

01. Introduction

What is the V Net Zero Pipeline?

Welcome

- The V Net Zero pipeline is a 53km pipeline that will transport captured carbon dioxide from Immingham to the former Theddlethorpe Gas Terminal. The V Net Zero pipeline is an essential part of the VNZ CO₂ Transport & Storage project (VNZ), which will put the Humber and Lincolnshire region at the forefront of carbon capture and storage technology in the UK.
- Meeting the UK's target of achieving Net Zero carbon emissions by 2050 will require reduced emissions of carbon dioxide from existing industries within the Humber and Greater Lincolnshire region. This transition to a low-carbon economy must be done in a way that retains and promotes jobs and prosperity in the Humber region.
- Carbon capture, transport and storage offers a way to maintain these vital energy-intensive industries for decades. The technology allows us to keep jobs in the region and provides the low-carbon infrastructure needed to promote the development of new industries and investment in Lincolnshire and the Humber.
- The V Net Zero pipeline will transport captured carbon dioxide from the Immingham industrial site, to the site of the former Theddlethorpe Gas Terminal (TGT), 53km away. From there, the captured carbon emissions will be transferred along an existing subsea pipeline, before being injected into two existing depleted gas reservoirs, 9,000 feet deep and 120km off the coast in the North Sea. This process is called 'carbon capture and storage', and is one of several important ways for the UK to achieve its target of achieving Net Zero carbon emissions by 2050.

Who are we?

- Harbour Energy was founded in 2017. Chrysaor Holdings Limited merged with Premier Oil plc to create Harbour Energy plc in 2021. Our aim is to create value in a responsible manner for all stakeholders, in accordance with global standards, and we're aiming to be Net Zero by 2035.
- We have an extensive record of safety management in the oil and gas industry, including in the development and operation of over 38 gas fields and the former Theddlethorpe Gas Terminal in Lincolnshire.
- Harbour Energy is working with industry and government to develop carbon capture, transportation and storage in the UK, as the sole developer of the VNZ CO₂ Transport & Storage Project.
- Working with key partners at the Immingham Industrial Cluster, the V Net Zero CO₂ Transport & Storage project can help decarbonise the existing energy-intensive industries in the Humber, preserving existing high-skilled jobs and promoting new investment to the region through access to low-carbon transportation infrastructure.

Project description

- The V Net Zero pipeline will be part of a process known as 'carbon capture and storage', commonly shortened to CCS. CCS is recognised as one of several key methods to achieve the government's targets of reaching Net Zero carbon emissions by 2050.
- Once fully operational, the V Net Zero pipeline will transport 11 million tonnes of carbon a year. That's equivalent to removing almost 20 per cent of the emissions from the UK's cars each year.

Harbour Energy's plan

- The V Net Zero CO₂ Transport & Storage project is in the development phase. We are consulting on the proposed route corridor of the new pipeline. Construction of the project is planned to start in 2025 and carbon storage will begin in 2027.



Have your say

Harbour Energy has been working on developing the best possible route for the pipeline for over a year.

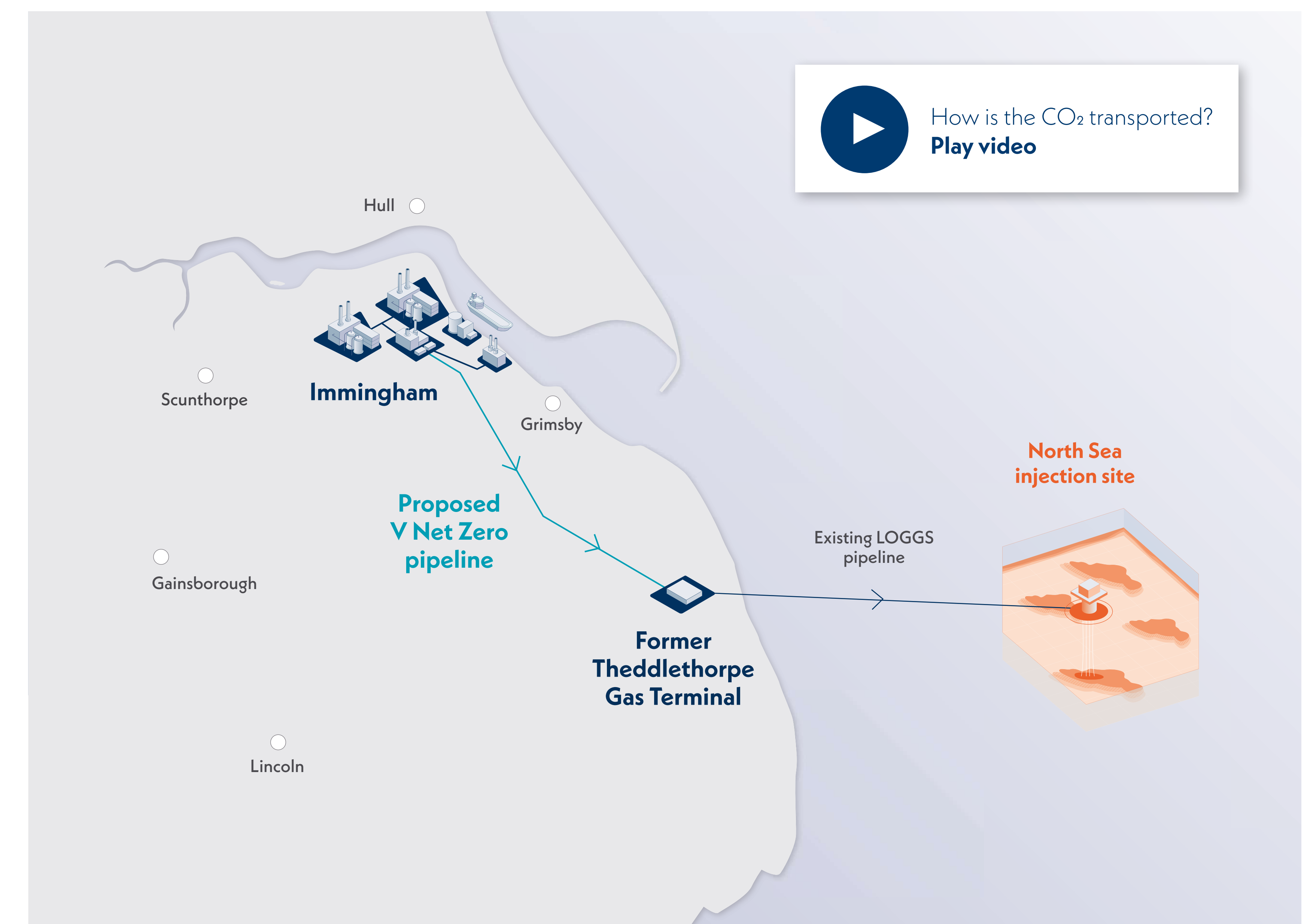
We have considered many factors when deciding on a corridor we will construct the pipeline within. This includes communities, homes and services, the presence of protected habitats and species, Areas of Outstanding Natural Beauty and built-up areas – among many other factors.

Your feedback will help us to develop a more clearly defined, narrower route where we expect the pipeline to run. We'll then come back to local communities to consult further later this year.

This public consultation on our proposals for the V Net Zero pipeline will be open for 6 weeks, between Tuesday 26 April and Tuesday 7 June 2022.

We would welcome your feedback through the online survey available in our Virtual Consultation Room.

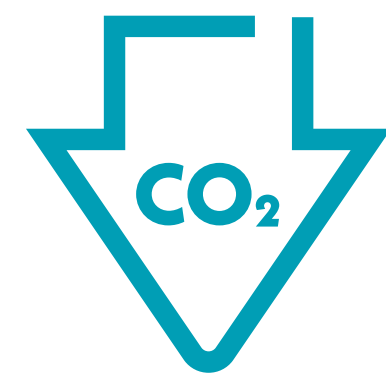
If you would like further information about our proposals for the V Net Zero pipeline, visit our website at www.vnetzeropipeline.co.uk



An overview of the planned VNZ CO₂ Transport & Storage project, including the proposed 53km route of the V Net Zero pipeline, between Immingham and Theddlethorpe.



02. Working towards a low-carbon future



What is Net Zero?

- **Net Zero** means that the amount of carbon dioxide we emit into the atmosphere is no greater than the amount of carbon dioxide we take away from the atmosphere.
- It means we're controlling the levels of carbon dioxide we emit, while finding cleaner, more-efficient sources of energy and decarbonising existing industry and infrastructure.
- This is where carbon capture and storage technology is set to play a crucial role. The Intergovernmental Panel for Climate Change (the IPCC) forecasts that removal of carbon dioxide from the atmosphere is needed in all scenarios that limit global warming to 1.5 degrees.

What is carbon capture and storage?

Carbon capture and storage is the process by which carbon dioxide can be prevented from reaching the atmosphere, and is then transported to underground storage that locks emissions safely in bedrock under the sea. In the UK, all prospective carbon dioxide storage sites are located offshore, with a large storage potential under the North Sea.

As countries around the world work to cut their carbon emissions, the capture and storage of carbon is set to play a crucial role. By capturing, transporting and injecting carbon emissions into depleted gas reservoirs, we can help the transition to cleaner sources of energy while decarbonising existing industry and infrastructure.

The UK Government has set out plans as part of the 6th Carbon Budget to capture and store between 20 and 30 million tonnes of carbon dioxide a year by 2030.

How will carbon capture be facilitated through the V Net Zero pipeline?

After being captured at the Immingham Industrial Cluster, transported along the 53km V Net Zero pipeline, and then offshore via the existing LOGGS pipeline, the carbon dioxide will be stored in the Viking Area depleted gas reservoirs under the North Sea, which are 9,000 feet below the seabed.

The Viking Area is uniquely suited to long-term carbon storage because of the knowledge acquired during previous gas developments. These reservoirs held natural gas over millions of years due to the proven presence of an extensive 'SuperSeal' that prevents gas from escaping.

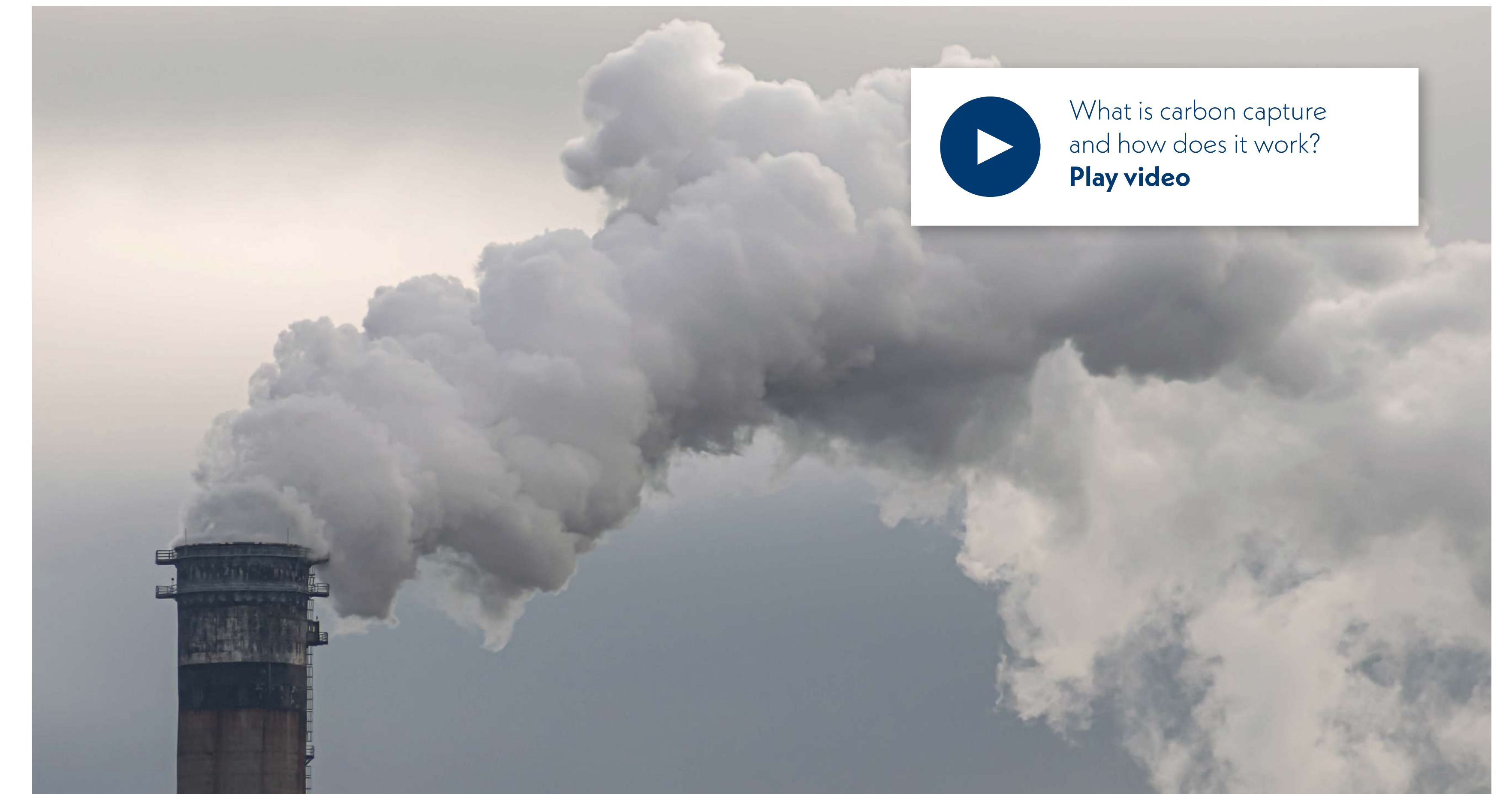
Harbour Energy initially developed the Viking Area gas fields in the 1970s to fuel the UK's energy transition from coal to gas. With the gas fields now decommissioned, there is an opportunity to refill these depleted reservoirs with carbon, safely preventing this carbon dioxide from being released to the atmosphere.

Harbour Energy was awarded a UK carbon storage licence from the UK's regulatory body in 2021, after a comprehensive technical assessment.

How will the V Net Zero pipeline open the door to a low-carbon future?

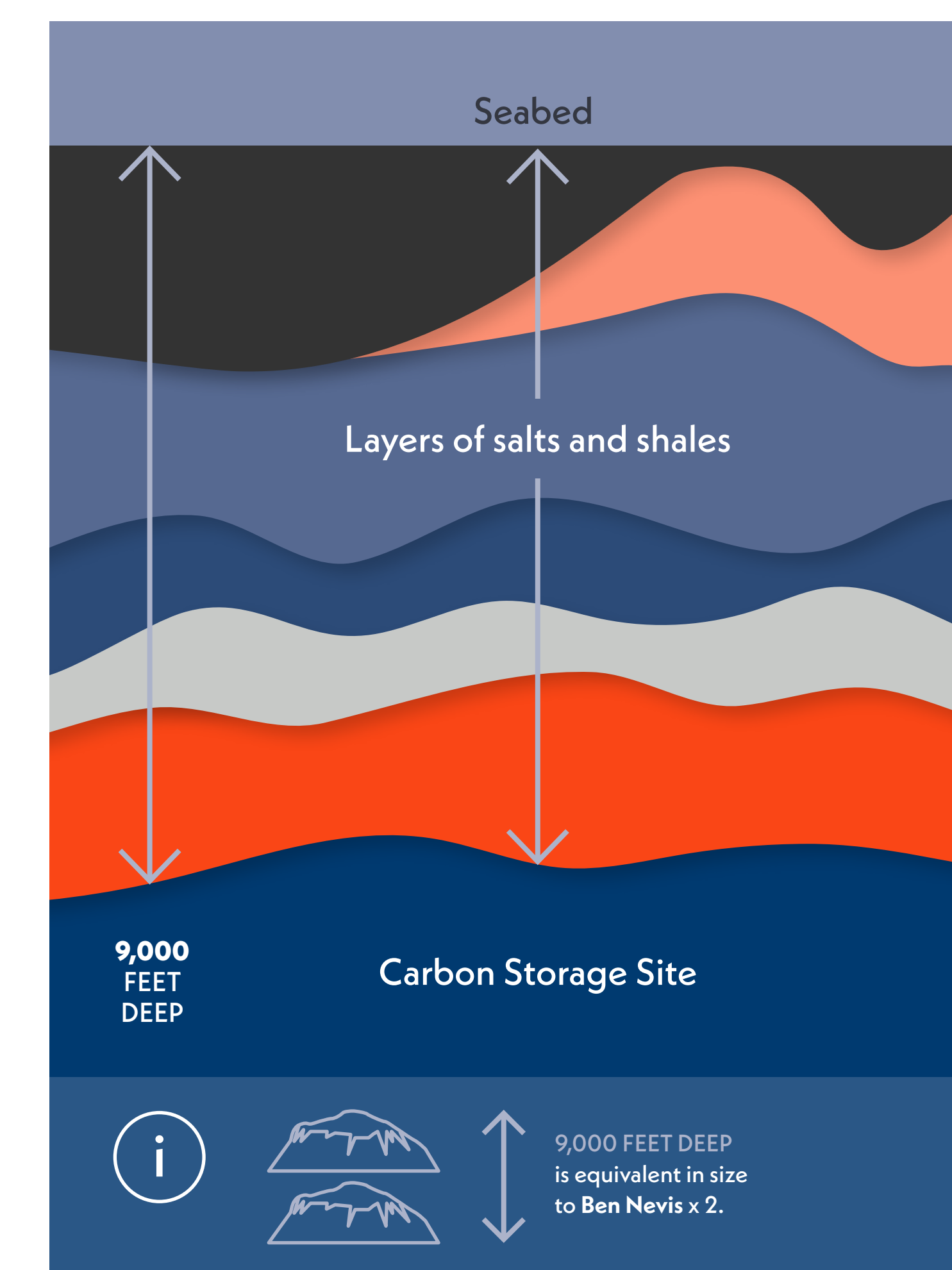
Over 70 per cent of the existing Humber industrial emissions are located on the Lincolnshire side of the Humber estuary. Decarbonising these industries is needed not only to meet the UK's Net Zero goals, but also to preserve highly skilled jobs in the region.

In addition to preserving existing jobs in energy-intensive industries, the V Net Zero pipeline will encourage future low-carbon investment to the Lincolnshire and Humber region.

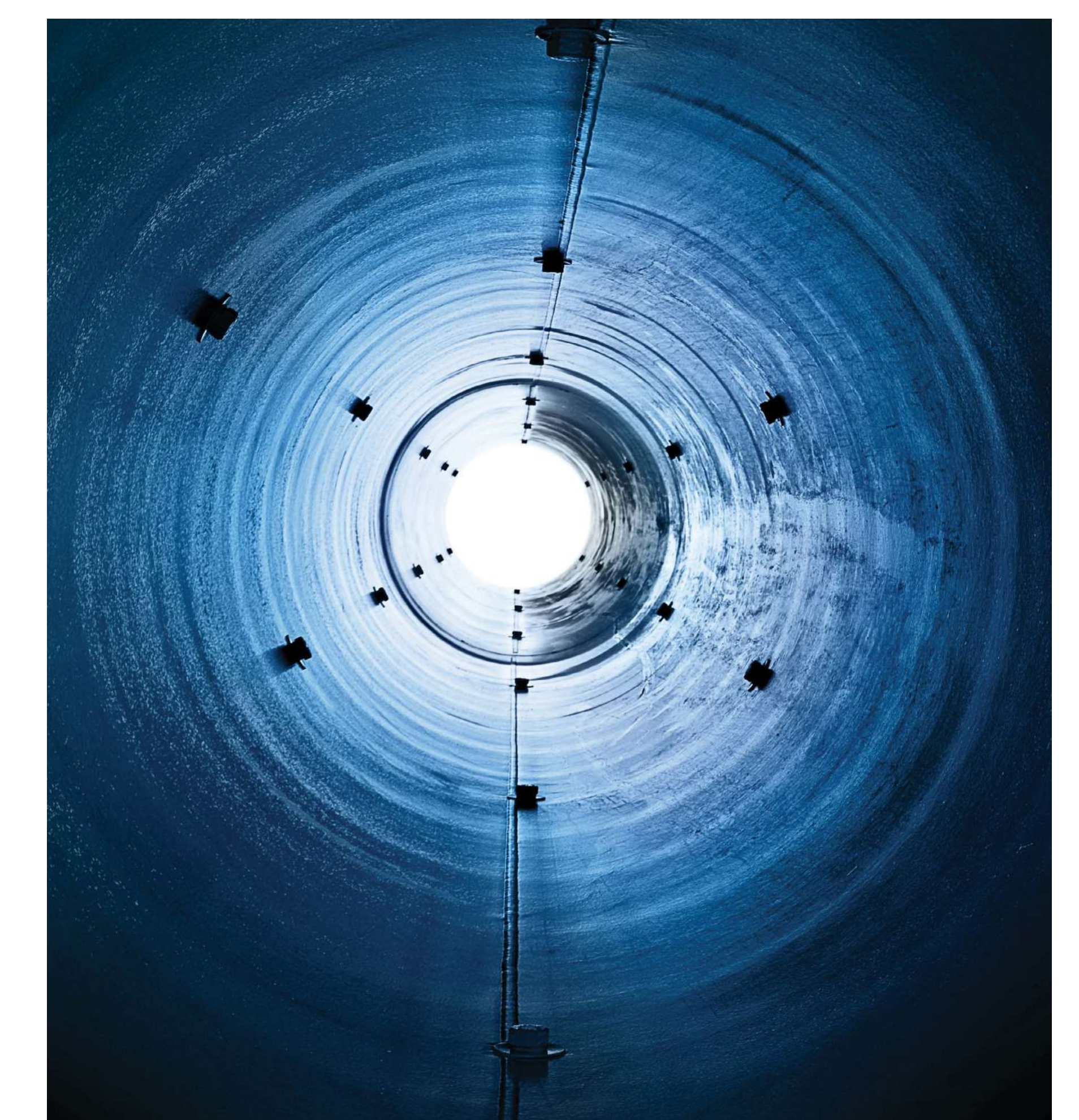


What is carbon capture and how does it work?
[Play video](#)

Countries around the world are working to cut carbon emissions.



Carbon dioxide will be injected 9,000 feet beneath the sea bed, 120km off the Lincolnshire coast under the North Sea.



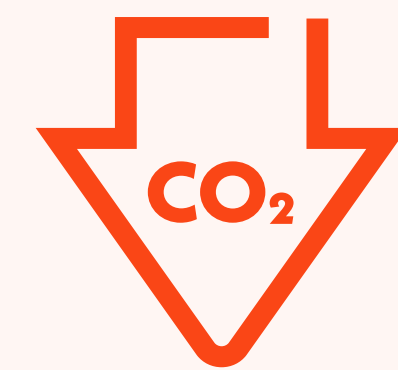
The proposed pipeline will be buried underground and will transport carbon between Immingham and Theddlethorpe.

03. Benefits of the scheme



Opportunities for the Humber

The project will provide high-quality jobs and skills training, while promoting low-carbon, technology-led investment in the region for the long term.



Tackling climate change

By 2030, the V Net Zero project and our partners in the Immingham Industrial Cluster plan to capture, transport and store 11 million tonnes of carbon dioxide a year. This would be equivalent to removing almost 20 per cent of the emissions from the UK's cars each year.



Safeguarding industry

This investment will remove carbon emissions from existing industry in the Humber region and enable a longer-term sustainable energy transition; thus, safeguarding existing jobs.



Boosting biodiversity

We're proposing to achieve a 10 per cent net increase in local biodiversity as part of the project.



 How carbon capture and storage help protect the economy?
[Play video](#)

The project will bring opportunities to the Humber, safeguarding existing jobs and putting the region at the forefront of carbon capture technology in the UK.

04. The environmental context

What is an Environmental Impact Assessment?

Throughout this year, Harbour Energy will be developing an Environmental Impact Assessment (EIA). The objective of this is to provide information to decision-makers about the potential impacts of the project on the environment. These matters can then be taken into consideration by the relevant authority, which in the case of the V Net Zero pipeline is the Secretary of State for Business, Energy & Industrial Strategy.

There will be several stages to the EIA which are outlined below:

- Scoping
- Environmental surveys and data collection
- Preliminary Environmental Information Report
- Environmental Statement
- Submission and consultation

Scoping process

Scoping forms a key stage of the EIA process; providing a way to identify any likely significant environmental effects arising from the project. It identifies the issues likely to be of most importance in the assessment (for example ecology and biodiversity, archaeology, and construction noise and vibration). This work is then written up in a Scoping Report.

This report, along with a request for a Scoping Opinion, is submitted to the Planning Inspectorate, who must adopt a Scoping Opinion within 42 days. The Planning Inspectorate must consult the relevant consultation bodies and local authorities, who have 28 days to respond to the consultation. The Planning Inspectorate can then consider these responses before issuing their Scoping Opinion.

Managing impact



Review of project lifecycle

Managing impacts on the environment begins at the pipeline routing phase of the project. We will systematically review environmental impacts throughout the life of the project, and working with local stakeholders, take appropriate steps to manage any environmental impacts.



Construction Environment Management Plan

The steps we're taking to manage the environmental impacts will be presented in a Construction Environment Management Plan (CEMP). The CEMP will be secured through a 'Requirement' in the Development Consent Order (DCO). A DCO is a piece of legislation, meaning there will be a legal requirement to ensure we take the steps we say we will take to manage the environmental impact.



Adhering to regulatory requirements

As well as developing an Environmental Impact Assessment at the outset of our work, the V Net Zero pipeline project will adhere to all statutory environmental regulations, align with conservation objectives, strategic policies and management plans, and adopt rigorous environmental standards in accordance with our own policy commitments.



Our Construction Environment Management Plan will outline the steps we are taking during construction to manage environmental impact along the route of the pipeline.

05. Planning and route development

What is a Development Consent Order and why is it needed?

To build a Nationally Significant Infrastructure Project (NSIP) a Development Consent Order (DCO) is needed. To gain a DCO, a planning application is made under the Planning Act 2008. NSIPs are infrastructure developments of national importance in England and Wales. These include projects such as major roads, power plants, large renewable energy projects and airport extensions. A DCO application is made to the Planning Inspectorate. They will consider the application and make a recommendation to the Secretary of State for Business, Energy & Industrial Strategy (BEIS), who will ultimately decide whether development consent should be granted for the scheme.

What is the planning process for granting approval for the pipeline?

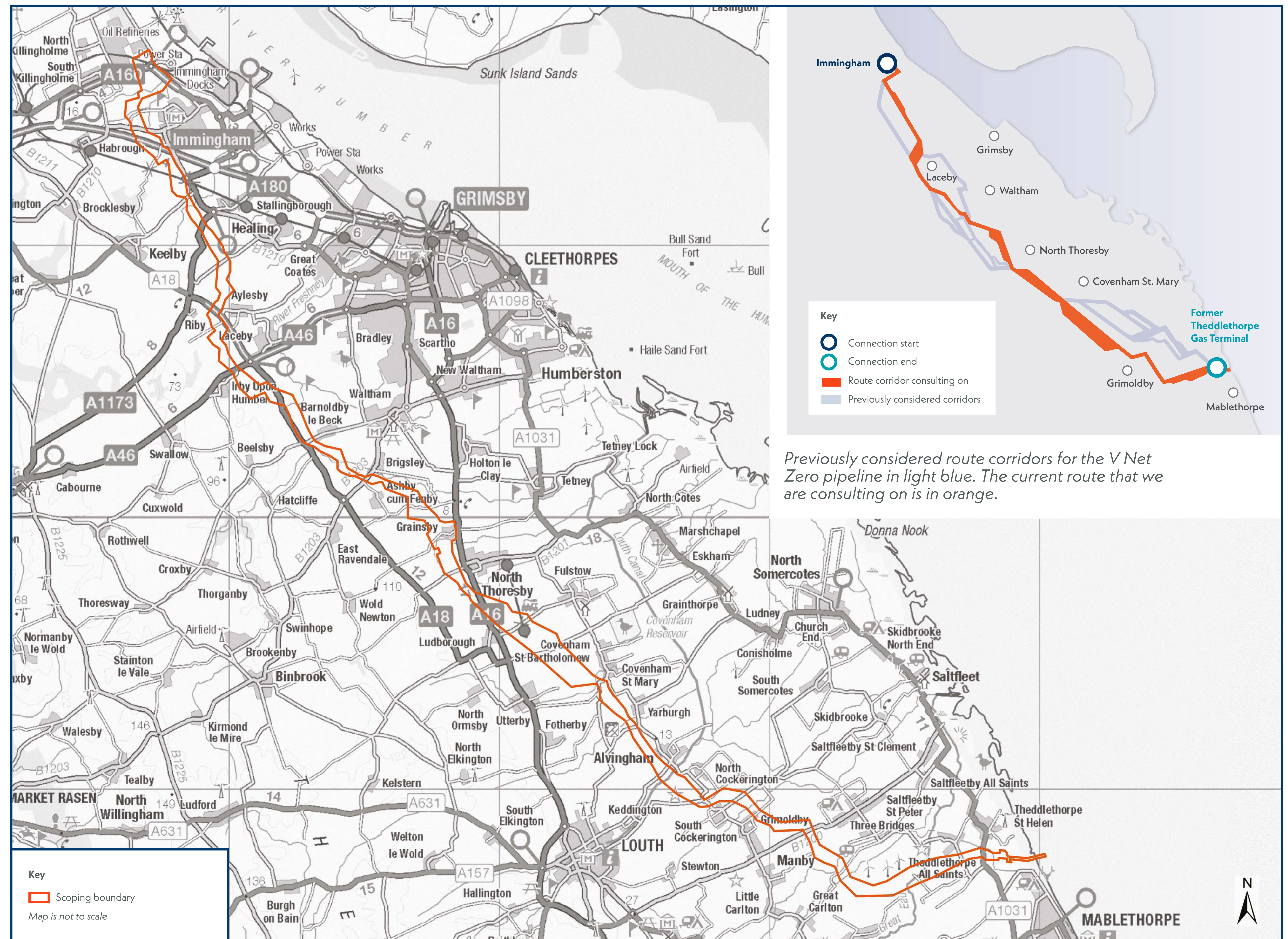
A DCO application must be made to approve the project and construct the V Net Zero Pipeline. There are six stages to a DCO application; more details are outlined below.

- Pre-application
- Acceptance
- Pre-examination
- Examination
- Recommendation and decision
- Post-decision

What are we asking local people about?

The 'corridor' we are seeking your views on refers to the widest possible area we could lay the pipeline within. We need to revise this corridor to a much narrower route. However, we want to do this after asking the views of the local community. We also need to talk to landowners who might be affected, and carry out wide-ranging surveys. We want this corridor to strike a balance between the competing factors we must consider. We have been working to develop the best possible corridor for the pipeline for over a year. As part of this, we undertook detailed assessments on five possible options. We have considered several important factors in trying to decide on a corridor to construct the pipeline within. These are:

- The safety of local communities
- Built-up areas or sensitive buildings such as schools
- Areas protected for their habitats and species
- The Lincolnshire Wolds Area of Outstanding Natural Beauty (AONB)
- Areas that are vulnerable to flooding
- Historic monuments



Overview of the proposed corridor within which the pipeline route will be selected.

06. Construction

Duration of construction

We expect the construction phase to last up to two years. However, some aspects of construction will be relatively quick. The main activities will include earthworks and moving materials by lorry, cutting the trench and covering it, and landscaping.

We will develop a detailed programme that will aim to limit the amount of time specific locations are affected by construction.

We will let residents know well in advance the details of the construction works planned, to help minimise disruption and to allow communities to plan for any disruption we cannot avoid.

What does the construction process involve?

Before construction, we will survey the pipeline route and mark it out. The width of the construction corridor will be around 30m.

We will discuss, with landowners and occupiers of land, our requirements for construction compounds, access and monitoring during the construction phase. This will ensure we remain in line with our commitments made in the Construction Environment Management Plan (CEMP).

There will be temporary compounds along the pipeline route to support the construction. These will consist of a main works compound and temporary construction areas at each of the block valve sites. Construction compounds will include welfare facilities, a site office and storage areas for machinery and equipment.

We will also provide temporary tracks to allow machinery to enter and exit the compounds safely.

Construction management

Due to the nature of the construction work needed, some disruption is inevitable.

We will maintain best practice on site and through overall management of the project as per the CEMP. This ensures that all the way through the construction period, we carefully control activities that could cause dust, noise and vibration, and manage any impacts.



The proposed pipeline will be buried underground along the 53km route.



The scheme will safeguard industrial jobs in the region.

07. Next steps

How to get involved

We will gather and analyse all feedback from the public consultation and use it to inform our proposals where possible.

We will produce a post-consultation report to highlight how feedback we receive has helped shape our plans for the V Net Zero pipeline.

Thank you for taking the time to examine our proposals for the V Net Zero pipeline. We look forward to working with local stakeholders as the project continues to take shape in the months ahead.

Have your say

You can provide feedback in the following ways:



Feedback form

www.vnetzeropipeline.co.uk



Email at

vnetzeropipeline@aecom.com



Phone on

07917986094



By mail at

Freepost VNZ PIPELINE CONSULTATION

V Net Zero pipeline project timeline

2022

26 April to 7 June 2022
Non-statutory consultation

Summer/Autumn 2022
Statutory consultation

2023

Spring 2023
DCO application submitted

2024

Summer 2024
Anticipated DCO decision

2025

TBC 2025
Construction period to begin

2027

TBC 2027
Construction period to conclude



08. Route corridor map

