

# 01. What is the Viking CCS pipeline?



## Welcome

Thank you for taking part in our statutory public consultation on the proposed Viking CCS pipeline. This is a new 55km pipeline that will transport captured carbon dioxide (CO<sub>2</sub>) from Immingham to the former Theddlethorpe Gas Terminal.

This consultation is an important step in delivering the project, which will bring benefits to the region's economy and put the Humber and Lincolnshire region at the forefront of carbon capture technology in the UK.

This statutory consultation is open until **23:59 on Tuesday 24 January 2023**. We'd like to hear your views about our proposals, including the preferred route for the pipeline and the key benefits and likely effects. Your feedback will help us to create a project that considers local people and businesses, the environment, and the wider Lincolnshire and Humber region.

## Who we are

Harbour Energy is the largest London-listed independent oil and gas company. Our priority is to run safe and reliable operations, while protecting our people, assets and the environment. Across our operations, we aim to achieve net zero greenhouse gas emissions by 2035.

We have a long history of operating in the Humber and Lincolnshire region, providing safe and environmentally sound operations. In particular, we have more than 40 years of operational experience relating to the Viking field area in the North Sea. We also operated the Theddlethorpe Gas Terminal site over the same time period.



The V Net Zero pipeline has changed its name to the Viking CCS pipeline, to better reflect the strength of our project's carbon capture and storage capabilities. The aims of the project and our approach to developing it have not changed. All of the feedback we've received so far remains valid and has helped us refine our proposals.

## Carbon capture and storage

Carbon capture and storage (CCS) is the capture of CO<sub>2</sub> emissions from industrial sources before the CO<sub>2</sub> can enter the atmosphere, followed by transportation of the CO<sub>2</sub> to deep underground sites where it is stored. In the UK, all prospective CO<sub>2</sub> storage sites are located offshore, with a large storage potential under the North Sea.

The Viking CCS project will take CO<sub>2</sub> that has been captured from industries in the Immingham area, and transfer it to deep offshore storage sites. The CO<sub>2</sub> will travel from Immingham through a new onshore pipeline to the former Theddlethorpe Gas Terminal (TGT).

At TGT, the CO<sub>2</sub> will transfer into our existing offshore pipeline to be transported 140km off the coast of Lincolnshire. Finally, the CO<sub>2</sub> will be injected into depleted gas reservoirs 9,000 feet below the seabed.

This process will be one of several important ways for the UK to achieve its target of achieving net zero carbon emissions by 2050.



*The Immingham Industrial Cluster from above.*



*Countries around the world are working to cut carbon emissions.*



*The CO<sub>2</sub> will travel from Immingham through a new onshore pipeline to the former Theddlethorpe Gas Terminal.*

# 02. Route map



## The story so far

2021

2021

The project launched and we began to develop options for the route corridor.

2022

April – June 2022

We held our first non-statutory consultation on the proposed route corridor. The 'corridor' was the widest possible area within which we could lay the pipeline.

September – October 2022

Following feedback from our first consultation, and extra work by our project team to find the optimum route corridor, we made some changes to the corridor. We then held a second non-statutory consultation to seek views on the updated route corridor.

November 2022 – January 2023

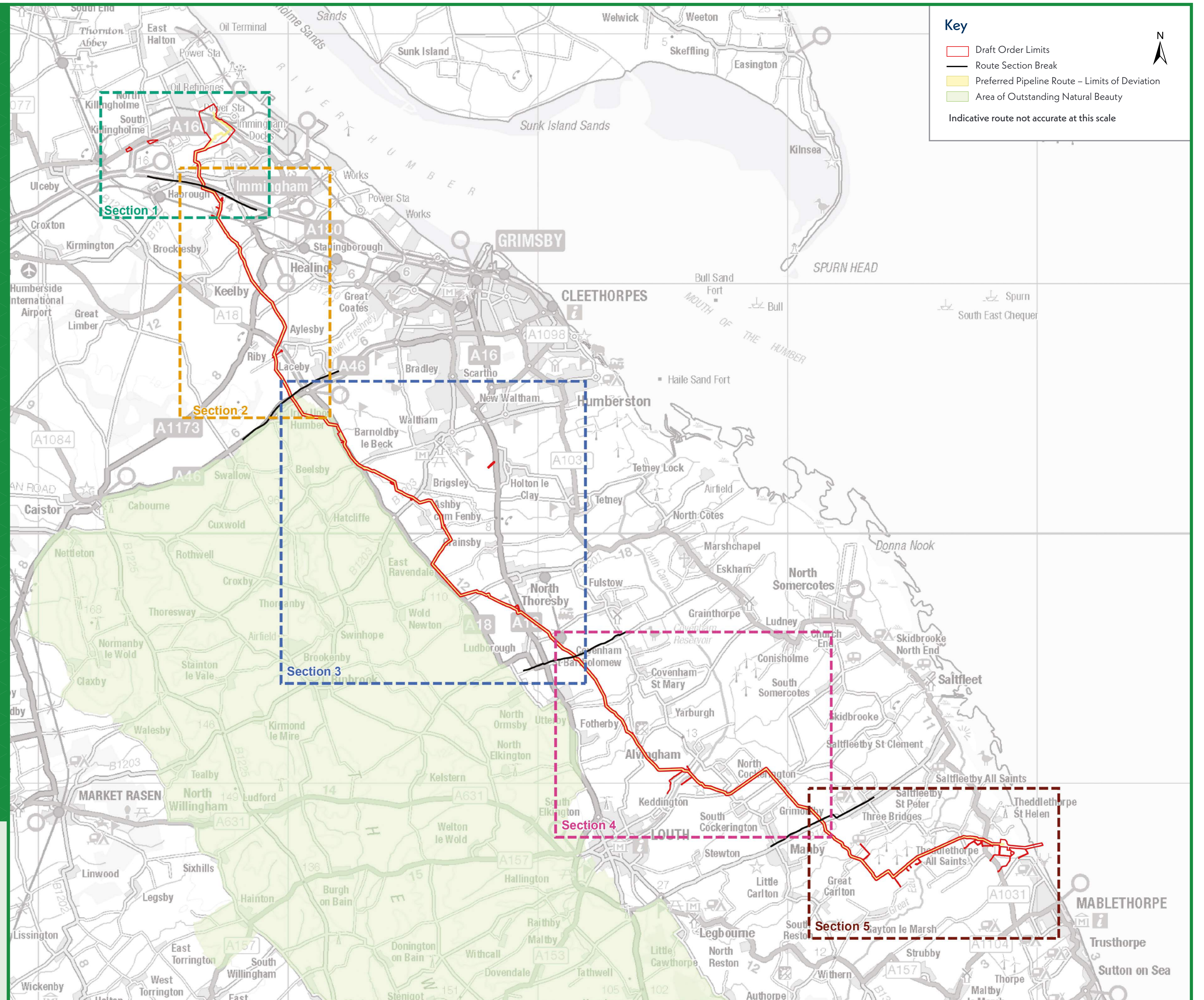
This statutory consultation seeks your views on the preferred route for the pipeline, as well as the potential environmental effects and details about construction and operations.

2022/23



### Find out more

Copies of the maps are available for you to take away at our consultation events. You can also view the maps in closer detail using our interactive mapping tool, which can be found on the iPad at our events and in the virtual consultation room, available via the project website: [consultation.vikingccs.co.uk](https://consultation.vikingccs.co.uk)



# 03. What the project will achieve



## Opportunities for the Humber

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



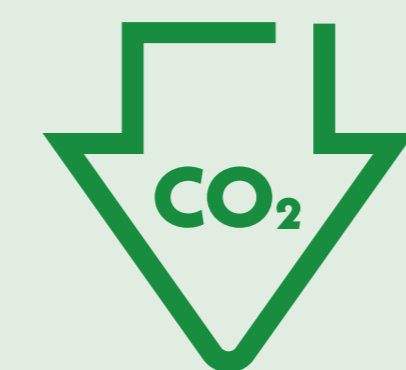
## Safeguarding industry

This investment will remove CO<sub>2</sub> emissions from existing industry in the Humber region, safeguarding existing jobs and enabling a longer-term sustainable energy transition.



## Boosting biodiversity

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



## Tackling climate change

By 2030, the Viking CCS project and our partners plan to capture, transport and store 10 million tonnes of CO<sub>2</sub> a year. This would be equivalent to removing almost 20 per cent of the emissions from the UK's cars each year.



*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 planning process

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

This project is designated as a Nationally Significant Infrastructure Project (NSIP). NSIPs are infrastructure developments of national importance in England. These include projects such as major roads, power plants, large renewable energy projects and major pipelines.

NSIPs require a type of planning consent called a Development Consent Order (DCO). To gain a DCO, a planning application is made under the Planning Act 2008.

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 and Industrial Strategy, who will ultimately decide whether development consent should be granted for the scheme.

## What is the planning process for granting a DCO?

Consulting communities and stakeholders before an application is an important part of the DCO process. This consultation is your opportunity to share your comments on the project, so we can refine our proposals before we submit our application, which we expect to do in 2023.

When we submit our application, the Planning Inspectorate will first decide if it meets the requirements of the Planning Act 2008. If it does, an Examining Authority will consider the application, and any representations. During the examination stage, anyone with an interest in the project can take part and make representations in writing, or verbally at hearings.

The Examining Authority will then report its recommendation to the Secretary of State, who will make a final decision on whether or not to grant a DCO for the project.

## The Development Consent Order (DCO) process

There are six stages to the DCO process as outlined below:

01

**Pre-application**  
We are at this stage

02

**Acceptance**  
Typically 28 days

03

**Pre-examination**  
Typically three months

04

**Examination**  
Typically six months

05

**Recommendation and decision**  
Typically six months

06

**Post-decision**  
Work begins if approval granted



### Find out more

If you would like any further information on the DCO application process, please visit the Planning Inspectorate's website: <https://infrastructure.planninginspectorate.gov.uk/application-process/the-process/>

# 05. How we will construct the pipeline

We currently expect the construction phase to last for approximately one year. We will develop a detailed programme that will aim to limit the amount of time each specific location is affected by construction.

The main activities will include earthworks and moving materials by lorry, cutting the trench, laying and covering the pipeline, covering the trench, and landscaping.

We will develop a Construction Environmental Management Plan (CEMP) to ensure that, throughout the construction period, we carefully control activities that may cause dust, noise and vibration, and manage any potential impacts. The CEMP will include a traffic management plan to help limit disruption to local roads during construction. A draft CEMP is available to read as part of this consultation.

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

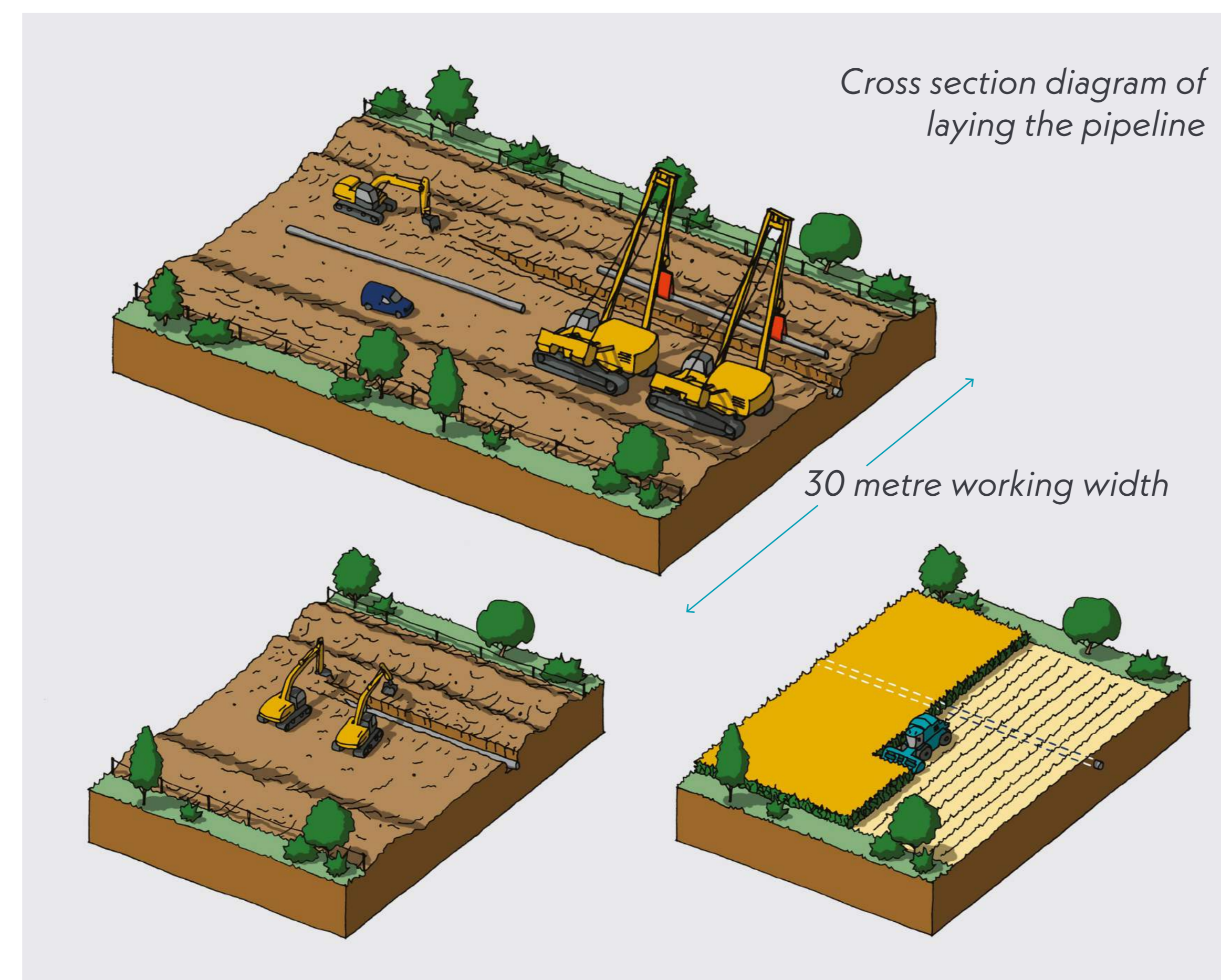


## Find out more

Please see pages 26 – 29 of the consultation brochure for more detailed descriptions of these construction techniques, as well as an overview of the proposed temporary construction compounds and access routes and tracks.

## Open cut trenching

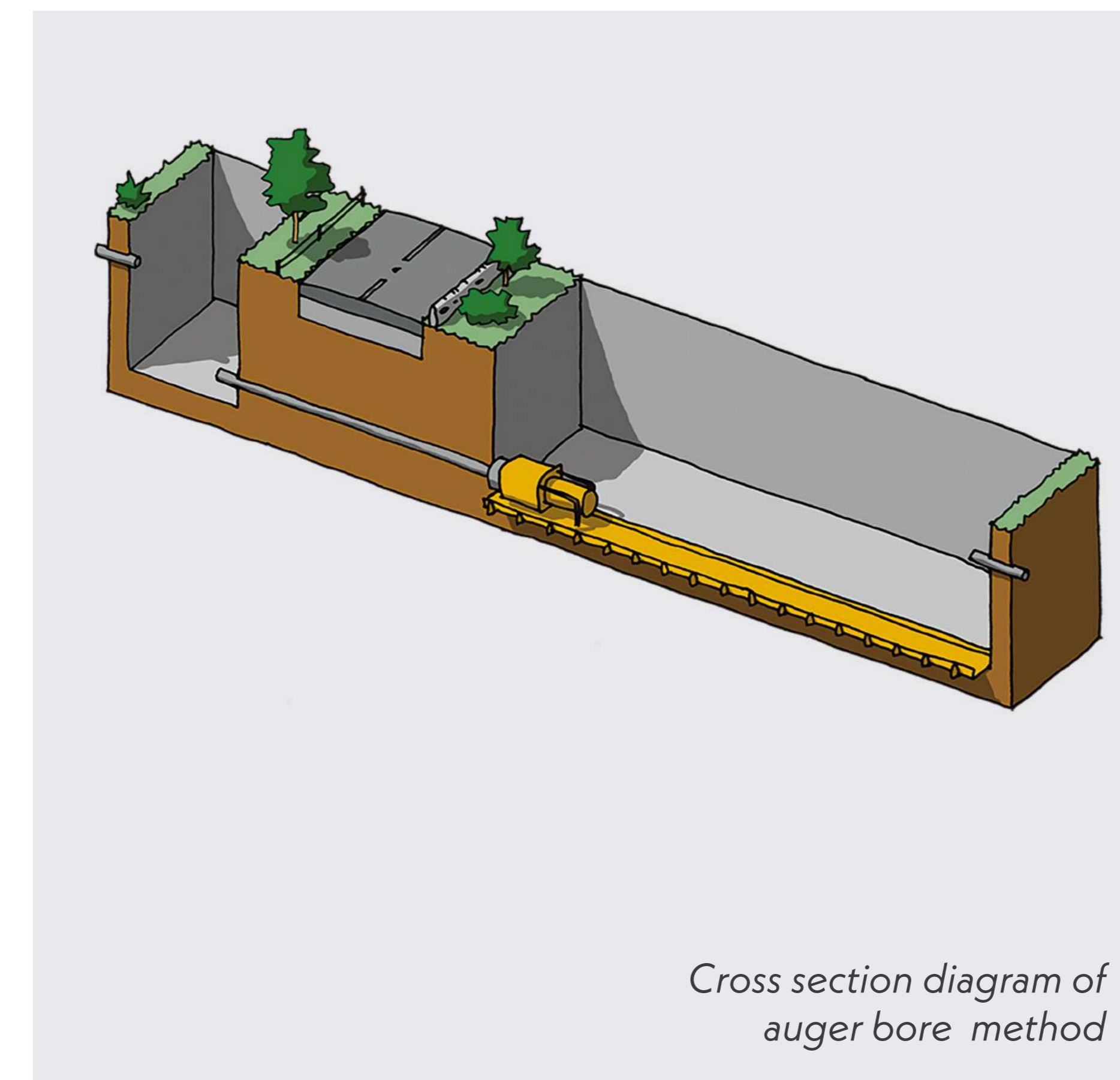
The most common method of constructing the pipeline would be open cut trenching.



- First, we mark out and fence off the 30-metre working width – the total area within which construction work will take place
- We create access routes to the working area from the road network
- Next, we carefully strip back the topsoil and store it next to where we removed it, on the edge of the working width
- The pipeline sections are delivered to the site from pipe storage areas at temporary construction compounds. We place them on supports, and then weld them together into longer sections called 'strings'
- Next, we dig the pipeline trench, storing excavated material separately from the topsoil, on the opposite side of the trench
- We then lower the pipeline 'strings' into the trench using special vehicles called 'side booms'
- We weld the pipeline strings together in the trench
- We then fill the trench with the excavated material and carefully replace the topsoil
- We reinstate the drainage and return the land to its previous use

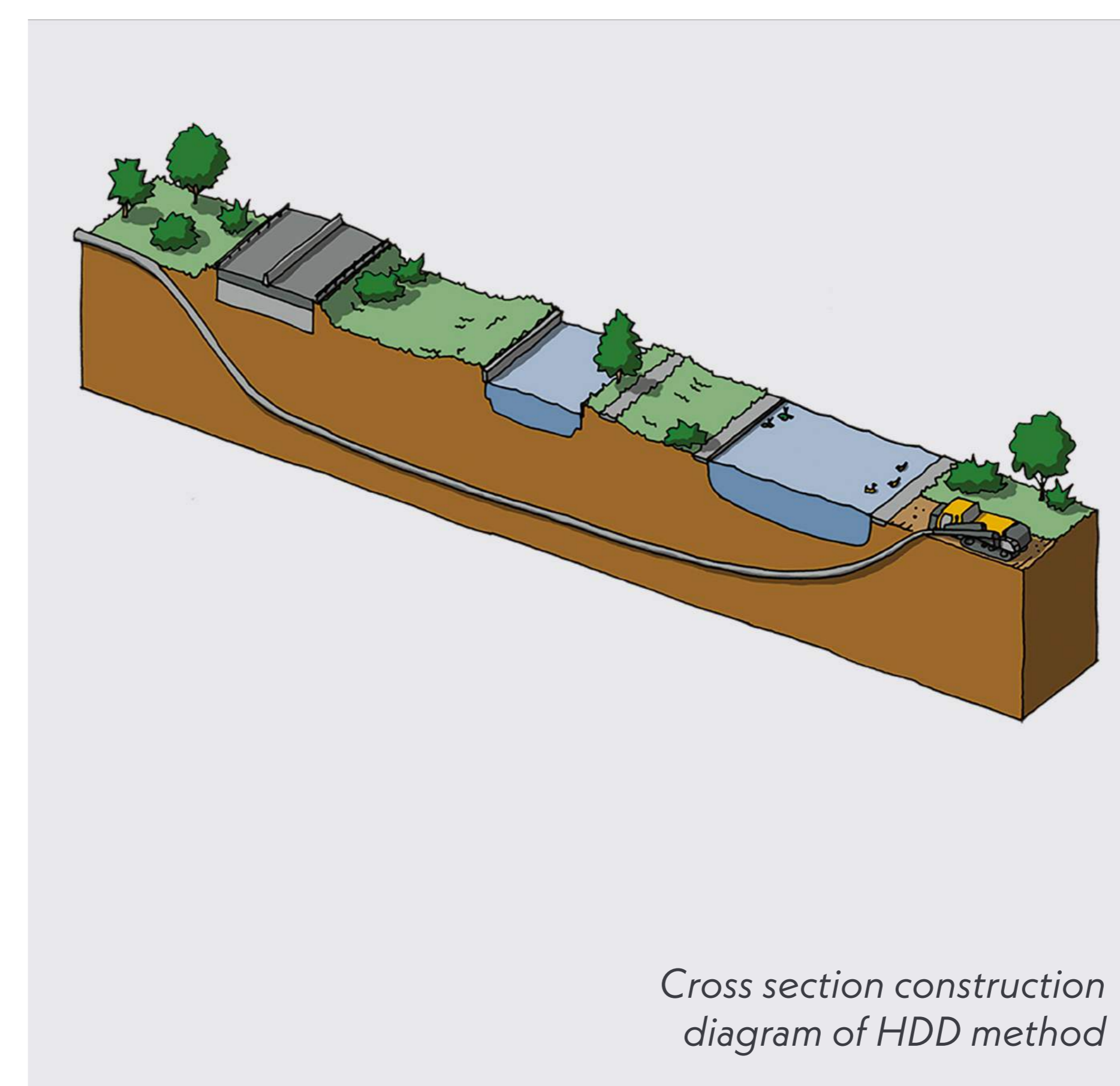
## Trenchless techniques

To help reduce disruption during construction, where we need to cross railways and major roads and waterways, we would plan to use trenchless techniques instead of open cut trenching. There are two ways this can be done:



### Auger bore

- A pit is dug on one side of the crossing and a smaller reception pit is dug on the other side
- A section of pipe is then fitted with an auger, similar to a drill bit or corkscrew
- The auger is then bored through to the other pit, taking the pipe with it
- Sections of pipe are welded together as the pipe is pushed through
- Spoil material is removed from the long pit
- The pits are then backfilled with the excavated material and the land is restored



### Horizontal directional drilling (HDD)

- A steerable drill is used to drill a hole beneath the crossing point
- The hole created is slightly larger than the diameter of the pipe
- A pipe 'string' is welded together on one side of the crossing
- A winch is then used to pull the pipe 'string' through the hole

# 06. Above ground infrastructure

## Pipeline

Once operational, the pipeline will be monitored 24 hours a day, seven days a week. It will also be inspected during regular site visits.

Once the land has been fully reinstated, only minimal facilities will remain visible.



### Pipeline marker posts

These are used to mark the pipeline route at key locations such as road and rail crossings.

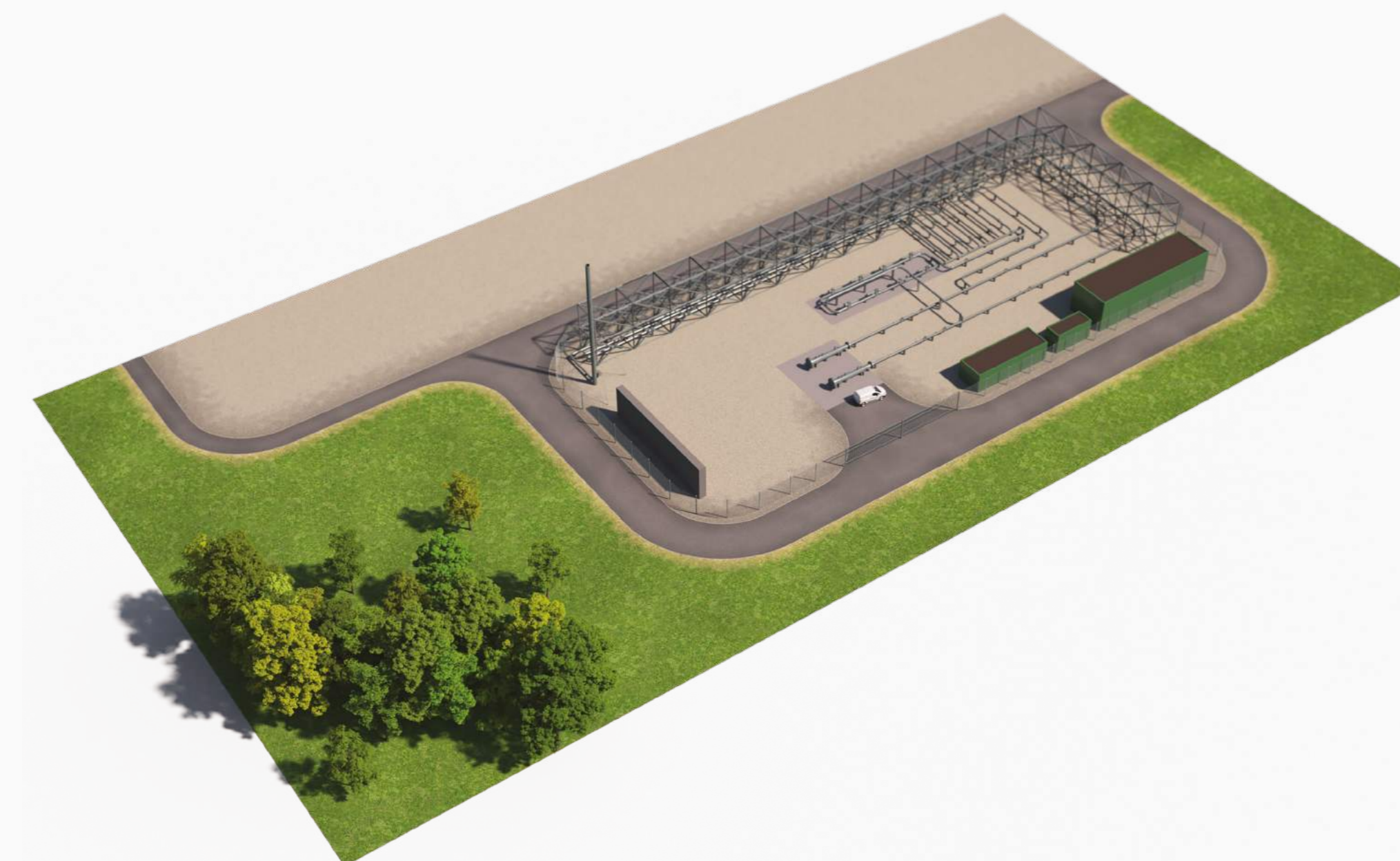


### Construction of above ground facilities

When constructing our above ground facilities, we will temporarily need compounds we can use for construction. These compounds will have direct access from the road, and will include areas for parking vehicles, storing plant and materials, and providing welfare facilities for construction workers.

## Immingham facilities

The CO<sub>2</sub> captured from emitters will pass into an above ground facility. This forms the beginning of the Viking CCS pipeline. The facility would be located on a parcel of land west of Rosper Road in Immingham.



- The site will have above ground pipework and include a vent stack approximately 25 metres high
- The facilities will require an electrical connection
- It will be surrounded by security fencing and have a gated access off Rosper Road and room to park a car or van

## Block valve stations

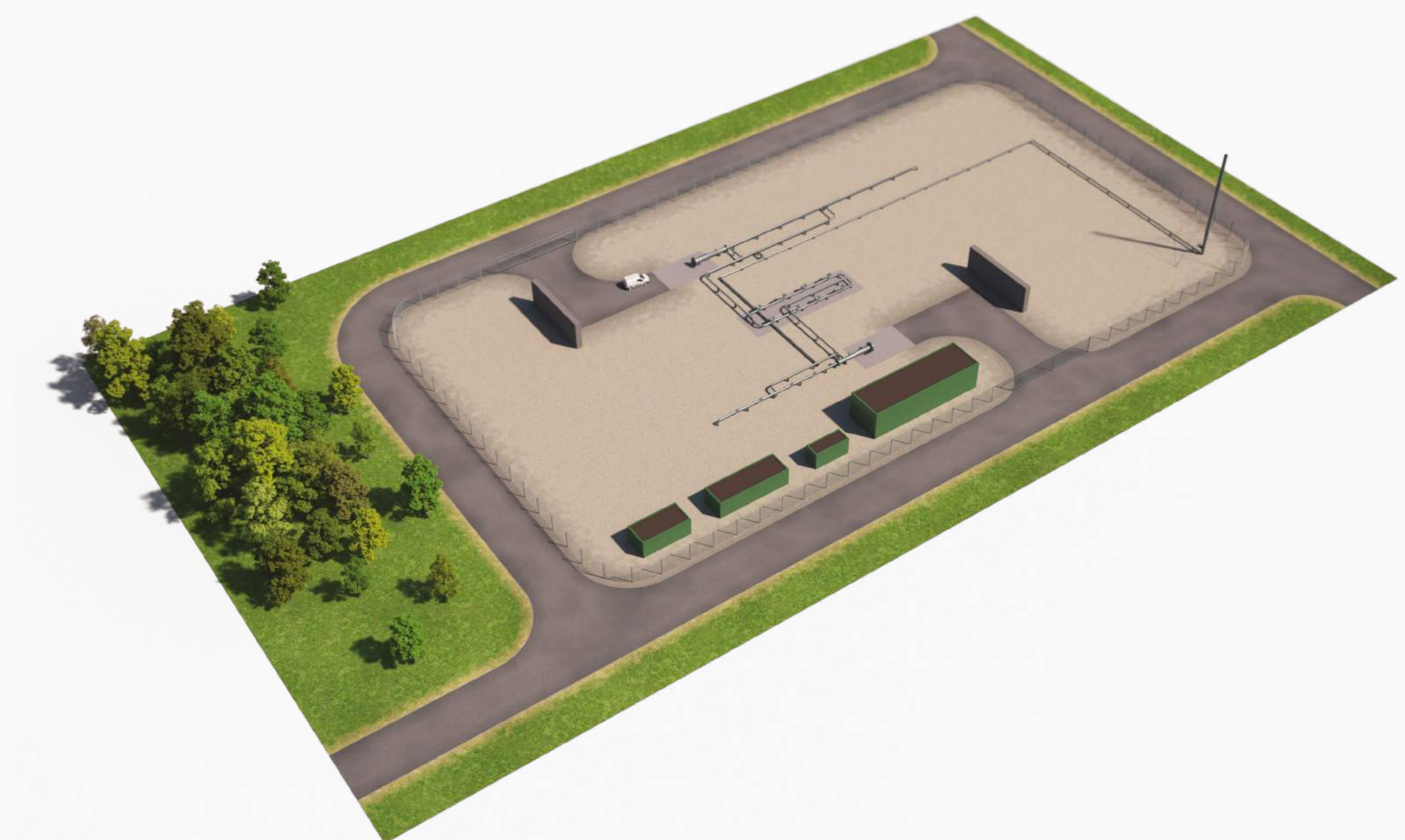
Block valve stations are installations of approximately 35 x 35 metres, that allow sections of the pipeline to be shut off either at the site or remotely. This is to allow for maintenance or in the highly unlikely event of an emergency. We are proposing to have three block valve stations along the route.



- There would be a permanent access from the road into each site, and the site would be gated and securely fenced
- The facilities will require an electrical connection
- We would plant vegetation in an area around the site to help provide screening to minimise the visual impact

## Theddlethorpe facilities

There will be an above ground facility at the site of the former Theddlethorpe Gas Terminal. This will be where the onshore pipeline connects to the existing offshore pipeline.



- This will also include above ground pipework and a vent stack approximately 25 metres high
- The site will have an access point from the road, an access track, and a gated access point
- The facilities will require an electrical connection
- The facility will be surrounded by security fencing and, if necessary, landscape planting will be used to further screen it

# 07. Environment

Our project will bring many benefits but, as with all infrastructure projects, there will be some impacts. That's why the planning process requires us to carry out detailed environmental assessments before we submit our application.

Understanding the area we're working in, its environmental sensitivities and the impacts our project might have, allows us to identify how we could mitigate those impacts.

We have a commitment to protect the environment at all times. The aim of the project is to provide a net environmental benefit by reducing the emissions of CO<sub>2</sub> to the atmosphere from critical UK industries. Managing our environmental impact starts during the pipeline routing assessment phase and is systematically reviewed and assessed throughout the rest of the project. This will ensure we can identify and control any potential impacts associated with project activities.

## What is a Preliminary Environmental Information Report?

We have already started initial work and site surveys, which have been summarised in our *Preliminary Environmental Information Report (PEIR)*, which is part of this consultation.

The PEIR details our initial environmental assessments, the potential environmental effects of the project and the mitigation measures we propose to take.

## Where do I find out more about the environmental impacts of the Viking CCS pipeline?

A summary of the PEIR can be found on pages 35 – 38 of our consultation brochure.

A copy of the full PEIR, and the shorter Non-Technical Summary, is also available in our virtual consultation room, at document inspection venues along the route of the pipeline, and at in-person events.

## The evolution of the PEIR

Following this consultation, we will continue to develop our Environmental Impact Assessment and present the findings within an *Environmental Statement (ES)*. The ES will reflect the evolution of the project design and the feedback received during this consultation. We will submit the ES as part of our DCO application.



The planning process requires us to carry out detailed environmental assessments before we submit our application.

# 08. How to take part

## Next steps

Once the consultation closes on Tuesday 24 January 2023, we will review all the suggestions and comments received during the consultation period.


We will consider all feedback as we make further refinements to our proposed design. We will set out a summary of the responses you have given during consultation, with details of how your feedback has helped shape our proposals, as part of a *Consultation Report*.


This report will form part of our DCO application and will be available to the public following submission of the application, which we expect to be later in 2023. If our application is approved, we expect to start work on the project in 2025.

## Have your say


You can provide feedback in the following ways:

 Completing the online response form located on the project website at: [consultation.vikingccs.co.uk](https://consultation.vikingccs.co.uk)

 Attending an **in-person consultation event**, where you can meet the project team and complete a paper copy of the response form

 Requesting the response form by post or picking up a paper copy at one of our document inspection venues – you can post this to us at: **Freepost VIKING CCS PIPELINE** (no stamp needed)

 Email the response form to: [vikingccspipeline@aecom.com](mailto:vikingccspipeline@aecom.com)

 Email or post us a written response to the consultation



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