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# UK Poseidon and Orion projects

7<sup>th</sup> International Workshop on Offshore Geologic CO<sub>2</sub> Storage

*University of Texas, 17th September 2024*

## Track-1 projects (2012,2020)

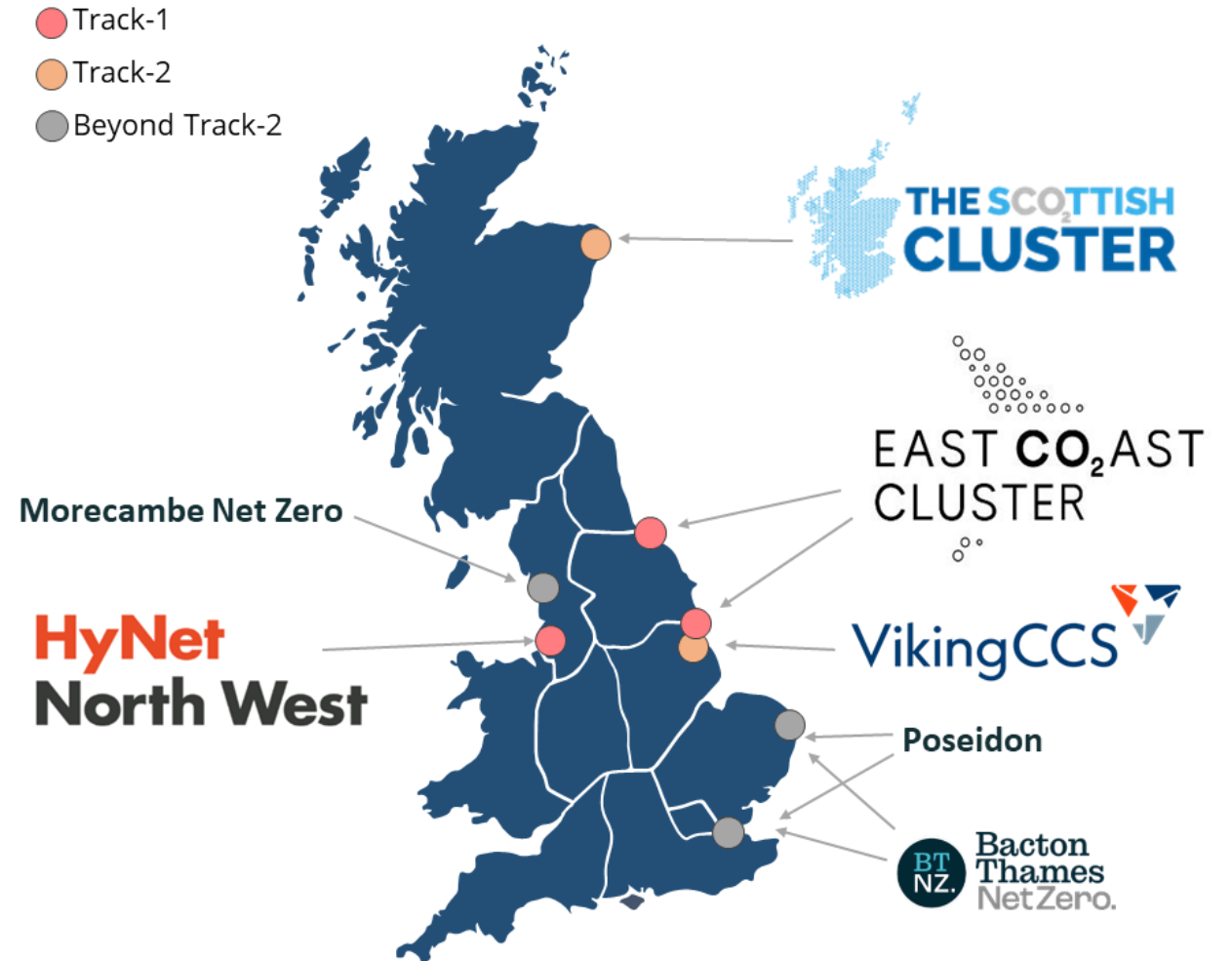
- Government funded
- FID anticipated Q4 2024
- Injection start-ups from 2027

## Track-2 projects (2018,2021)

- Government funded
- FID in 2026/2027
- Injection start-ups from 2028/2029

## Beyond Track-2 projects (2023)

- Three front runner projects : Poseidon, Bacton Thames Net Zero and Morecambe Net Zero
- FID in 2027/2028
- Injection start-ups from 2029





- Start of UK operations in 2003
- Representing 10% of UK domestic production today
- 52 operated fields offshore with 1,200 staff
- 2 onshore terminals for process and compression
- Several ongoing decommissioning projects



Terminal Bacton – Capacity ~500 mmscf/d

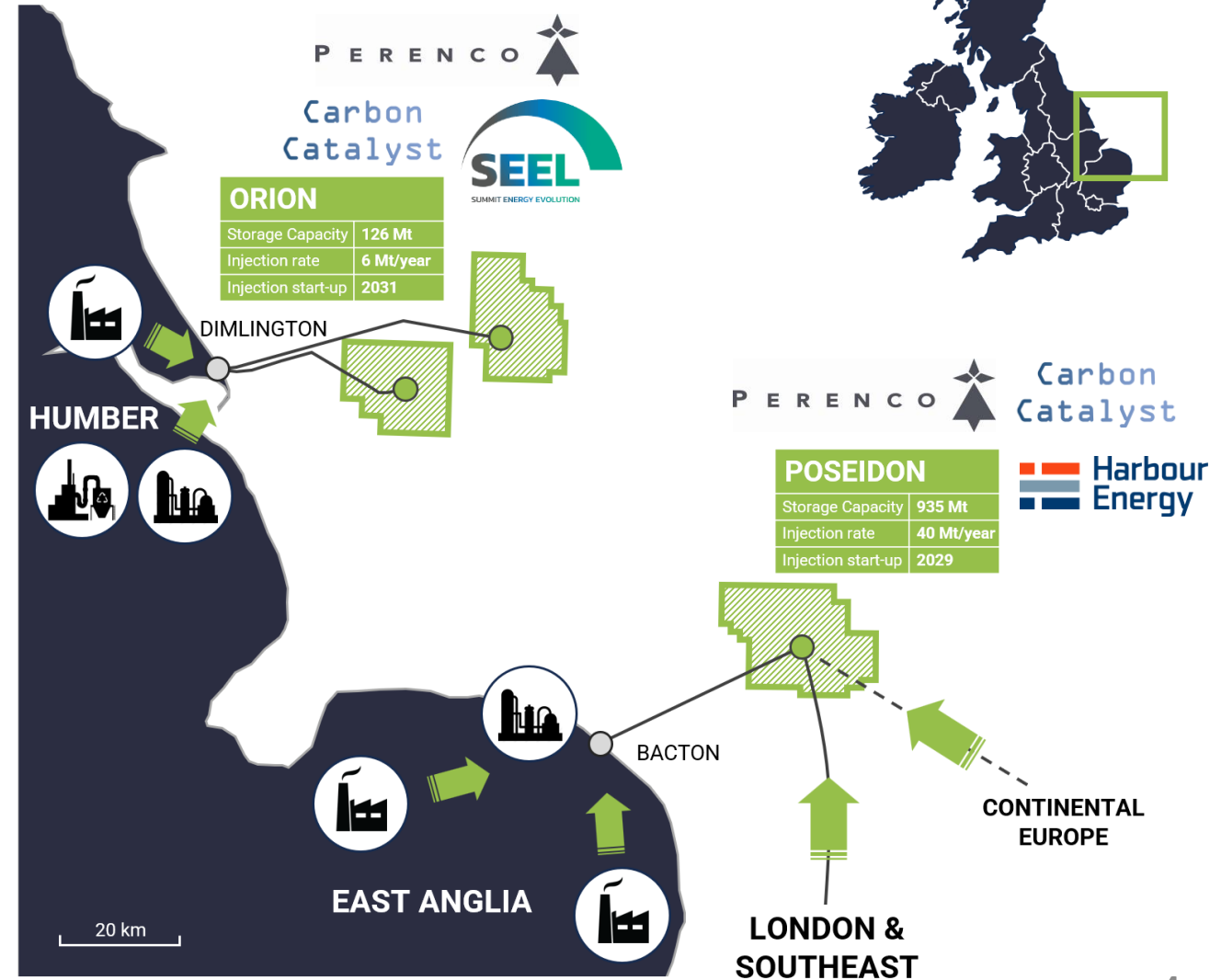


Terminal Dimlington – Capacity ~500 mmscf/d

# Overview - Poseidon & Orion Projects

## Two independent T&S projects awarded in 2023 through the UK 1st CS Round

- Perenco - an efficient and established operator with 20 years of Southern North Sea operating experience (onshore terminals/offshore fields & infrastructure)
- These CCS projects form the foundation of Perenco's operational decarbonisation program
- Business strategy to expand into CCS to ensure a long-term future in the North Sea and nurture local CCS expertise



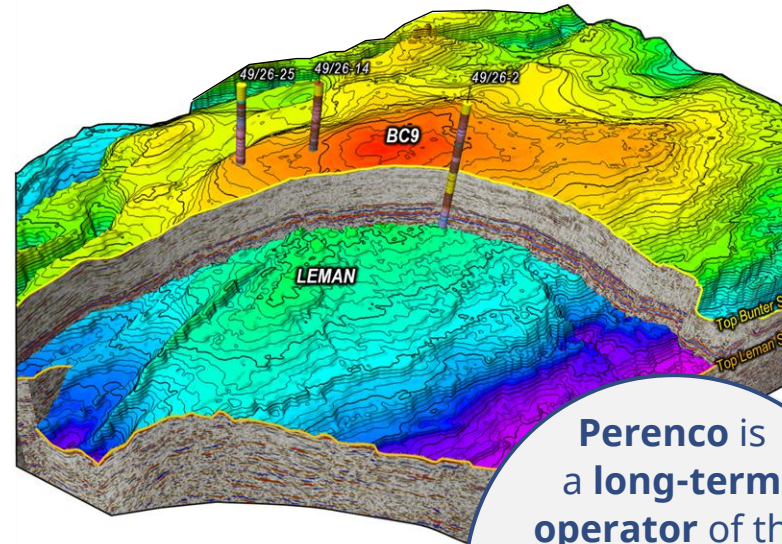


## A World Class CCS project – Decarbonising the Southeast of the UK and Continental Europe

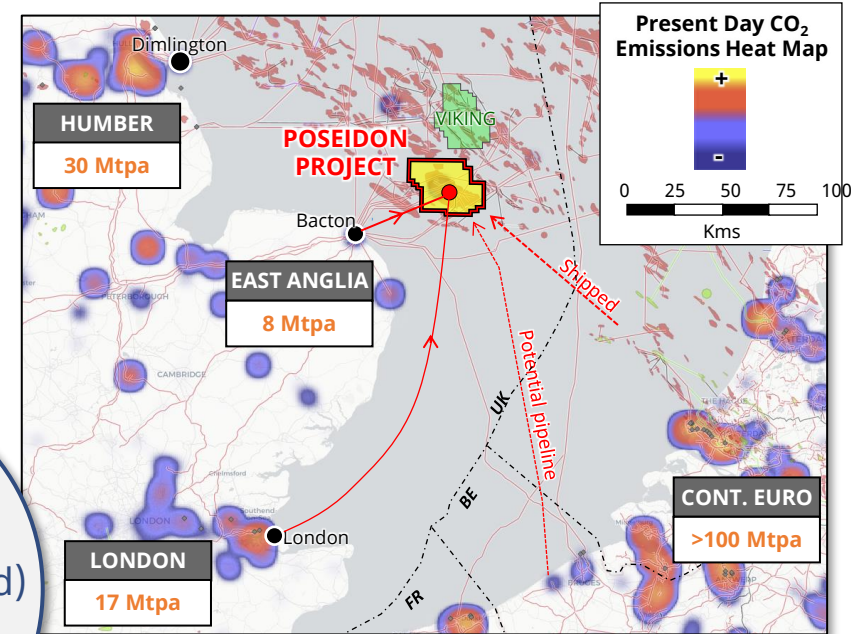
### Key Project Metrics

Storage Capacity	935 Mt
First Injection	2029
Peak Injection Rate	40 Mtpa
Injection Period	38 years

- Storage Licence award July 2023
- Appraisal Term work program focused on full site characterisation, including injectivity test in 2024, ahead of Storage Permit award.
- Targeting FID (Storage Permit) by 2027
- Storage centered on the Leman field (14.5 TCF reserves), the UK's largest legacy gas field, and overlying BC-9 saline aquifer closure
- The project will deliver scaled-up transport and storage services for a wide range of CO2 emitters across East Anglia, London, wider Southeast of the UK and Continental Europe



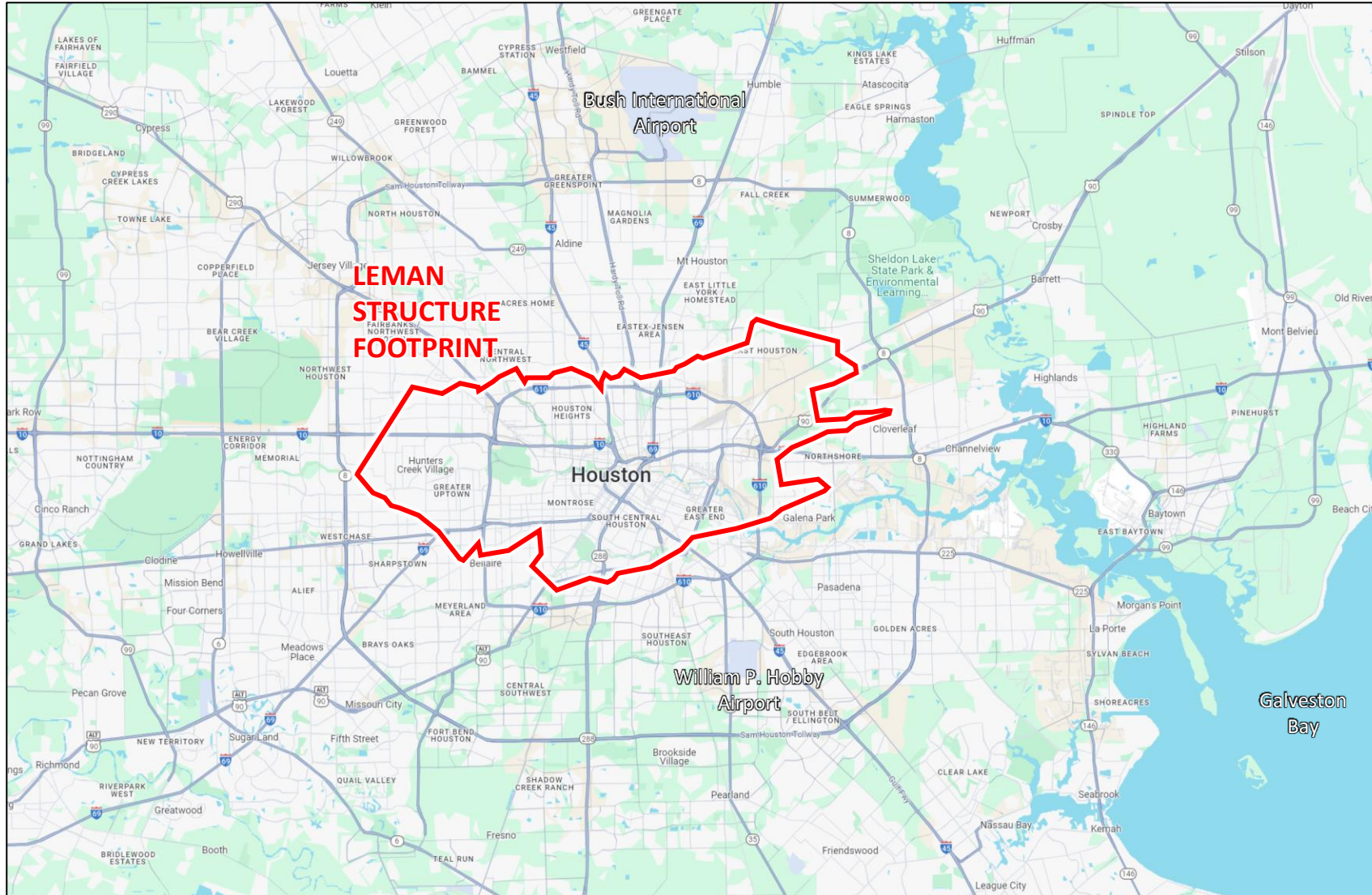
**Perenco is a long-term operator of the offshore (Leman field) and onshore (Bacton Terminal) infrastructure**



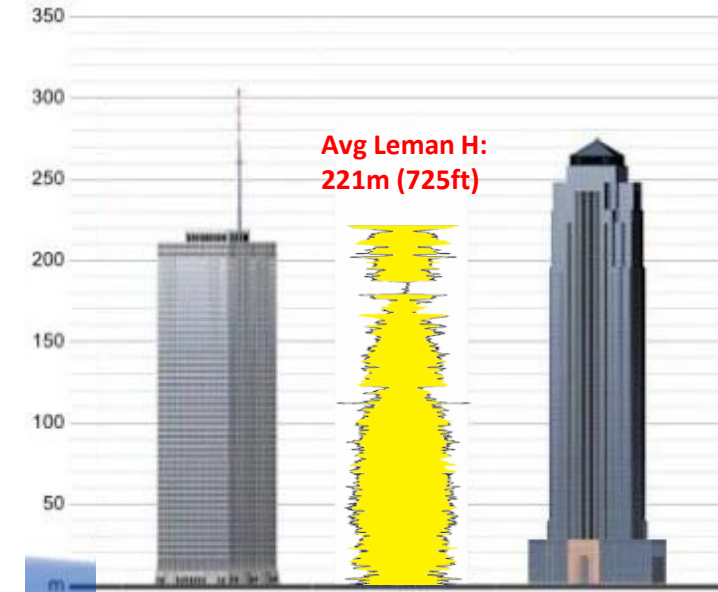


# Poseidon Project

Leman Poseidon is located over UK's largest gas field ( 14.5Tcf )



## Leman Reservoir thickness



One Shell Plaza  
217m (714ft)

Williams Tower  
275m (901ft)

- Highly Compartmentalised  
→ Option to Develop Segment-by-Segment
- Ultra Depleted <20bar

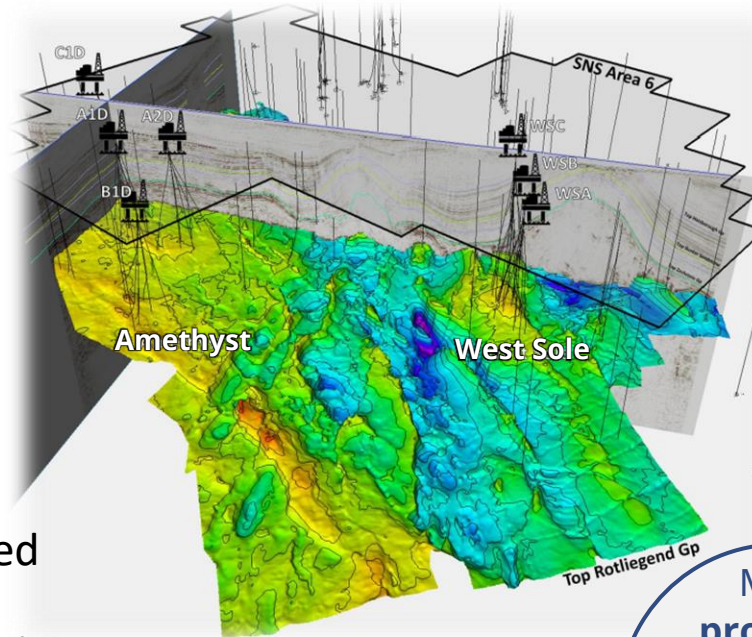


## Strategically positioned to decarbonise Humberside, the UK's largest industrial cluster

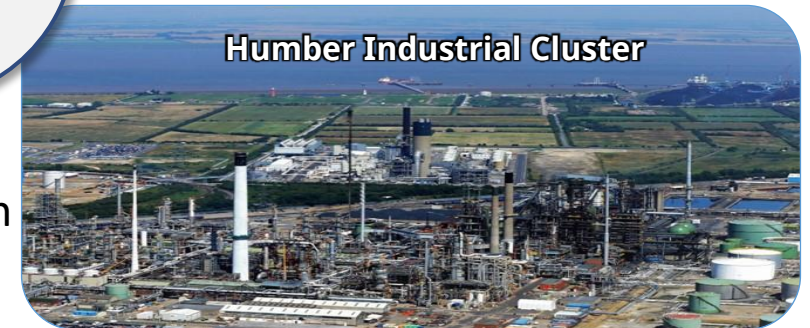
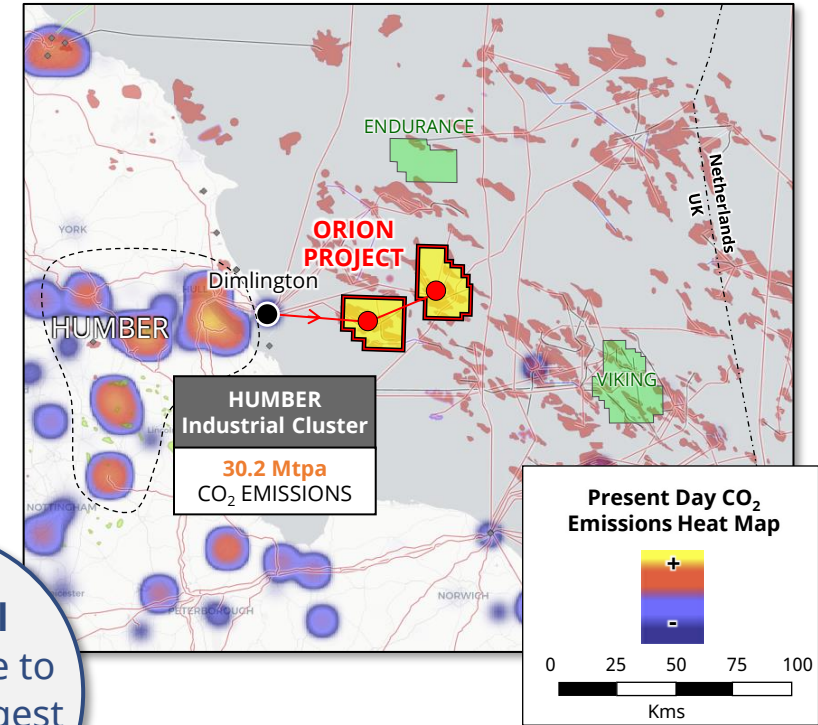
### Key Project Metrics

Storage Capacity	126 Mt
First Injection	2031
Peak Injection Rate	6 Mtpa
Injection Period	30 years

- Storage Licence award August 2023
- Appraisal Term work program focused on full site characterisation and preparation for Storage Permit award
- Targeting FID (Storage Permit) by 2029
- Project Orion storage is centered on the high-quality reservoirs of the decommissioned Amethyst field cluster and depleted West Sole field
- The project is strategically positioned to support the accelerated decarbonisation of the Humberside industrial area, with its storage sites being the most proximal storage reservoirs to Humberside (46km from the Dimlington gas processing terminal)



Most proximal storage site to the UK's largest industrial cluster







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Thank You!