Car Parking Provision and Standards** requires provision for car parking where it meets the operational needs of the site and is essential to the viability of the development.

5.3.8 **Policy T24: Road Freight** states that where heavy goods vehicles endanger safety, cause community severance, or environmental intrusion, and alternative routes exist, the movement and parking of these vehicles would be restricted.

5.3.9 **Policy LC2: Sites of Special Scientific Interest and National Nature Reserves** states that development in these areas will only be permitted if the reasons for the development clearly outweigh the nature conservation value of the site itself and the national policy to safeguard the national network of such sites. Any damage to the SSSI should be kept to an absolute minimum and conditions or planning obligations and other appropriate compensatory measures would be considered.

5.3.10 **Policy LC4: Development Affecting Sites of Local Nature Conservation Importance** states that in all cases where development is permitted which may damage the nature conservation value of the site, such damage shall be kept to a minimum.

5.3.11 **Policy LC7: Landscape Protection** states that development proposals located in rural settlements or open countryside will need to give special attention to the protection of scenic quality and distinctive local character. Development must respect the character of the local landscape, or it will not be permitted.

5.3.12 **Policy LC12: Protection of Trees, Woodland, and Hedgerows** requires all development to ensure the retention of trees, woodland, and hedgerows.

5.3.13 **Policy HE8: Ancient Monuments** states that development proposals which would result in an adverse effect on Scheduled Ancient Monuments and other nationally important monuments, or their settings, will not be permitted.

5.3.14 **Policy DS1: General Requirements** sets an expectation for development proposals to demonstrate a high standard of design. There should be no unacceptable loss of amenity to neighbouring land uses in terms of noise or other nuisance and cause no pollution of water, air or land which could create detrimental environmental conditions. Suitable on-site drainage should be provided and where there are off-site drainage problems, the developer will be expected to overcome them. There should be no unacceptable impacts to conservation of the natural or historic environment, and such local features should be retained and enhanced where possible.

5.3.15 **Policy DS6: Temporary Buildings** states that planning permission would be granted for temporary buildings if the building is not highly visible to the general public or detrimental to the amenity of the area.

5.3.16 **Policy DS10: New Hazardous Installations and Pipelines** requires the Applicant to demonstrate that the proposal will impose no significant development restrictions on surrounding land users.

5.3.17 **Policy DS11: Polluting Activities** states that developments will be granted planning permission where it is demonstrated that the levels of potentially polluting emissions, including effluent, leachates, dust, smell or noise do not pose a danger to adjacent areas.

5.3.18 **Policy DS13: Groundwater Protection and Land Drainage** requires all development proposals to secure effective land drainage measures and ground water protection in order to control the level of water in the land drainage system.

5.3.19 **Policy DS15: Water Resources** states that unless adequate measures are undertaken to reduce the impact of the quality and quantity of water resources by means of water abstraction, permission will not be granted.

5.3.20 **Policy DS16: Flood Risk** states that development will not be permitted where it would increase the risk of flooding elsewhere unless adequate protection mitigation measures are undertaken.

5.3.21 **Policy M5: Best and Most Versatile Agricultural Land** requires proposals for non-agricultural uses on the best and most versatile agricultural land to ensure that restoration of the land should enable it to retain its long-term capacity for farming.

5.4 Material Considerations

5.4.1 There are two other policy documents that are considered material to the determination of this planning application as they are considered to form part of the NLDF. These documents are listed below.

Supplementary Planning Documents (SPDs)

5.4.2 The following are adopted Supplementary Planning Documents (SPDs) which provide additional guidance to support the implementation of the relevant local plan. They offer detail on some policies and should be considered when making a planning application.

5.4.3 **Planning for Renewable Energy Development – Supplementary Planning Document (November 2011):** This SPD builds on policies in the Core Strategy and North Lincolnshire Local Plan and sets out planning policy towards renewable energy development.

5.4.4 **Planning for Health and Wellbeing 2016 – Supplementary Planning Document (July 2016):** This SPD builds on policies in the Core Strategy and North Lincolnshire Local Plan, and sets out planning policy towards Health and Wellbeing, and cites landscape and historic assets as important assets to wellbeing.

5.5 National Planning Policy

National Planning Policy Framework

5.5.1 The National Planning Policy Framework (NPPF), first published in 2012, was most recently updated in December 2024. The policy guidance it contains is a material consideration and forms part of the decision-making process. It sets out the overarching aims of development and policy guidance of relevance to the determination of this planning application. Further guidance is provided in the National Planning Policy Guidance (NPPG).

5.5.2 The key sections of the NPPF of relevance to the Proposed Development are:

- Paragraph 2: Determination of planning permission;
- Paragraph 8: Sustainable development overarching objectives; and economic objective, a social objective, and an environmental objective;
- Paragraphs 10-12: Presumption in favour of sustainable development;
- Paragraphs 39-47: Decision making;
- Paragraph 48: Determining applications;
- Paragraphs 56-59: Planning conditions and obligations;
- Paragraphs 85 and 87c: Building a strong competitive economy and the expansion and modernisation of industry;
- Paragraphs 103-104: Open space and recreation;
- Paragraph 105: Protecting public rights of way and access;
- Paragraph 109: Promoting sustainable transport;
- Paragraph 113: Maximum parking standards for non-residential development;
- Paragraphs 115-118: Considering development proposals;
- Paragraphs 124-125: Making effective use of land;
- Paragraphs 135-137: Achieving well-designed and beautiful places;

- Paragraphs 139-141: Reflecting local design policies and guidance on design;
- Paragraph 161: Supporting the transition to net zero by 2050;
- Paragraphs 162-169: Planning for climate change;
- Paragraphs 178-182: Planning for flood risk, the exception test;
- Paragraph 187: Conserving and enhancing the natural environment;
- Paragraphs 192-194: Habitats and biodiversity;
- Paragraphs 196-199: Ground conditions and pollution;
- Paragraph 202: Conserving and enhancing the historic environment;
- Paragraphs 207-208: Proposals affecting heritage assets; and
- Paragraph 212: Considering potential impacts.

National Policy Statements

5.5.3 The National Policy Statement for Energy (EN-1) sets out the need case for significant large scale energy infrastructure to meet Government objectives. It also sets out the need to decarbonise the economy. The Trial HDD constitutes the investigative works to inform the HCCP DCO project which will deliver development supported in EN-1.

5.5.4 The National Policy Statement for Natural Gas Supply Infrastructure and Gas and Oil Pipelines (EN-4) states the importance of carbon capture use and storage and its important contribution to the transition to net zero by 2050 with the decarbonisation of vital UK industry sectors.

5.6 Material Considerations

5.6.1 There are two other documents that are considered material to the determination of this planning application. These documents are listed below.

6 Planning Assessment

6.1 Introduction

6.1.1 This section provides an assessment of the Proposed Development with reference to planning policy context provided in previous sections, and other relevant considerations. The key matters are considered to be:

- Principle of Development;
- Design;
- Air Quality;
- Ecology and Biodiversity;
- Climate Change;
- Cultural Heritage and Archaeology;
- Drainage, Flood Risk and the Water Environment;
- Agricultural Land;
- Geology, Soils and Contaminated Land;
- Landscape and Visual;
- Materials and Waste;
- Noise and Vibration;
- Lighting;
- Traffic and Transport; and
- Residential Amenity.

6.2 Principle of Development

6.2.1 The principle of development is supported by local planning policy as set out below. The Applicant is aiming to operate a Trial HDD under the River Humber which, if successful, would demonstrate a sustainable construction method for the HCCP project (to comprise the subject of a future DCO application) by means of reduced environmental impacts, construction period, and social impacts on the surrounding area.

6.2.2 NLLDF Policy CS2 requires development proposals to comply with sustainable development principles including taking account of environmental capacity. Policy CS18 requires development proposals to utilise natural resources as efficiently and sustainably as possible. It also supports new technology, including carbon capture, where it can help to reduce CO_2 emissions from heavy industrial uses in North Lincolnshire.

6.2.3 The principle of the Trial HDD is supported by local planning policy as it is intended to help provide understanding that the HDD method is suitable for the wider HCCP crossing. This would help to reduce the environmental effects of the HCCP, in line with NLLDF Policies CS2 and CS18.

6.2.4 The wider HCCP DCO project is considered a local and national priority and is supported by National Policy Statements EN-1 and EN-4 as it will reduce industrial CO_2 emissions for the country, and specifically the Humber region, and support the Government's Net Zero targets. If the Trial HDD provides understanding that HDD is suitable for the HCCP pipeline crossing, it has the potential to reduce the environmental effects of the HCCP, in line with NLLDF Policy CS2.

6.2.5 Saved NLLP Policy RD2 prohibits development proposals in the open countryside except where they cannot be reasonably accommodated within the defined development boundaries. Saved Policy DS1 requires development proposals to be designed to ensure no unacceptable loss of amenity to neighbouring land uses. Saved Policy DS10 requires new pipelines to demonstrate that proposals would impose no significant development restrictions on surrounding land uses.

6.2.6 The Trial HDD could not reasonably be located within settlement boundaries as the location of the development is dictated by the wider HCCP project and needs to be located close to the Humber River. It is expected to be operational for a limited period of time, with up to approximately 50 days of continuous drilling (in North Lincolnshire) accounted for. The full use of the Application Site is expected to be for approximately 10 to 12 months in total. Following full decommissioning, the Site would be restored to its original condition. The only permanent pieces of infrastructure, the metal casing pipe and pipe sleeve, will be cut and capped off at 2m below local ground level to avoid interaction with agricultural practices, made safe and left in situ. No visible above ground works or ground disturbance will occur within the Application Site. The Proposed Development therefore meets the requirements of Saved NLLP Policies RD2, DS1 and DS10.

6.3 Design

6.3.1 NLLDF Policy CS5 requires new development to be well designed and appropriate for its context. This includes creating safe and secure environments and considering the relationship between any buildings, the spaces around them, and interaction with the surrounding area. Saved NLLP Policy DS1 requires development proposals to demonstrate a high standard of design.

6.3.2 Due to the nature of the Proposed Development, there is limited flexibility in terms of design, architecture and selection of materials compared to other types of development. The proposals have been sited and designed to minimise visual and other amenity impacts on nearby residents and other users of the local area.

6.3.3 The Proposed Development is designed to be temporary, with no permanent infrastructure other than the metal casing and pipe sleeve, detailed in Paragraph 6.2.3. If the Trial HDD is unsuccessful, the land would be reinstated to its original condition.

6.3.4 If the Trial HDD provides understanding that HDD is suitable for the HCCP pipeline crossing, the compound hardstanding and access tracks are anticipated to be left in place until approximately the final quarter of 2028, when a decision on the HCCP DCO is expected. If the HCCP DCO is granted approval, the compound and access tracks would be reused during the HCCP DCO construction. If the HCCP DCO is refused approval, the land would be reinstated to its original condition. In any case, the compound and access tracks would be removed and fully reinstated, with the exception of the permanent steel casing and pipe sleeve, within an approximate 5-year period.

6.3.5 There would therefore be no permanent impacts on the area resulting from the design of the Proposed Development. The scheme has been designed to minimise any potential temporary impacts and is therefore compliant with Policy CS5, saved Policy DS1 and national planning policy in the NPPF at paragraphs 131 to 141.

6.4 Air Quality

6.4.1 NLLDF Policy CS18 requires development proposals to help protect people and the environment by protecting and improving the quality of the air. Saved NLLP Policy DS1 requires development proposals to ensure no unacceptable loss of amenity to neighbouring land uses and cause no air pollution that could create detrimental environmental conditions.

6.4.2 Construction activities relating to the Proposed Development such as excavation, ground works, drilling, cutting, construction and storage of materials have the potential to result in dust emissions throughout the construction phase.

6.4.3 It is anticipated that during periods of peak construction activity for the Trial HDD there would be a daily maximum of 30 vehicles travelling along either Route 1a via Goxhill or Route 1b via east Halton. This would occur during the

brief period when a two-way system would operate during the construction of the temporary access track. During this period both HGVs and cars / LGVs would travel along either Route 1a or 1b and would leave via either route. Once the one-way system is in operation, HGVs using Route 1a to access the compound would exit using Route 1b and vice versa.

6.4.4 For Route 1a the daily maximum consists of 14 HGVs and 15 cars / LGVs travelling to the Humber South compound via Goxhill. For Route 1b this consists of 14-15 HGVs and 15 cars / LGVs travelling to the compound via East Halton Therefore, on Route 1a there could be a daily maximum of 58 movements (28 HGV and 30 cars / LGV two-way movements). For Route 1b this daily maximum would be 59 movements (29 HGV and 30 cars / LGV two-way movements). Outside of the peak construction activity the daily vehicles flows on both routes are anticipated to lower.

6.4.5 The overall construction associated with the Trial HDD will take approximately 10-12 months. Peak construction activity is anticipated to occur over a short duration of one week. There may be occasions where traffic exceeds the daily maximum number of vehicle during specific construction activities. However, these events would be isolated and occur over a much shorter duration.

6.4.6 Vehicle movements both on-site and on the local road network also have the potential to result in the re-suspension of dust from highway surfaces.

6.4.7 The Proposed Development is not located within 6km of an Air Quality Management Area (AQMA).

6.4.8 Traffic flows associated with the development are below the criteria set out in The Institute of Air Quality Management (IAQM) Land Use Planning & Development Control Guidance. The Guidance states that HGV flows of greater than 100 Annual Average Daily Traffic (AADT) two-way movements and greater than 500 AADT flows for LGVs and cars (combined) are likely to give rise to Air Quality issues. The guidance states that “if none of the criteria are met then there should be no requirement to carry out an Air Quality assessment for the impact of the proposed development on the local area, and the impacts can be considered to have insignificant effects.” The only impacts from the development on Air Quality is likely to be generated through dust associated with the construction phase.

6.4.9 Outline activities to manage dust on site during construction and operation are set out in Appendix A of the OCEMP and would be updated in the detailed CEMP.

6.4.10 Overall, the Trial HDD has the potential to cause a minor temporary impact to the air quality of the Site and the surrounding area, as a result of construction activities and vehicle movements to and from the site, but emissions from traffic are well below the thresholds that require full assessment. However, due to the temporary nature of the Proposed Development, adoption of suitable measures to manage dust during construction, and traffic numbers below the threshold of assessment in IAQM guidance, the Trial HDD will not have a permanent air quality impact, therefore, the project is compliant with NLLDF Policy CS18, saved Policy DS1, and NPPF paragraph 199.

6.5 Ecology and Biodiversity

International, National and Locally Designated Sites and Habitats

6.5.1 The Trial HDD Site extends into a section of the Humber Estuary corridor which is designated as a Site of Special Scientific Interest (SSSI), Special Area of Conservation (SAC), Special Protection Area (SPA), and Ramsar site. The boundaries for these statutory designated sites are identical in proximity to the Site. The Impact Risk Zones (IRZ) associated with the Humber Estuary SSSI extend over the Site. At this distance threshold, pipelines and underground cables are listed as development types that could have a harmful effect on the SSSI and the SAC, SPA or Ramsar site it underpins. This application covers land outside the designated sites but is on land adjacent.

6.5.2 There are no direct impacts to the qualifying features of the designated sites as a result of the Proposed Development. Potential for effects on the internationally designated sites within the Zone of Influence during the construction, operation, and decommissioning stage of the Proposed Development have been assessed in the Ecological Appraisal and Biodiversity Net Gain Assessment (submitted with this planning application).

6.5.3 There is no Local Nature Recovery Strategy (LNRS) published for North Lincolnshire; therefore, NLLDF policies have been consulted to assess the Strategic Significance of the Site. The Humber Estuary Corridor part of the Site is located within an internationally designated site, meaning this part of the Site has been classed as being ‘formally identified within the local plan’.

6.5.4 NLLDF Policy CS17 requires development proposals to safeguard protected sites for nature conservation, give appropriate consideration to important habitats and species, and ensure that development retains, protects and

enhances features of interest and provides for appropriate management of these features.

6.5.5 Saved NLLP Policy LC2 states that development in SSSIs and National Nature Reserves will only be permitted if the reasons for the development clearly outweigh the nature conservation value of the site itself and any damage is kept to a minimum. Saved Policy LC4 requires development that may damage the nature conservation value of a site to keep such damage to a minimum. Saved Policy LC12 requires development to ensure the retention of trees, woodland and hedgerows.

6.5.6 There are no trees, woodland, or hedgerows which would be affected by the Proposed Development. Therefore, the Proposed Development is compliant with NLLDF Policy CS17, saved NLLP Policies LC2, LC4 and LC12, and national planning policy in the NPPF at paragraphs 187 and 192-194.

Biodiversity Net Gain

6.5.7 A Biodiversity Net Gain Assessment (Document Reference: 30181090 -ARC-XX-XX-RP-ZB-0002-1-HDD) has been completed to estimate the potential net change in biodiversity value of the Humber South Site and to consider how the development could achieve at least 10% biodiversity net gain. The BNG Assessment has been conducted in line with statutory requirements which mandate developers to deliver at least a 10% increase in biodiversity value for the site.

6.5.8 Using the Statutory Biodiversity Metric Calculation Tool, the pre-development biodiversity value for on-site habitats are:

- Habitat units: 7.4;
- Hedgerow units: 0 and
- Watercourse units: 0.

6.5.9 It is proposed that the applicant will commit to reinstatement to pre-works habitat type, condition and extent within 24 months of first use. The Proposed Development would therefore be classed as temporary in the statutory metric at determination.

6.5.10 If, following the Trial HDD, any features or hardstanding areas need to remain beyond 24 months for use during the HCCP main pipeline installation, an “as-built” BNG update will be submitted with a request to extend the temporary permission before the 24-month point. The BNG update would show exactly what has been retained and for how long and would be used to secure any

additional off-site units required to maintain compliance and ensure mandatory BNG requirements are met.

6.5.11 The OCEMP outlines measures for how the Proposed Development will minimise impacts cause by construction activities using the best environmental practice techniques and following the minimum standards required for construction (detailed in the Outline CEMP, Document Reference: 181090 - ARC-XX-XX-RP-ZZ-0002-1).

6.5.12 Overall, the Proposed Development promotes effective stewardship of wildlife by safeguarding the surrounding SSSI, SAC, SPA and Ramsar Site and the reinstatement of pre-works habitats, as outlined in the Biodiversity Net Gain Assessment (Document Reference: 30181090 -ARC-XX-XX-RP-ZB-0002-1-HDD). Therefore, the Proposed Development complies with NLLDF Policy CS17, Saved Policy LC2, and NPPF paragraph 187.

6.6 Climate Change

6.6.1 The Proposed Development directly supports the UK's broader climate change objectives. The HCCP is key infrastructure within the East Coast Cluster, designed to facilitate the capture, transportation, and permanent storage of industrial CO2 emissions from the Humber region. The Proposed Development supports the wider proposed HCCP project, which is expected to deliver significant, long-term reductions in industrial CO_2 emissions.

6.6.2 The Proposed Development aligns with local climate change policy, as it is an example of development that uses resources efficiently and sustainably to improve environmental quality and promote new technologies for carbon capture. The temporary nature of the Proposed Development prevents any long-term or permanent climate change impacts arising from the Trial HDD, and the vehicular movements to and from the Site have been limited as far as practicable to avoid climate change impacts as a result of transport associated with the Proposed Development. The proposals therefore support NLLDF Policy CS18 and national planning policy at NPPF paragraphs 8 and 162-169.

6.7 Cultural Heritage and Archaeology

6.7.1 Nearby settlements, such as Goxhill and Barrow-Upon-Humber, have historic ties to agriculture and estuarine trade, although the immediate setting of the Site has remained primarily rural in character. The strategic position on the Humber Estuary, both as a natural boundary and a major tidal waterway, has significantly influenced land use and settlement patterns across this part of

North Lincolnshire, with the estuarine environment also supporting a range of nationally and internationally important habitats close to the Site. It is possible therefore that settlement activity could be present on and within the vicinity of the site, with high potential for medieval finds. However, due to the dynamic coastline and potential for disturbance, the overall archaeological potential of the site is assessed as medium.

6.7.2 In advance of the Proposed Development, archaeological trial trenching has been undertaken to inform the design and establish appropriate mitigation and control measures for the main Trial HDD works. No significant findings were encountered in the trial trenches. The Proposed Development is supported by a Heritage Desk-Based Assessment (Document Reference: 30181090 -ARC-XXXX-RP-ZA-0003-1) which assesses the likely impacts on cultural heritage assets and archaeology.

6.7.3 The Proposed Development has the potential to affect cultural heritage and archaeology, primarily through ground disturbance. These impacts will be carefully managed through the measures set out in the supporting archaeological assessments, which are based on the trial trenching outcomes. No adverse effects are anticipated for Scheduled Monuments or Listed Buildings. Therefore, the Proposed Development complies with NLLDF Policy CS6 and saved Policies LC7 and HE8 as there are no assumed permanent negative impacts on cultural heritage or archaeology surrounding the Site.

6.8 Drainage, Flood Risk and the Water Environment

6.8.1 NLLDF Policy CS16 requires development proposals to support North Lincolnshire's waterscape. Policy CS19 supports proposals that do not increase the risk of flooding and requires development in high flood risk areas to demonstrate that they would not increase flood risk elsewhere and sustainability benefits would outweigh any flood risk.

6.8.2 Saved NLLP Policy DS13 requires development proposals to secure effective land drainage measures and groundwater protection to control the level of water in the land drainage system. Saved Policy DS15 requires proposals to address impact on water abstraction. Saved Policy DS16 requires proposals to ensure they would not increase the risk of flooding elsewhere unless adequate protection mitigation measures are undertaken.

6.8.3 The Proposed Development includes the provision of suitable on-site drainage to ensure surface water is appropriately managed during the temporary works. This is detailed in the Surface Water Drainage Strategy (Document Reference:

30181090 -ARC-XX-XX-RP-DE-0001-1-Drainage Strategy) and Construction Phase Surface Water Management Plan (Document Reference: 30181090 -ARC-XX-XX-RP-ZZ-0005-1-Construction Phase Surface Water Management Plan). All hardstanding and access tracks are designed to prevent water pollution and minimise flood risk, with measures in place to control surface runoff and maintain water quality. If the Trial HDD provides information that the HDD is a suitable method of installation for the main pipeline, and subject to the HCCP DCO being granted consent, full reinstatement of the site would not happen for a period of 5 years. If the Trial HDD indicates HDD is not a suitable method of installation and is not taken forward as a construction method for the HCCP DCO, all temporary hardstanding and drainage infrastructure would be removed and the site would be restored to its original condition within approximately 2 years from the commencement of the Trial HDD works, ensuring no long-term impact on existing drainage patterns or local water bodies.

6.8.4 The Water Supply Strategy (Appendix A) evaluates multiple options for sourcing water for the drilling operations. Abstraction from local watercourses and groundwater was ruled out due to environmental and reliability concerns. Instead, water would be supplied via road tankers, minimising potential impacts on local water sources and ecosystems.

6.8.5 The Proposed Development is accompanied by an assessment of flood risk (Document Reference: 30181090-ARC-XX-XX-RP-EN-0002-1-Flood Risk Assessment – North Lincolnshire), and mitigation measures are proposed to ensure the risk of flooding is not increased either on-site or elsewhere.

6.8.6 Overall, the Proposed Development demonstrates a clear commitment to managing drainage and protecting the water environment on and off-Site. It ensures effective on-site drainage, avoids water pollution, limits high-risk water abstraction methods, commits to full site restoration and includes flood risk mitigation. The Proposed Development complies with NLLDF Policies CS16, CS19, saved NLLP Policies DS13, DS15 and DS16, and national policy in the NPPF at paragraphs 178-182.

6.9 Agricultural Land

6.9.1 Saved NLLP Policy RD1 states that, for non-agricultural development on best and most versatile agricultural land, there must be an overriding need for the development. Saved Policy M5 requires proposals for non-agricultural uses on the best and most versatile agricultural land to ensure that restoration of the land should enable it to retain its long-term capacity for farming.

6.9.2 A detailed Agricultural Land Classification (ALC) and soil survey has been conducted to assess the quality of agricultural land within the site. Provisional ALC mapping shows that the application site comprises entirely Grade 3 land (good quality agricultural land).

6.9.3 With the exception of a single sample, the whole of the survey corridor was found to be ALC Grade 3b land and therefore not Best and Most Versatile (BMV) land.

6.9.4 The use of this land is temporary for the duration of the Trial HDD, with a total expected period of use of approximately 10-12-months (including up to approximately 50 days of continuous drilling). If the Trial HDD provides information that HDD is suitable method for installation of the main HCCP pipeline, and the HCCP DCO is granted approval, limited elements of the temporary compound will remain in situ for the construction of the HCCP DCO including the hardstanding and access tracks.

6.9.5 Following decommissioning, the Site would be restored to its original agricultural condition. The only permanent infrastructure left in situ would be the metal casing to guide the drill through unstable soils, and the pipe sleeve that would be pulled through the entire length of the HDD bore. The metal casing would be cut and capped at 2m below ground level to ensure it does not interfere with future agricultural activities. The pipe sleeve will be entirely below ground.

6.9.6 A Soils Management Plan is included in the supporting documentation, ensuring that topsoil is properly stripped, stored, and reinstated post-works to preserve soil quality and agricultural productivity.

6.9.7 The design of the Proposed Development minimises the development footprint and locates infrastructure in a strategic position to avoid unnecessary disturbance to agricultural land and practices in the surrounding fields.

6.9.8 Overall, the Proposed Development utilises numerous measures of protecting the existing and future agricultural uses of the Site, ensuring full compliance with saved policies RD1 and M5 and NPPF paragraph 187.

6.10 Geology, Soils, and Contaminated Land

6.10.1 NLLDF Policy CS17 requires development proposals to enhance features of geological interest and appropriately manage them. Saved NLLP Policy DS10 requires proposals for new pipelines to demonstrate that they will impose no

significant development restrictions on surrounding land users. Saved Policy DS11 requires development proposals to ensure that any potentially polluting emissions do not pose a danger to adjacent areas.

6.10.2 A Phase 1 Geo-Environmental Study (Document Reference: 30181090 -ARC-XX-XX-RP-EN-0004-1-Geo-Environmental Phase 1 Study – North Lincolnshire) has been prepared in support of the application. The report concludes that the Trial HDD works are not likely to cause any significant impacts to the geology of the Site. No on-site contamination sources have been identified from historical or current land uses.

6.10.3 The historical brickworks to the east of the site could be a potential source of contamination although the distance and location of the brickworks and associated clay pits make the likelihood of significant impact from these sources relatively low. Where risks are identified, mitigation measures would be implemented in line with standard industry protocols, including safe storage and disposal of any contaminated materials encountered during construction.

6.10.4 Previous site investigations and regulatory records (including the Environment Agency and local authority datasets) show no pollution incidents or groundwater quality issues affecting the site or immediate surrounds. Furthermore, the absence of peat soils and significant organic matter reduces the likelihood of leachable contaminants or gas generation. Risks to groundwater pollution would be minimised by virtue of the proportionate approach to be taken towards the extent of Trial HDD works, causing minimal earthworks disturbance, and construction procedures would be undertaken in accordance with a Detailed CEMP. Risks to ground stability are minimised by the insertion of metal casing that will guide the drill through unstable ground. Where risks are identified, mitigation measures would be implemented in line with standard industry protocols, including safe storage and disposal of any contaminated materials encountered during construction.

6.10.5 The construction phase of the Proposed Development has the potential to impact soils as they are stripped, handled and reinstated. Appendix E of the Outline CEMP includes outline mitigation measures to minimise impacts on soils and these are detailed in an Outline Soils Management Plan (Document Reference: 0181090 -ARC-XX-XX-RP-ZA-0004-1). The Outline Soils Management Plan will be further developed into a Detailed Soil Management Plan by the contractor to ensure that soils are carefully stripped, stored, and reinstated after construction. This minimises disturbance, prevents soil degradation, and supports the restoration of agricultural productivity post-development.

6.10.6 The majority of the disturbance to geology and soils is temporary, as the construction compounds and access tracks would be fully reinstated to their original condition after the works are complete or after the main HCCP construction phase if the DCO is granted. Furthermore, earthworks would be managed to prevent erosion, compaction, and loss of soil structure. Measures would be in place to avoid mixing of topsoil and subsoil, and to prevent pollution of soils from construction activities. Only the capped metal casing pipe will remain underground, positioned to avoid future interference with agricultural use.

6.10.7 It is therefore considered that there will be no unacceptable impacts in relation to geology and contaminated land, and that the Proposed Development demonstrates accordance with local policies CS17, DS10 and DS11 and national policy in the NPPF at paragraphs 196-199.

6.11 Landscape and Visual

6.11.1 NLLDF Policy CS16 requires development proposals to protect, enhance and support North Lincolnshire's landscape, greenspace, and waterscape. Saved NLLP Policy LC7 requires development proposals located in rural settlements or open countryside to give special attention to the protection of scenic quality and distinctive local character. Development must respect the character of the local landscape, or it will not be permitted. Saved Policy DS6 states that temporary buildings will generally be permitted if the building is not highly visible to the public or detrimental to the amenity of the area.

6.11.2 A Landscape and Visual Appraisal (LVA) has been undertaken in order to address the potential effects of the Trial HDD Works on landscape features, landscape character and visual amenity within a 3km radius of the site.

6.11.3 The submitted LVA demonstrates that, due to the temporary nature and contained footprint of the works, there would be no unacceptable effects on the character or quality of the surrounding landscape. The assessment identifies that the site is located within a predominantly agricultural setting, with existing visual screening provided by mature field boundaries, hedgerows, and the wider flat topography. The LVA confirms that any short-term changes to views for nearby receptors would be limited in extent, reversible, and confined to the construction period.

6.11.4 Mitigation measures, such as the careful siting of equipment, protection of boundary vegetation, and timely reinstatement of disturbed areas, ensure that residual impacts are both minor and short term. The LVA also confirms that the

scheme aligns with national and local policy requirements for integrating new infrastructure sensitively into the landscape context. The careful planning and implementation of mitigation measures mean that there would be no unacceptable landscape or visual impacts. It is therefore considered that there would be no unacceptable impacts in relation to landscape or visual factors, and that the Proposed Development demonstrates accordance with associated local and national policy.

6.11.5 During the site construction phase, while the introduction of temporary infrastructure and activity may initially alter the landscape character and visual amenity, the magnitude of change is at worst assessed as medium, with significance of effect at worst being moderate adverse, but are considered not significant due to its temporary and reversible nature.

6.11.6 The reinstatement phase will facilitate the removal of temporary infrastructure, allowing the landscape to return to its baseline condition, resulting in no effects following full reinstatement.

6.11.7 Overall, the Proposed Development's design and mitigation strategies, combined with careful planning and execution, are required to ensure that the landscape and visual impacts are managed effectively. Following full restoration, the landscape and visual characteristics are expected to fully integrate back into the original rural setting, preserving the area's intrinsic qualities and value. Therefore, the Proposed Development complies with NLLDF Policy CS16 and saved Policies LC7 and DS6.

6.12 Minerals and Waste

6.12.1 NLLDF Policy CS20 requires major developments to produce Site Waste Management Plans and integrate facilities for waste minimisation, re-use, recycling and composting.

6.12.2 All site waste generated by the construction works would be stored, handled, and transported in compliance with relevant waste legislation. Waste would be segregated and stored securely in clearly labelled receptacles and in the unlikely event that any hazardous waste is encountered, this would be stored separately to avoid contamination. The site would be kept tidy, waste stored securely and removed regularly to prevent pests.

6.12.3 Surplus spoil or waste materials may arise from either material imported to site or from those generated on site. HDD projects generate considerable quantity of liquid waste/drill waste including mud. The disposal of this waste would be

discussed in the detailed CEMP and are likely to include segregation of waste streams (e.g., soils, construction materials, general waste, and wastewater) and safe storage and disposal of any hazardous materials that are encountered during the construction and operational phases of development.

6.12.4 A Site Waste Management Plan would be developed to ensure that waste is stored and handled appropriately and that Construction Demolition and Excavation (CD&E) materials generated at worksites is managed in accordance with the waste hierarchy to prevent, reduce, re-use, recycle, recover, and dispose of materials and within the relevant regulatory controls.

6.12.5 The Proposed Development is temporary, therefore, most of the materials including the compounds and access tracks would be removed and disposed of in line with waste hierarchy principles during Site restoration.

6.12.6 Overall, the Proposed Development complies with NLLDF Policy CS20 and national planning policy in the NPPF at paragraph 8.

6.13 Noise and Vibration

6.13.1 Saved NLLP Policy DS1 requires development proposals to ensure no unacceptable loss of amenity to neighbouring land uses in terms of noise or other nuisance.

6.13.2 A Noise and Vibration Impact Assessment (Document Reference: 30181090 - ARC-XX-XX-RP-ZA-0007-1) has been undertaken for the proposed Trial HDD works.

6.13.3 To inform the assessment, a baseline noise survey was carried out to characterise the existing acoustic environment at noise sensitive receptors surrounding the Proposed Development site.

6.13.4 Based on the proposed working methodology for the Trial HDD works, noise and vibration predictions have been undertaken for the civils works and the drilling works. The predicted levels have been assessed against the criteria set out in BS 5228:2009+A1:2014.

6.13.5 The assessment shows that noise levels generated during the civil engineering works will not cause an exceedance of the daytime criteria and are therefore not predicted to result in significant effects.

6.13.6 The drilling works will require activities to be undertaken on a 24-hour basis and therefore they would be subject to a more onerous acoustic criterion, as defined

by BS 5228-1:2009+A1:2014. The assessment has identified that the predicted noise levels at the surrounding receptors on the south bank do not exceed the night-time criterion with the adoption of suitable noise attenuation equipment.

6.13.7 It is likely that general construction working hours will apply for all works other than the drilling period, but there may be exceptional circumstances will result in the need to work outside these hours. The wording of conditions to enforce construction working hours can be agreed during the planning determination period.

6.13.8 It is therefore considered that, subject to appropriate conditions, there will be no unacceptable impacts in relation to noise and vibration, and that the Proposed Development demonstrates accordance with Policy DS1 and national policy in the NPPF at paragraphs 187 and 198.

6.14 Lighting

6.14.1 Saved NLLP Policy DS1 requires development proposals to ensure no unacceptable loss of amenity to neighbouring land uses in terms of noise or other nuisance. This can be assumed to include light pollution.

6.14.2 Temporary lighting is required throughout the duration of the works. During the construction, general use and reinstatement of the compound lighting would be turned off when the site is not in use, minimising unnecessary illumination. During drilling, lighting will be needed throughout the 24-hour drilling operations, which are expected to last for up to approximately 50 days. Outside of these periods, lighting would be turned off when the site is not in use, minimising unnecessary illumination. The lighting will consist of self-contained units powered by generators. The lighting canopies are designed with a maximum height of 4.5 meters and incorporate hoods to ensure that light is angled downwards, thereby reducing light spill and glare during nighttime operations.

6.14.3 Downward-facing, hooded lights help to avoid excess light spill, protecting surrounding habitats, minimizing disturbance to local wildlife, and reducing visual impacts for nearby residents. This approach is particularly important due to the proximity of sensitive ecological sites.

6.14.4 Adequate lighting is provided to ensure the safety of all staff present on-site during night-time operations, in compliance with national health and safety requirements.

6.14.5 Overall, the Proposed Development lighting strategy complies with saved Policy DS1 and national planning policy in NPPF paragraph 198.

6.15 Traffic and Transport

6.15.1 NLLDF Policy CS1 requires development to minimise and mitigate development pressure on the area's environment. Policy CS25 supports development that introduces appropriate demand management measures, integrates transport provision into the design of the development, and provides a freight strategy including lorry parking and HGV route management.

6.15.2 Saved NLLP Policy T2 requires development proposals to provide satisfactory access. Saved Policy T15 supports proposals where new highways infrastructure seeks to conserve the landscape and natural environment. Saved Policy T18 requires development proposals to concentrate traffic onto the most suitable roads. Saved Policy T19 requires provision of car parking where it meets the operational needs of the site. Saved Policy T24 states that where heavy goods vehicles endanger safety, cause community severance, or environmental intrusion, and alternative routes exist, the movement and parking of these vehicles would be restricted.

6.15.3 Following consultation with North Lincolnshire County Council officers and National Highways the proposed construction route along the local road network is:

- Route 1a (via Goxhill): M180 J5 Barnetby Interchange A15 – B1206 – College Road – Ferry Road – East Marsh Road; and
- Route 1b (via East Halton): Skitter Road - Townside – East Halton Road – Harbrough Roundabout.

6.15.4 For a short period of approximately four weeks, a two-way construction traffic system using both Routes 1a and 1b would operate while the temporary access route is constructed.

6.15.5 Outside of this period, the construction route would operate as a one-way system for HGVs only, which would result in HGVs accessing the Site via Ferry Road, and exiting via Skitter Road / Townside, with passing places provided on both. Other construction vehicles classified as 'lights' (cars and LGVs) would be able to use the construction route as two-way. AILs may also need to return from site via Goxhill due to weight and size limitations on Skitter Bridge, but it is expected there would be a very small number of AILs as detailed above.

6.15.6 A series of control measures would be applied during the construction phase of the Proposed Development to reduce or avoid any potential effects that might occur. Those include:

- NEP are committed to ensuring that all contractor and sub-contractor vehicles arriving at site would comply with sufficient safety measures;
- Adherence to designated routes: suppliers would be made aware that these routes are required to be followed at all times unless it is agreed that alternative routes/diversions are in place;
- This construction route would typically operate as a one-way system for HGVs only, which would result in HGVs accessing the Site via Ferry Road, and exiting via Skitter Road / Townside, with passing places provided on both. Other construction vehicles classified as 'lights' (cars and LGVs) would be able to use the construction route as two-way;
- Passing places are proposed to be constructed along Ferry Road, East Marsh Road, and Skitter Road but do not form part of this planning application;
- Emergency access protocols would be put in place and would be identified within the Site Health and Safety plan;
- The Main Works Contractor would ensure that debris deposits onto the public road as a result of construction traffic are minimised as much as possible and are cleared away if they occur;
- Appropriate road signs warning motorists of the site access/egress and of construction HGVs turning in and out of the site access would be provided and installed;
- Site inductions would cover traffic safety, highlighting the need to take special care when travelling through the construction route;
- Due to the sensitivity of the area, and the previous history of the area with regards to Feeder 9, it has been agreed with North Lincolnshire Council, construction traffic will avoid travelling to / from Site during school times; and
- Avoiding sensitive times such as school drop off / pick up where possible to avoid impacts during peak periods surrounding nearby Goxhill Primary School and East Halton Primary School.

6.15.7 The assessment of the future 2026 baseline and traffic generated during construction of the proposed development identified that predicted increase in total and HGV traffic will have a negligible impact on operational capacity of the existing local highway network and would be temporary over a 10–12-month programme. The number of vehicle movements generated by the proposed development is considered low and is unlikely to have an adverse impact on highway safety.

6.15.8 No Public Rights of Way (PRoWs) are intended to be closed or temporarily diverted. However, it should be noted that there are numerous PRoWs along the construction routes. In particular it should be noted that the PRoW - Footpath FP/GOXH/50 – routes over Skitter Beck bridge, which forms part of the construction traffic access. It is proposed that this PRoW will remain open. However, appropriate management would be put in place to mitigate the impacts on PRoW users following consultation with the North Lincolnshire Council PRoW officer. This would be set out in the final Traffic Management Plan and CEMP.

6.15.9 Overall, the Proposed Development complies with NLLDF Policies CS1 and CS25, saved policies T2, T15, T18, T19, T24 and DS1, and national planning policy at NPPF paragraphs 115-118.

6.16 Residential Amenity

6.16.1 Saved NLLP Policy DS1 requires development proposals to ensure no unacceptable loss of amenity to neighbouring land uses in terms of noise or other nuisance. Saved Policy DS10 requires proposals to demonstrate that there will be no significant development restrictions on surrounding land users.

6.16.2 Firtree Farm and Lynton Stud on East Marsh Road are the closest residential receptors to the site. These properties are over 800m to the north west of the proposed compound.

6.16.3 The Proposed Development, including the construction, operation, and reinstatement are temporary, with the most intensive activity of the continuous drilling lasting up to approximately 50 days. Noise would be managed through best-practice construction methods, outlined in the OCEMP, to minimise impacts on nearby residential receptors. Additionally, noise and vibration assessments have informed the layout and OCEMP. Noise monitoring will be undertaken where necessary. This is compliant with saved policy DS1 and DS10.

6.16.4 Measures such as water suppression and wheel washing are implemented to reduce dust generation on Site during operation of the Trial HDD. Vehicle movements are also being managed to minimise dust and exhaust emissions which might impact neighbouring properties and residential receptors as detailed in the Outline Construction Traffic Management Plan (Document Reference: 30181090-ARC-XX-XX-RP-TP-0001-1) and the OCEMP. This is compliant with NLLDF Policy CS17 and saved policy DS1.

6.16.5 All temporary lighting is downward facing and hooded to minimise light spill and glare for nearby residential receptors. Lighting would be minimised and will only be used during night-time operations. A Lighting Strategy would be developed. This is compliant with saved policy DS1 and NLLDF Policy CS16.

6.16.6 Construction traffic has been routed to avoid sensitive residential areas where possible. An Outline Construction Traffic Management Plan (Document Reference: 30181090 -ARC-XX-XX-RP-TP-0002-1-Outline Construction Traffic Management Plan - North Lincolnshire) is in place to manage vehicle movements, reduce congestion, and ensure safety for local residents. This ensures compliance with NLLDF Policies CS1 and CS25, and saved policies T2, T15, T18, T19, T24, and DS1.

6.16.7 The placement of 2-3m high bunds topsoil and spoil bunds offers some screening of the compound, although some plant, machinery and structures would be visible above this.

6.16.8 Following the completion of the Trial HDD or following the HCCP DCO construction, all temporary infrastructure would be removed and the land restored to its original condition, ensuring no permanent adverse impacts on residential amenity.

7 Summary and Conclusion

7.1.1 This PDAS is submitted on behalf of Northern Endurance Partnership to accompany a full planning application for:

- A proposed hardstanding and compound of approximately 21,060m^2 (2.1ha) for welfare, equipment laydown, drill entry point, retention pond, topsoil and subsoil storage bunds, anchor block, fluid containment pit, parking and associated access tracks;
- A temporary laydown area adjacent to the proposed access track close to the existing private unadopted access track that will be used to access the nearest public highway at the junction of East Marsh Road and Chapel Field Road;
- An area of underground development within the compound that incorporates the permanent insertion of approximately 50m of 42-inch diameter metal casing to guide the drill through unstable soils, of which 35m is proposed to be underground within this compound and access tracks planning application boundaries, with the remaining 15m forming part of a separate planning application for the underground works associated with the HDD; and
- Permanent installation of an approximately 35m section of 3-to-4.5-inch (outer diameter) steel pipe sleeve which will be installed through the whole length of the HDD under the Humber River. A 700m section of the HDD/sleeve pipe forms part of a separate planning application for the underground works associated with the HDD.

7.1.2 The Proposed Development will inform the feasibility of HDD being used and taken forward as the preferred option to construct the carbon transportation pipeline to cross the Humber River within the proposed HCCP which will in due course comprise the subject of a separate DCO application DCO. The HDD method would provide significant benefits in terms of minimising the construction programme and any associated impacts on the community for that project.

7.1.3 The Proposed Development accords with both national and local planning policy. The UK Government has a target of meeting net zero emissions by 2050. As the UK's most carbon intensive industrial region, it is important there is a plan in place for the decarbonisation of the Humber region. Once built, the HCCP will offer carbon emitting sites across the Humber region the opportunity to transport carbon emissions to underground storage. The Trial HDD is a fundamental early phase site investigation to inform the HCCP design and installation. Projects such as HCCP are essential for the UK to meet its net zero

targets. The development will make a significant contribution to achieving sustainable economic development to support a competitive industrial sector.

7.1.4 The assessment in this Statement demonstrates that there are no permanent adverse impacts associated with the Proposed Development. Temporary impacts associated with the construction and operation of the Proposed Development are relatively limited and can be satisfactorily mitigated.

7.1.5 Assessments relating to ecology, noise and vibration, archaeology and cultural heritage, flood risk, landscape and visual, traffic and transport, construction impacts, drainage, soils, geo-hydrology and geo-environment (land quality) have been submitted as part of this planning application.

7.1.6 The table below summarises how the Proposed Development complies with local planning policy. Chapter 6 addresses how the Proposed Development also complies with national planning policy.

Table 7-1 – Planning Policy Assessment Summary Table

Key Matter	Relevant Policies	Justification
Principle of Development	NLLDF Policy CS2: Delivering More Sustainable Development NLLDF Policy CS18: Sustainable Resource Use and Climate Change Saved NLLP Policy RD2: Development in the Open Countryside Saved NLLP Policy DS1: General Requirements Saved NLLP Policy DS10: New Hazardous Installations and Pipelines	The Proposed Development would help enable the wider HCCP DCO project to identify a drilling method that would reduce environmental impacts, construction period, and social impacts on the surrounding area. Following decommissioning, the Site would be restored to its original condition. The only permanent pieces of infrastructure would be capped off underground and made safe.
Design	NLLDF Policy CS5: Delivering Quality Design in North Lincolnshire Saved NLLP Policy DS1: General Requirements	Due to the nature of the Proposed Development, there is limited flexibility in terms of design, architecture and selection of materials compared to other types of development. The proposals have been sited and designed to minimise visual and other amenity impacts on nearby residents and other users of the local area. There would therefore be no permanent impacts on the area resulting from the design of the Proposed Development.
Air Quality	NLLDF Policy CS18: Sustainable Resource Use and Climate Change Saved NLLP Policy DS1: General Requirements	The only air quality impacts from the Proposed Development are likely to be generated through construction dust. This would be managed through the Construction Environmental Management Plan.
Ecology and Biodiversity	NLLDF Policy CS17: Biodiversity Saved NLLP Policy LC2: Sites of Special Scientific Interest and National Nature Reserves Saved NLLP Policy LC4: Development Affecting Sites of Local Nature Conservation Saved NLLP Policy LC12: Protection of Trees, Hedgerows and Woodlands	There are no anticipated impacts on protected sites and habitats from the Proposed Development. The Proposed Development would not impact trees, woodland or hedgerows. The proposals are considered temporary in Biodiversity Net Gain terms. The applicant would reinstate all pre-development habitats within 24 months of first use.
Climate Change	NLLDF Policy CS18: Sustainable Resource Use and Climate Change	The temporary nature of the Proposed Development prevents any long-term or permanent climate change impacts arising from the Trial HDD. The vehicular movements to and from the Site have been limited and reduced as far as reasonably practicable to avoid climate change impacts as a result of transport associated with the Proposed Development.
Cultural Heritage and Archaeology	NLLDF Policy CS6: Historic Environment Saved NLLP Policy LC7: Landscape Protection Policy HE8: Ancient Monuments	The Proposed Development has the potential to affect cultural heritage and archaeology, primarily through ground disturbance. These impacts will be carefully managed through the supporting archaeological assessments and trial trenching outcomes. No adverse effects are anticipated for Scheduled Monuments or Listed Buildings.
Drainage, Flood Risk and the Water Environment	NLLDF Policy CS16: North Lincolnshire's Landscape, Greenspace & Waterscape NLLDF Policy CS19: Flood Risk	The Proposed Development includes the provision of suitable on-site drainage to ensure surface water is appropriately managed during the temporary works. Mitigation measures are proposed to ensure that the risk of flooding is not increased either on-site or elsewhere.

Key Matter	Relevant Policies	Justification
	Saved NLLP Policy DS13: Groundwater Protection and Land Drainage Saved NLLP Policy DS15: Water Resources Saved NLLP Policy DS16: Flood Risk	
Agricultural Land	Saved NLLP Policy RD1: Development involving High Quality Agricultural Land Saved NLLP Policy M5: Best and Most Versatile Agricultural Land	With the exception of a single sample, the entire survey area around the Site was found to be Grade 3b and therefore not Best and Most Versatile Agricultural Land. The Proposed Development is temporary. Following decommissioning, the Site would be restored to its original condition. Topsoil on the Site would be properly stripped, stored and reinstated post-works to preserve soil quality. The design of the Proposed Development minimises the development footprint and locates infrastructure in a strategic position to avoid unnecessary disturbance to agricultural land and practices in the surrounding fields.
Geology, Soils and Contaminated Land	NLLDF Policy CS17: Biodiversity Saved NLLP Policy DS10: New Hazardous Installations and Pipelines	The Proposed Development is not likely to cause any significant impacts on the geology of the Site. No contamination sources have been identified on the Site. Where risks from potential contamination sources are identified, mitigation measures would be implemented including safe storage and disposal. Risks of groundwater pollution would be minimised through a proportionate approach causing minimal earthworks disturbance. The majority of the disturbance to geology and soils is temporary, as the construction compounds and access tracks would be fully reinstated to their original condition after the works are complete or after the main HCCP construction phase if the DCO is granted.
Landscape and Visual	NLLDF Policy CS16: North Lincolnshire's Landscape, Greenspace & Waterscape Saved NLLP Policy LC7: Landscape Protection Saved NLLP Policy DS6: Temporary Buildings	Due to the temporary nature and contained footprint of the works, there would be no unacceptable effects on the character or quality of the surrounding landscape. Any short-term changes to views for nearby receptors would be limited in extent, reversible, and confined to the construction period. Mitigation measures, such as the careful siting of equipment, protection of boundary vegetation, and timely reinstatement of disturbed areas, ensure that residual impacts are both minor and short term.
Materials and Waste	NLLDF Policy CS20: Sustainable Waste Management	All site waste generated by the construction works would be stored, handled, and transported in compliance with relevant waste legislation. A Site Waste Management Plan would be developed to ensure that waste is stored and handled appropriately. The Proposed Development is temporary, therefore, most of the materials including the compounds and access tracks would be removed and disposed of in line with waste hierarchy principles during Site restoration.
Noise and Vibration	Saved NLLP Policy DS1: General Requirements	Noise levels generated during the civil engineering works will not cause an exceedance of the daytime noise level criteria and are therefore not predicted to result in significant effects. Noise levels generated by 24-hour drilling would not exceed the night-time noise level criteria with the adoption of suitable noise attenuation equipment.

Key Matter	Relevant Policies	Justification
Lighting	Saved NLLP Policy DS1: General Requirements	Temporary lighting is required throughout the duration of the works. During the construction, general use and reinstatement of the compound lighting would be turned off when the site is not in use, minimising unnecessary illumination. Downward-facing, hooded lights would help to avoid excess light spill, protecting surrounding habitats, minimising local wildlife disturbance, and reducing visual impacts.
Traffic and Transport	NLLDF Policy CS1: Spatial Strategy for North Lincolnshire NLLDF Policy CS25: Promoting Sustainable Transport Saved NLLP Policy T2: Access to Development Saved NLLP Policy T15: Highway Improvements and New Highway Construction Saved NLLP Policy T18: Traffic Management Saved NLLP Policy T19: Car Parking Provision and Standards Saved NLLP Policy T24: Road Freight Saved NLLP Policy DS1: General Requirements	The predicted increase in HGV and total traffic from the Proposed Development would have a negligible impact on the capacity of the local highway network and would be temporary over a 10-12-month period. Nearby Public Rights of Way would be kept open and appropriate management would be put in place to mitigate impacts on users.
Residential Amenity	NLLDF Policy CS16: North Lincolnshire's Landscape, Greenspace & Waterscape NLLDF Policy CS17: Biodiversity Saved NLLP Policy DS1: General Requirements Saved NLLP Policy DS10: New Hazardous Installations and Pipelines NLLDF Policy CS1: Spatial Strategy for North Lincolnshire NLLDF Policy CS25: Promoting Sustainable Transport Saved NLLP Policy T2: Access to Development Saved NLLP Policy T15: Highway Improvements and New Highway Construction Saved NLLP Policy T18: Traffic Management Saved NLLP Policy T19: Car Parking Provision and Standards Saved NLLP Policy T24: Road Freight Saved NLLP Policy DS1: General Requirements	Noise impacts on nearby receptors would be appropriately managed and mitigated through best-practice construction methods. No significant impacts are anticipated. Air quality impacts from construction dust would be minimised through methods set out in the Construction Environmental Management Plan. All temporary lighting is downward facing and hooded to minimise light spill and glare for nearby residential receptors. Lighting would be minimised and will only be used during night-time operations. Construction traffic has been routed to avoid sensitive residential areas where possible and impacts on the local road network are likely to be negligible. Any short-term visual impacts would be limited in extent, reversible, and confined to the construction period.

7.1.7 Some of the detailed information required to ensure suitable measures and controls are in place would be produced by the contractor carrying out the works. We would therefore welcome pre-commencement conditions to be applied to the planning decision requiring submission of the following documents where the information submitted as part of this application has been provided as outline.

7.1.8 It is also acknowledged that the LPA will seek to apply conditions regarding noise. The Applicant would like to request that the LPA carefully considers the wording of any noise conditions in light of the requirement for 24-hour working during the drill period. It is likely that general construction working hours will apply for all works other than the drilling period, but there may be exceptional circumstances will result in the need to work outside these hours. We would be happy to discuss the wording of conditions further.

7.1.9 Having regard to the fact that that the Proposed Development accords with the adopted Development Plan and therefore in accordance with Section 38(6) of the Planning and Compulsory Purchase Act 2004, it is respectfully requested that planning permission is granted.

Appendix A

Water Supply Strategy

1 Water Supply Strategy

1.1 Background

1.1.1 This Water Supply Strategy has been prepared by Arcadis Consulting (UK) Limited (Arcadis), on behalf of Northern Endurance Partnership (NEP) (on behalf of the Applicant, Net Zero North Sea Storage Ltd), in support of its proposal to carry out early investigation works to support the Humber Carbon Capture Project (HCCP) project.

1.1.2 The early investigation works comprise of a Trial Horizontal Directional Drilling (HDD) under the River Humber from two compounds, one on each side of the River Humber. These will henceforward be referred to as the Humber North Compound and the Humber South Compound. The Water Supply Strategy has been developed based on an assessment of the feasibility of a variety of options to supply water to each compound for enabling of the HDD works being undertaken at each compound.

1.1.3 The principal driver for undertaking the Water Supply Strategy has been to understand the best option for sourcing water whilst minimising impacts as far as possible on the surrounding environment and local community. Consultation on the wider HCCP project and the Trial HDD has indicated that the local community are concerned about the generation of additional traffic through any development proposals in the area. The Water Strategy therefore considers alternatives including abstraction from water courses and groundwater, supply from local water mains, transporting water to site via road, and transporting water to site via non road options such as by barge. The source of the water supply has been determined through consultation with various stakeholders as noted in Sections 3 and 4.

1.2 Water requirements

1.2.1 A supply of clean water is required to operate the HDD, amounting to a maximum of 600m^3 of water required for each day of drilling per HDD. This estimate of the water required was calculated based on an assessment of the ground conditions for drilling. The drill is expected to be in operation for approximately 30 up to 50 days on both sides. The drilling on each side will be carried out in tandem. Drilling would be expected to operate 24 hours per day and therefore a constant supply of water is required. Any disruption to the supply of water would result in drilling stopping for a period of time until the water supply could continue, which would result in an overall longer duration of works. In order to facilitate a continuous supply, the water supplied to each compound would be held in lined retention ponds with a capacity of 3750m^3. The retention ponds would also need to be sufficiently sized to accommodate the volumes with an allowance of 200mm freeboard to prevent water overtopping or wave creation in high winds. The Water Supply Strategy has therefore had to consider the reliability of the different options for source and supply to ensure that the retention ponds remain full for the duration of drilling.

1.3 Consultation

1.3.1 Preapplication engagement has been undertaken with the Environment Agency (EA) to inform this assessment of the feasibility of the water supply options and the results of which have been summarised below.

1.3.2 Consultation was undertaken with local Water Utilities companies namely Anglian Water (AW) and Yorkshire Water (YW) for the south and north sites respectively to determine if it was possible to source water from the network.

1.3.3 Consultation has been undertaken with the Local Highway Authorities regarding suitable traffic routes and measures for the transportation of water to each compound via road.

1.3.4 Consultation was undertaken with Associated British Ports Humber Estuary Services (ABP HES) as the Statutory and Competent Harbour Authority regarding the feasibility of abstraction of Water from the River Humber and the feasibility of supplying water via barge or road tanker vessel.

1.4 Assessment of water supply options

1.4.1 The following Table 1-1 presents a summary of the investigations carried out in order to assess the feasibility of each water supply option against the water requirements of the Proposed Development. Water supply options for the Trial HDD from each side of the River Humber have been considered separately.

Table 1-1 Feasibility assessment of water supply options

Supply Option Investigated	Summary	Feasibility
Abstraction of Groundwater	**Humber North Compound** The bedrock geology underlying the north site comprises the White Chalk Subgroup (Flamborough Chalk Formation underlain by the Burnham Chalk Formation). The Chalk is classed as a Principal Aquifer. *Groundwater quality* The groundwater within the Chalk is saline and therefore would not be suitable as a water source for the drilling operations without prior desalination. *Groundwater quantity* In East Riding, the water resource (catchment abstraction management strategy (CAMS)) status for the Hull and East Riding Chalk has water resources available most of the time (Q95 flows or higher) but groundwater quality is impacted by saline intrusion and abstractions may need to be reduced or stopped at times of low groundwater levels. While groundwater may be available for abstraction, the proximity of the Humber River to a new abstraction location on the north bank could result in saline intrusion from the river to the Chalk aquifer. The EA preapplication response dated 17/02/2025 noted that the abstraction of water from groundwater sources may in principle be acceptable. However, there would need to be a robust assessment of the risk of exacerbating saline intrusion within the chalk through any new abstraction from groundwater in the aquifer. This would need to be demonstrated as part of a Hydrogeological Impact Assessment (HIA). A Groundwater Investigation Consent (GIC) application would	The abstraction of groundwater from the aquifer was assessed as an infeasible option for both Humber North Compound and Humber South Compound owing to the following: • Unsuitable ground water quality within the aquifer for use in drilling without prior treatment. The requirement for desalination would require a desalination plant within each compound, thereby introducing additional infrastructure into a floodplain, and an additional visual feature to the landscape. • There is a risk of saline intrusion within the chalk through any new abstraction for the Humber North Compound and as such the EA are unlikely to grant any new abstraction license due to the potential for damage to the aquifer. • Investigation works would be required to assess the impact of saline intrusion at the Humber North Compound, and these may ultimately confirm that the risk of saline intrusion is too significant for a new groundwater abstraction to be permissible by the EA. • No groundwater is available for consumptive licensing for the Humber South Compound. • Low confidence in the reliability of groundwater supply for the HDD works associated with any potential to abstract during high groundwater levels only at the Humber South Compound.

Supply Option Investigated	Summary	Feasibility
	need to be submitted prior to any formal application. Pumping test/monitoring would need to be undertaken as part of the GIC and these would inform the HIA. Given the risk of saline intrusion, it is considered unlikely that any new abstractions from the Chalk Aquifer would be granted by the EA following any GIC and HIA. It is therefore considered that groundwater abstraction from the Chalk Aquifer is not feasible for the supply of water to the Humber North Compound. **Humber South Compound** The bedrock geology underlying the south site also comprises the White Chalk Subgroup (Flamborough Chalk Formation underlain by the Burnham Chalk Formation), classed as a Principal Aquifer. *Groundwater quality* The groundwater within the Chalk is saline and therefore would not be suitable as a water source for the drilling operations without prior desalination. *Groundwater quantity* The water resource (CAMS) status states 'No groundwater is available for licensing in the Grimsby-Ancholme-and-Louth-abstraction-management-strategy area' with the Chalk aquifer of North Lincolnshire being 'fully committed to existing users and the environment'. Over-abstraction has historically raised concerns about saline intrusion, leading to strict groundwater management'. As dated above, the EA preapplication response noted that in line with the water balance presented in the Grimsby Ancholme and Louth Abstraction Licensing Strategy, 'no groundwater is available for consumptive licensing from the Chalk aquifer. It is unlikely that the	

Supply Option Investigated	Summary	Feasibility
	volumes sought would be available from the limited superficial deposits which overlie the Chalk.' The EA require evidence of an abstraction's non-consumptiveness to support a Chalk abstraction south of the River Humber. The EA identified that there may be opportunity to explore abstraction from the Chalk at high groundwater levels only, but this would be dependent on the recharge situation at the time and cannot be guaranteed to align with the programme of the HDD works. It is therefore considered that groundwater abstraction from the Chalk Aquifer is not feasible for the supply of water to the Humber South Compound.	
Abstraction from surface watercourses	**Humber North Compound** Preapplication engagement with the EA identified several drains in the area local to the north site (within 5km) that may be suitable for surface water abstraction (Burstwick, Keyingham, Thorngumbald). However, it was noted that the EA does not routinely monitor the flow in these drains and for any abstraction license to be granted to abstract from these watercourses prior flow monitoring would need to be undertaken. This flow monitoring would be necessary to provide assurance that the necessary volumes that would need to be abstracted to meet the demands of the HDD works would be achievable and that the proposed abstraction would not have any detrimental impact on the overall water resource and quality attributes of the watercourse and any related aquatic or water dependant ecology. The EA identified an existing abstraction at the bottom of Keyingham Drain (licence no. NE/026/0033/006) which contains a Hands-Off Level (HOL) condition (HOL is when the water reaches a level where the abstraction activity must cease until levels are restored as	The abstraction of surface water from local watercourses or drains was assessed as a low feasibility option for both Humber North Compound and Humber South Compound and was not progressed as part of the water supply strategy, owing to the following: • Low confidence in the reliability of the supply due to HOLs. • The placement and subsequent removal of pipes and equipment necessary to abstract water from a watercourse has the potential to cause damage and disturbance to the ecological habitats and species in and around the watercourse. • Distances of the watercourses from the Humber North Compound would require the construction of a pipe or the need for road tankers to transport the water.

Supply Option Investigated	Summary	Feasibility
	conditioned on an abstraction licence). Keyingham Drain is over 3.5km to the southeast of the Humber North Compound. **Humber South Compound** During preapplication engagement the EA noted that, although the Abstraction Licensing Strategy for the area states no surface water is available for consumptive abstraction, owing to the position of the south site close to the bottom of the hydrological catchment and outfall to the Humber estuary, there is potential for water availability within the catchment at high flows. The EA noted that returns submitted for licence AN/029/0009/014 for the unnamed drain feeding the Skitter Beck, suggests that there is sufficient flow within the drain to abstract the required quantities for the proposed works at the south site and there may also be sufficient water available to abstract from Skitter Beck at the point near the drilling entry point. For other drains or watercourses in the area (Barrow beck, Main drain / Carr gutter and the unnamed watercourse that flows towards the Humber) these would likely all have sufficient flow in them over the winter period to accommodate abstraction of the volumes required for the HDD works, but the EA notes that there is low confidence in the flows in the absence of flow monitoring. On this basis the EA would be supportive of allowing an abstraction from either the main Drain or the East Halton Beck at the very end of these channels or possibly from the other local drains or watercourses noted above subject to a HOL condition. However, this would need to be supported by a hydrological assessment and prior flow monitoring to confirm the availability of surface water and to determine an appropriate HOL condition which would form part of any licensed abstraction.	

Supply Option Investigated	Summary	Feasibility

Commercial Purchase/Draw Water from Local Mains (Water Utilities Supply)	**Humber North Compound**
	
	Consultation with Yorkshire Water resulted in the offer of the provision of water to the north site through a permanent upgrade to their network, comprising the construction of approximately 2.3km of permanent below ground pipework (within the confines of the highway) from an existing suitable point of connection in the network to the junction of Newlands Lane with the proposed access track to the site.
	
	Yorkshire Water have statutory powers to lay mains in private land under their code of practice, however this does not include private service pipes. Therefore, NEP would need to lay additional supply pipe from the compound to the Point of Connection (POC) at the Highway Boundary along Newlands Lane at the junction to the proposed haul road. NEP would need to enter into private agreements with the relevant landowners similar to a wayleave utilised by other statutory undertakers for laying of this additional section of the supply route.
	
	The construction of this route could take between 9 and 12 months to be completed.
	
	Humber South Compound
	
	Consultation with Anglian Water resulted in the offer of the provision of temporary supply for the required water usage for the duration of the construction works at the south site. This would be achieved through the construction of 5.4km of 180mm water pipe from North Killingholme (Ordnance Survey (OS) Grid Reference TA1493718499) to Skitter Road, just south of the field entrance to the south site (OS Grid Reference TA1448022851).
	
	It was noted that the pipework to be laid, whilst temporary, could be left in situ (offline) following completion of the Trial HDD and be
		The draw down of water from local mains through a commercial purchase from the relevant Water Utilities providers was assessed as a feasible but high impact option for both sides owing to the following:
		
		• Extensive construction works in the highway for period of between 9 – 12 months which could lead to disruption of local traffic and prolonged impact on the local community.
		• These works would be undertaken immediately in advance of the Trial HDD works which would elongate the impacts of the Proposed Development and associated construction traffic felt by the local communities.
		• The construction works would have environmental impacts which may include, but are not limited to:
		  ○ Disturbance to local wildlife and habitats
		  ○ Localised generation of dust
		  ○ Increased noise and vibration
		  ○ Consumption of raw materials and creation of waste.

Supply Option Investigated	Summary	Feasibility
	brought back online for the wider HCCP DCO scheme later, up to 2-5 years. The period of construction for the temporary pipe route would be approximately 11 months.	
HDD Contractor Supplies own water via Road tanker (purchase supply from haulage retailer)	**Humber North Compound and Humber South Compound** Consultation was carried out with a water haulage retailer to determine the sources of water available and estimate the traffic movements associated with the road road tankering of water from a suitable local source to the Humber North Compound and Humber South Compound. It is estimated that either four 30T road tankers or six 18T road tankers would need to undertake six return trips per day between the source water location and each site to deliver the required volumes of water for the HDD works. The water would be sourced from Anglian Water through the water haulage retailer. The road tankers will utilise the same traffic routes as other HGVs, which have been chosen in consultation with the Local Highways Authorities to minimise disruption and disturbance to the local communities.	The supply of water via road road tankering through the purchase of water from a water haulage retailer was considered feasible, however there are impacts associated with this option: • Increased traffic through local communities, potentially causing delays and disruption. • Potential for increased road traffic noise. Mitigation will be put in place to reduce these impacts, including: • Agreement with the Local Highways Authorities on appropriate traffic routes for the road tankers. • The size of the road tankers used will be optimised to reduce the number of road tanker movements required. The compounds and access tracks will be designed to accommodate larger road tankers.
Abstraction of Water from the River Humber	**Humber North Compound and Humber South Compound** Preapplication engagement with the EA noted verbally that the abstraction of surface water from the River Humber would likely be permissible owing to the volume of available water in this estuarine system, however there is no formal note of this in the written feedback received. This option would comprise abstracting estuary water, pumping the water to the compound and passing the water through a temporary desalinisation plant and into the retention pond. This would require a moored abstraction barge or pontoon with a pipe extracting water and transferring it onshore to the desalinisation plant. A temporary	The abstraction of water from the River Humber (estuary) was assessed as low feasibility owing to the following: • The River Humber is a designated Site of Special Scientific Interest (SSSI), Special Area of Conservation (SAC), Special Protection Area (SPA) and Ramsar site. A moored barge or pontoon, and associated pipes and equipment, has the potential to damage or disturb the marine species and protected habitats due to the placement of the equipment. • Large tidal range of the River Humber means that mooring a barge or pontoon would be challenging during low tide reducing the reliability of the supply.

Supply Option Investigated	Summary	Feasibility
	mooring on each side of the River Humber close to the compounds would need to be created and would remain in place for the duration of the HDD drilling. Due to the distance between the mooring and the compounds, an intermediary storage tank may also be required between the mooring and the desalination plant. A smaller support boat would be required to assist with the abstraction process. In order for water abstracted from the River Humber to be suitable for use in drilling at both compounds, desalinisation would have to be undertaken to reduce the salinity content to acceptable levels that it would not interfere or compromise the drilling operations. This would require a desalinisation plant set up at both compounds. Brine effluent resulting from the desalinisation process would be returned to the River Humber. A separate discharge hose would be needed to pump the extracted brine effluent back into the River Humber. Consultation with ABP HES noted the technically challenging nature of mooring within the River Humber owing to the short duration of the high-water period (approximately 2 hours) and that there is no existing mooring locations close to the either the Humber North Compound or Humber South Compound. Navigation safety issues associated with this option were also discussed.	• The barge or pontoon and the support boat would need to be manned throughout the abstraction process introducing health and safety risks for personnel onboard. • Movement and mooring of barges or pontoons within the River Humber introducing navigational safety risks due to proximity to a busy shipping channel. • The requirement for desalination would require a desalination plant within each compound, thereby introducing additional infrastructure into a floodplain, and an additional visual feature to the landscape.
Supply via barge or road tanker vessel	Clean water would be transported from a suitable port via barge or alternative vessel along the River Humber. The barge would be moored within the River Humber, outside of the shipping channel, and would pump water to the retention ponds within each compound via a hose system. It is expected that the process of pumping water would take between 2 and 4 hours and a smaller support boat would be required to assist with the mooring and management of the hose. The barge would then unmoor, return to port and repeat as required. The frequency of the barge deliveries would be dependent on the quantity of water transported.	The assessment determined that it was not feasible to supply water to the sites via barge owing to the following: • The River Humber is a designated SSSI, SAC, SPA and Ramsar site. A moored barge or alternative vessel, and associated pipe / hose and equipment, has the potential to damage or disturb the marine species and habitats due to the placement of the equipment. • Large tidal range of the River Humber means that mooring a barge would be challenging during low tide reducing the reliability of the supply

Supply Option Investigated	Summary	Feasibility
	Consultation with ABP HES noted the technically challenging nature of mooring within the River Humber owing to the short duration of the high-water period (approximately 2 hours) and that there is no existing mooring locations close to the either the Humber North Compound or Humber South Compound. Navigation safety issues associated with this option were also discussed. **Humber North Compound** Owing to the profile of the River Humber, the closest location to the Humber North Compound with water deep enough to moor, that is outside of the shipping channel, would be upriver beyond Paull Holme Strays and Paull Lighthouse. This would require a pipe / hose of approximately 2km.	• The barge or alternative vessel and the support boat would need to be manned throughout the supply process introducing health and safety risks for personnel onboard • Movement and mooring of barges within the River Humber introducing navigational safety risks due to proximity to a busy shipping channel • The supply is less reliable than other options since inclement weather or other factors outside of the Contractor's control could lead to a postponed supply of water
Trade on an existing Licence	Investigations were undertaken to identify it there was the potential to trade water under existing abstraction licenses operating in the area in order to source water for both the Humber North Compound and Humber South Compound. It was considered that should this option be feasible that it would prevent any additional pressures on the water resources in the region, which in particular for south of the River Humber was a concern given that water availability for surface water and groundwater abstraction is already limited in accordance with the Grimsby-Ancholme-and-Louth-abstraction-management-strategy (CAMs). A 1 km study area was applied to this search for existing abstractions based on the deduction that any distance in excess of this would be too significant to construct a temporary pipe to transfer water from the source to the compounds or the environmental impacts of such would far outweigh the benefits of the application of trading water over road road tankering water.	The assessment determined that it was not feasible to trade water from existing abstraction licenses up to 1km from both the Humber North Compound and Humber South Compound. As a result, no further consideration has been made to the impacts from road road tankering or construction of pipe to transport the water from the location of existing licensed abstractions.

Supply Option Investigated	Summary	Feasibility
	Humber North Compound No suitable existing abstraction licenses were identified up to 1km from the north site. **Humber South Compound** Two potential abstraction licences were identified, one at the 'Drain at Halton Marshes' (Licence AN/029/0009/014) and one at 'Highfield Farm Borehole' (Licence AN/029/0009/039). The drain at Halton Marshes licence was discussed with its owner ABP, and they were not willing to trade on the licence as the water is abstracted to maintain ecological mitigation (marsh / wetland) associated with their own undertakings. The Highfield Farm borehole had a very low volume of water permitted for abstraction under its license and this therefore did not offer a viable single solution for the sourcing of water to meet the demands for the Humber South Compound HDD.	

1.5 Adopted Water Supply Strategy

1.5.1 Assessment of the various water supply options has determined that the HDD Contractor supplying their own water via road tanker (purchasing the supply from a haulage retailer) is the most feasible and least impactful option for the Trial HDD from both sides of the River Humber.

1.5.2 Whilst this option will result in additional Heavy Goods Vehicles (HGVs) associated with the Proposed Development on the local road network, the required supply is temporary and for a short duration. The disturbance to nearby residents and local communities would be for a shorter duration than the timescale that would be needed for the construction of temporary or permanent pipework to connect the compounds with an alternative water source. The road tankers will utilise the same traffic routes as other HGVs, which have been chosen in consultation with the Local Highway Authorities to minimise disruption and disturbance to the local communities.

1.5.3 Deliveries of water via road tanker will, as much as possible, be limited to standard daytime working hours to reduce the impacts on local communities.

1.5.4 Transporting the water via road tanker removes the need for additional pipes, equipment and infrastructure that would be required for abstraction. This removes the disturbance to ecological habitats and species from the placement of equipment in and around watercourses. The risk of saline intrusion within the aquifers from groundwater abstraction is also removed. Navigational safety issues from operating within the River Humber are avoided.

1.5.5 Purchasing the water from a retailer means that the water supply is suitable to use for the HDD without desalination or other treatment. Therefore, less equipment is required by not needing a desalination plant, reducing infrastructure within floodplains and the visual impact of the compounds, as well as reducing the construction traffic associated with the set up and removal of the equipment.

1.6 Conclusion

1.6.1 A supply of clean water is required to operate the HDD, amounting to a maximum of 600m^3 of water required for each day of drilling. Water will be supplied via road tanker for the Trial HDD on both sides of the River Humber. The size of the road tankers used will be optimised to reduce the number of road tanker movements required.

1.6.2 A comprehensive assessment of the traffic and transport impacts of the Proposed Development, including from road tankers, has been undertaken within the Transport Appraisals (30181090 -ARC-XX-XX-RP-TP-0003-1-Transport Appraisal - East Riding of Yorkshire) and (30181090 -ARC-XX-XX-RP-TP-0004-1-Transport Appraisal - North Lincolnshire). Outline Construction Traffic Management Plans (CTMP) have also been produced which set out how the Proposed Development will manage construction traffic and implement measures to minimise impacts (30181090 -ARC-XX-XX-RP-TP-0001-1-Outline Construction Traffic Management Plan - East Riding of Yorkshire) and (30181090 -ARC-XX-XX-RP-TP-0002-1-Outline Construction Traffic Management Plan - North Lincolnshire).

1.6.3 It should be noted that for the main HCCP project, a separate Water Supply Strategy will be developed, and the decision making around water supply for the Trial HDD does not influence the findings of the wider HCCP water supply strategy.

Appendix B

Information on the Horizontal Directional Drill

The drill entry point is in the compound that is the subject of this planning application. The information below provides information on the full drilling approach which extends beyond the boundary of the compound and is subject to a separate planning application in the North Lincolnshire area. The

During pilot hole drilling, the HDD rig pushes a Bottom Hole Assembly (BHA) at the front of the drill string from the entry point along a predetermined HDD bore alignment. Drill pipe is added to the drill string at the HDD rig as drilling progresses. The BHA is expected to principally consist of the drill bit at the front of the assembly, a mud motor, and downhole survey equipment behind the drill bit. Steering of the drill bit is controlled from the HDD rig by pushing and rotating the drill pipe. The position of the BHA downhole is monitored at all times during drilling and the trajectory adjusted as required to remain within the planned alignment. Trial HDD pilot hole drilling will continue until the drill bit has reached the planned target point.

Excavation of the pilot hole is performed using a combination of the cutting action of the drill bit, and drilling fluid pumped at high pressure through the drill string to the drill bit. Drilling fluid is typically a mixture of fresh water and bentonite clay (a commonly used inert material) in powder form. Mixing of drilling fluid would take place on the surface within the compound, utilising water from the proposed retention pond. The drilling fluid is pumped into the drill string using a high-pressure drilling fluid pump. Drilling fluid returns to the surface through the excavated HDD bore where it is pumped from the drill entry pit through spoil separation and drill fluid recycling equipment.

In some instances, the conditions encountered on site could result in a failed drill. If this occurs, another attempt would be made either. Any subsequent attempts would be undertaken within the submitted red line boundary of the planning permission.

If further attempts are made, this may require additional metal casing to be installed.

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Humber Carbon Capture Pipeline