



# Cadent Gas: **H2East Pipeline:** Humber to Nottinghamshire



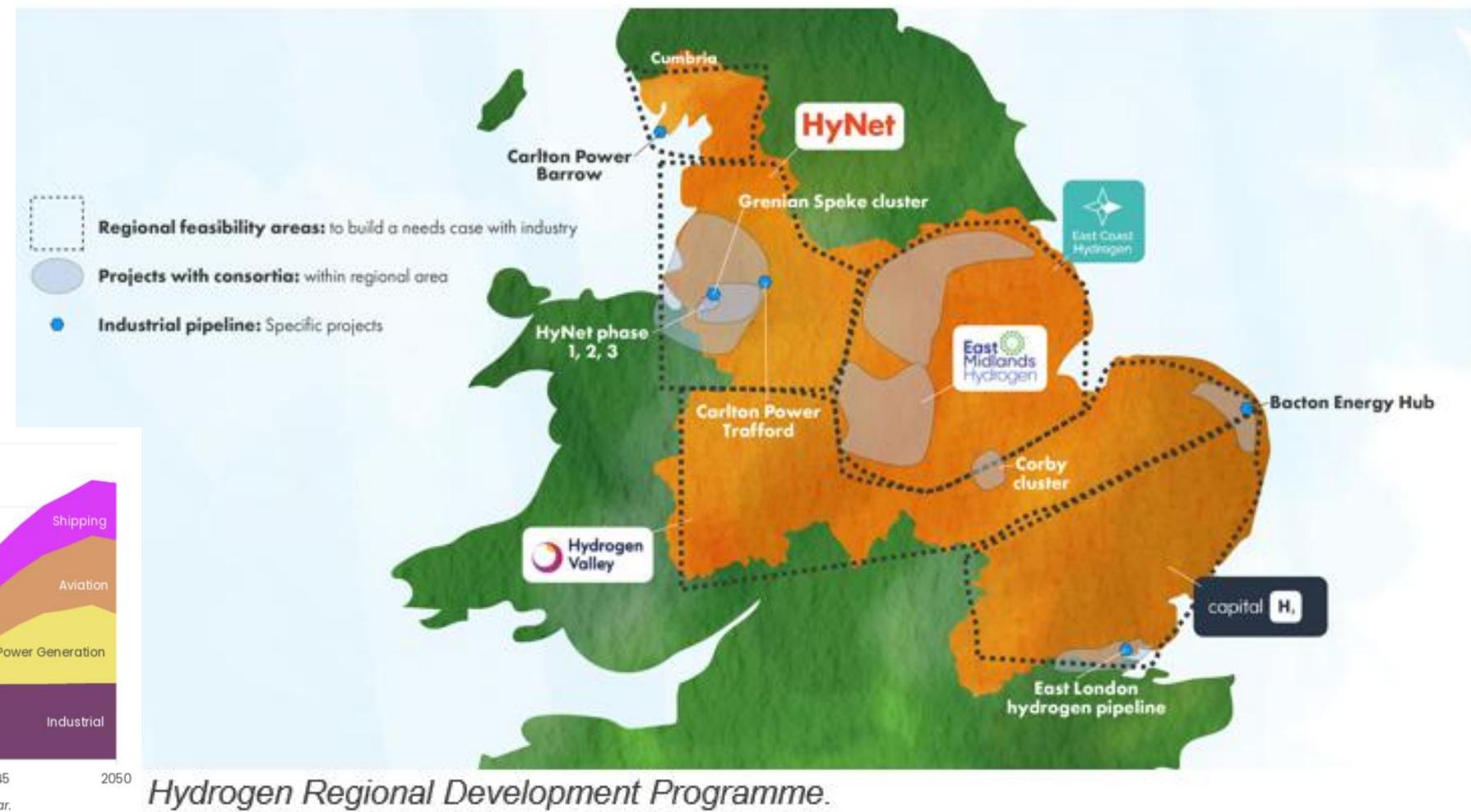
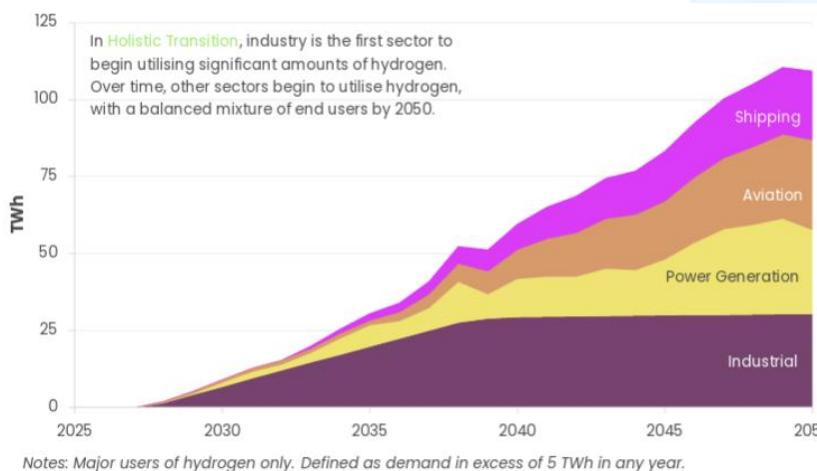
# Agenda

- Why is hydrogen required?
- East Coast Hydrogen
- Cadent H<sub>2</sub>East Pipeline: Humber to Nottinghamshire – our proposals
- The outline route
- Our hydrogen users
- Our hydrogen producers
- Programme for FEED and consenting
- Q&As and close



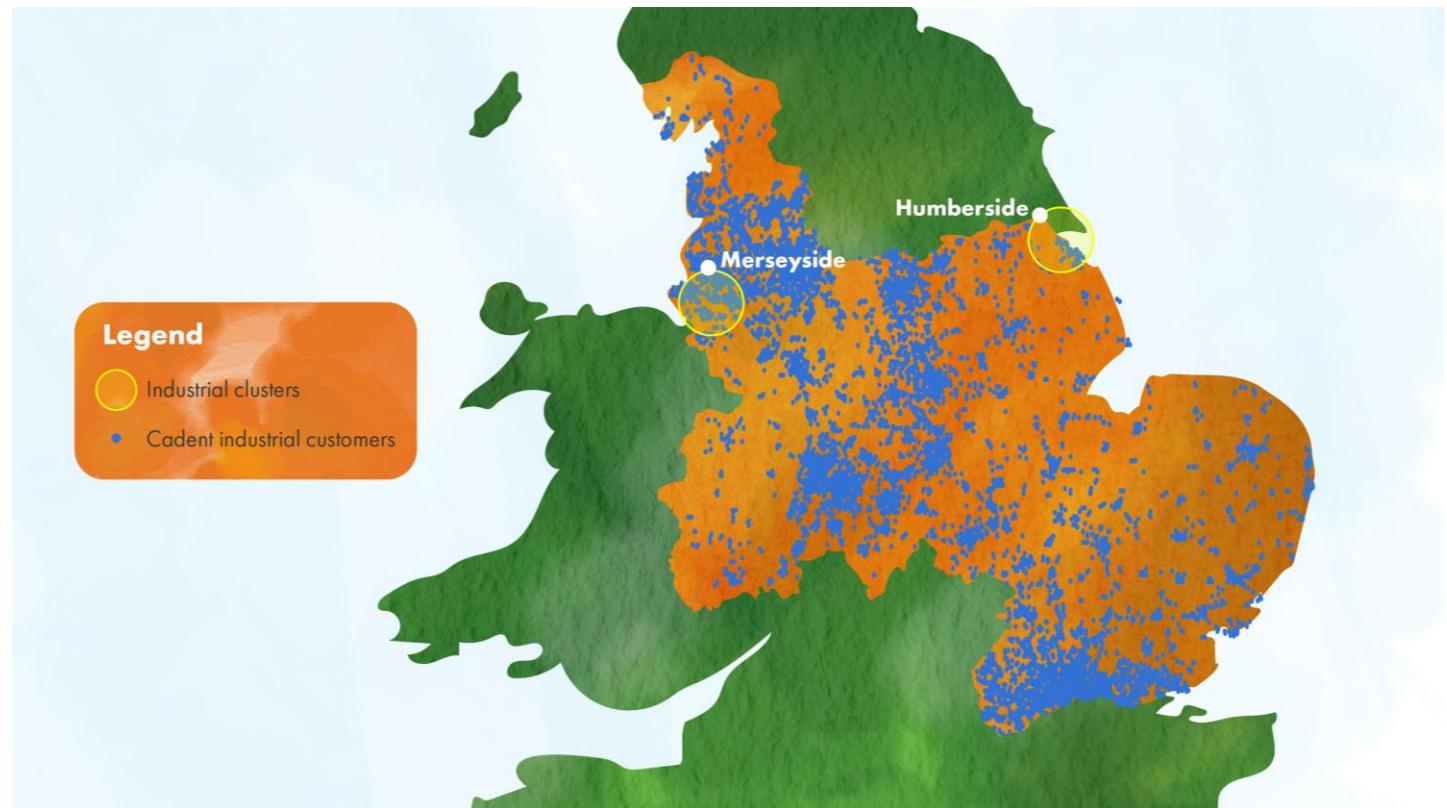
# Cadent is supporting industrial transition

NESO's Future Energy Scenarios 2025: Pathways to New Zero (Nov 2025) clearly sets out the holistic transition pathway, seeing a need for hydrogen for industry, power generation, aviation and shipping.



# Powering industry

- Cadent has 40,000 industrial customers connected to the gas network
- Many of these industries have decarbonisation strategies and are actively exploring ways to reduce natural gas usage
- Hydrogen is of particular importance for those industries that operate high temperature processes
- Organisations such as Tate and Lyle Sugars, Rolls Royce, Kellogg's, Heinz, Kimberly-Clark, Heidelberg, Encirc, Pilkington, Boots
- Industrial demand for hydrogen is not confined to industrial clusters



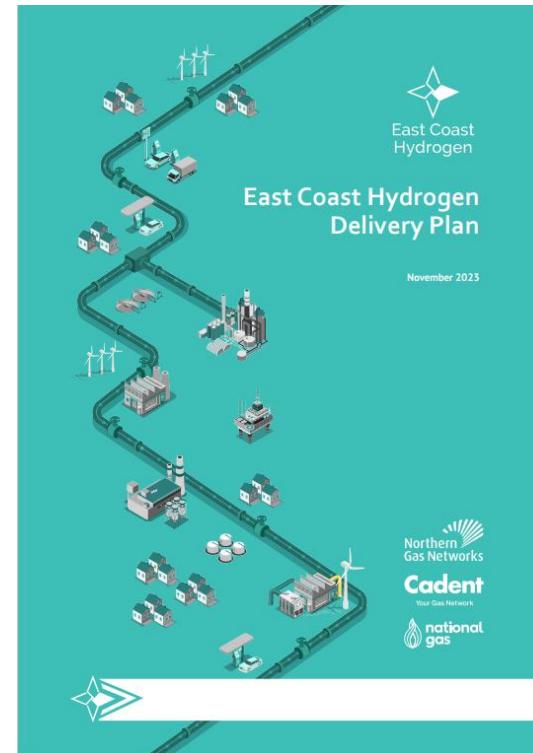
*Industrial customers connected to the Cadent network.*

# East Coast Hydrogen collaborating to develop hydrogen infrastructure

Cadent, National Gas and Northern Gas Networks are working collaboratively to develop network infrastructure to transport low carbon hydrogen to industry and power stations

## Cadent's role

- Cadent is developing proposals for H<sub>2</sub> East Pipeline: Humber to Nottinghamshire
- Deliver hydrogen to industrial customers, initially focused on those with the highest gas demand



# Benefits of the H2East Pipeline

CO<sub>2</sub> savings

0.75 Mt/CO<sub>2</sub> pa can be prevented from being emitted if the project is developed (H2East Pipeline: Humber to Nottinghamshire)

Safeguarding industry

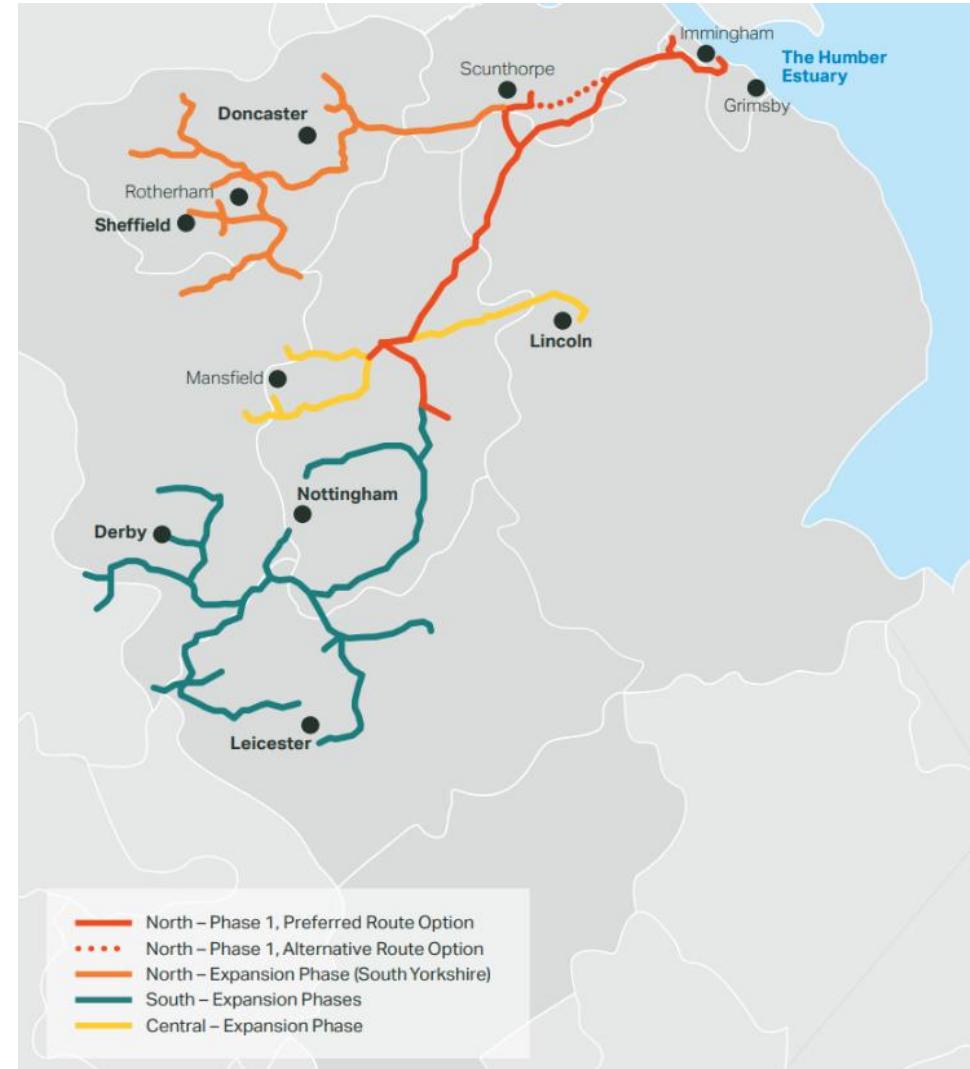
Minimum 10 offtakers, 3TWh hydrogen per yr by 2035. Limited viable decarbonisation options, preserves jobs and supports the regional economy

Boosting hydrogen production

Connects to hydrogen production projects in Immingham and High Marnham

Future expansion

Extensions possible into South Yorkshire and into Leicestershire, Derbyshire and the Midlands

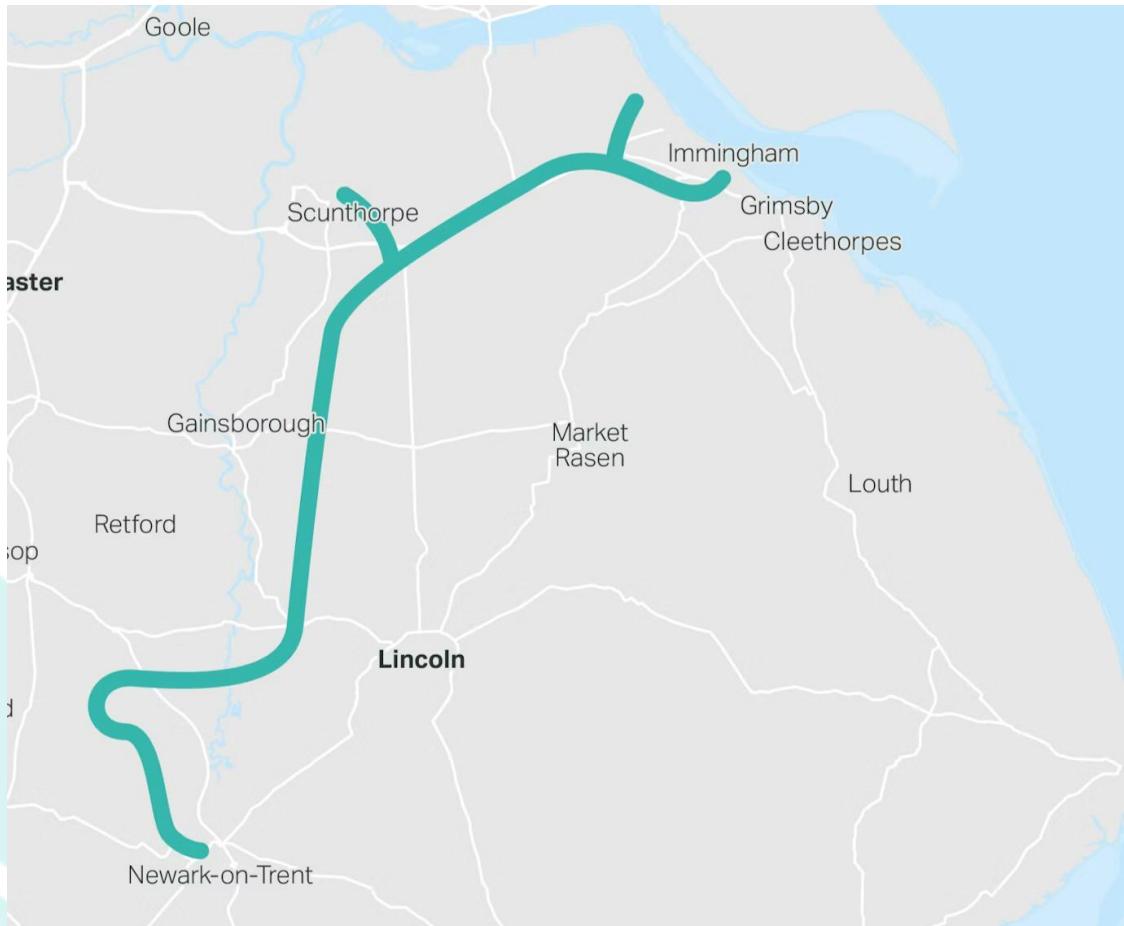


# H<sub>2</sub>East Pipeline: Humber to Nottinghamshire

- After 4 years of partners collaboration and development the H<sub>2</sub>East Pipeline: Humber to Nottinghamshire is set to advance to Front End Engineering Design (FEED) having gained £40 million of funding from Ofgem to undertake engineering design work and the preparation of planning proposals
- Cadent has been engaging existing users and potential hydrogen producers for several years
- Hydrogen sourced from 3 production plants, including:
  - Uniper Near Immingham (North Lincolnshire)
  - HyMarnham (Nottinghamshire)
- Create a network linking industrial users in Lincolnshire and Nottinghamshire, after assessing alternative pipeline options. Domestic supply is not part of these proposals.
- Project continuation beyond FEED will be subject to future allocation rounds via the DESNZ Hydrogen Transport Business Model



# H2East Pipeline: Humber to Nottinghamshire Route



- Pipeline stretches a total of c.150km and is new build
- 8 Above Ground Installations (AGIs)
- Routes through predominately rural areas
- Connects Immingham, Scunthorpe and Newark
- Can be expanded in subsequent phases
- Consultation is out in the spring 26 that will give further details on route

# Hydrogen Off-takers

- In total c.3TWh of demand by 2035 connected to the pipeline
- Range of industrial sites including steel, building materials (bricks, insulation) titanium dioxide, food and lime manufacture
- Tronox, British Sugar and Forterra presented at our webinar, which is online to view
- Some reasons why they want hydrogen include:
  - Can start with a blend on existing equipment, reducing initial capex outlay
  - Existing equipment can be modified with minimal impact upon the product
  - Does not require a new factory to be built for electrification
- Large sites need a portfolio of technologies to reach net zero i.e hydrogen, electrification & CCUS.
- Website Link: <https://h2east.co.uk/>



# Hydrogen Producers



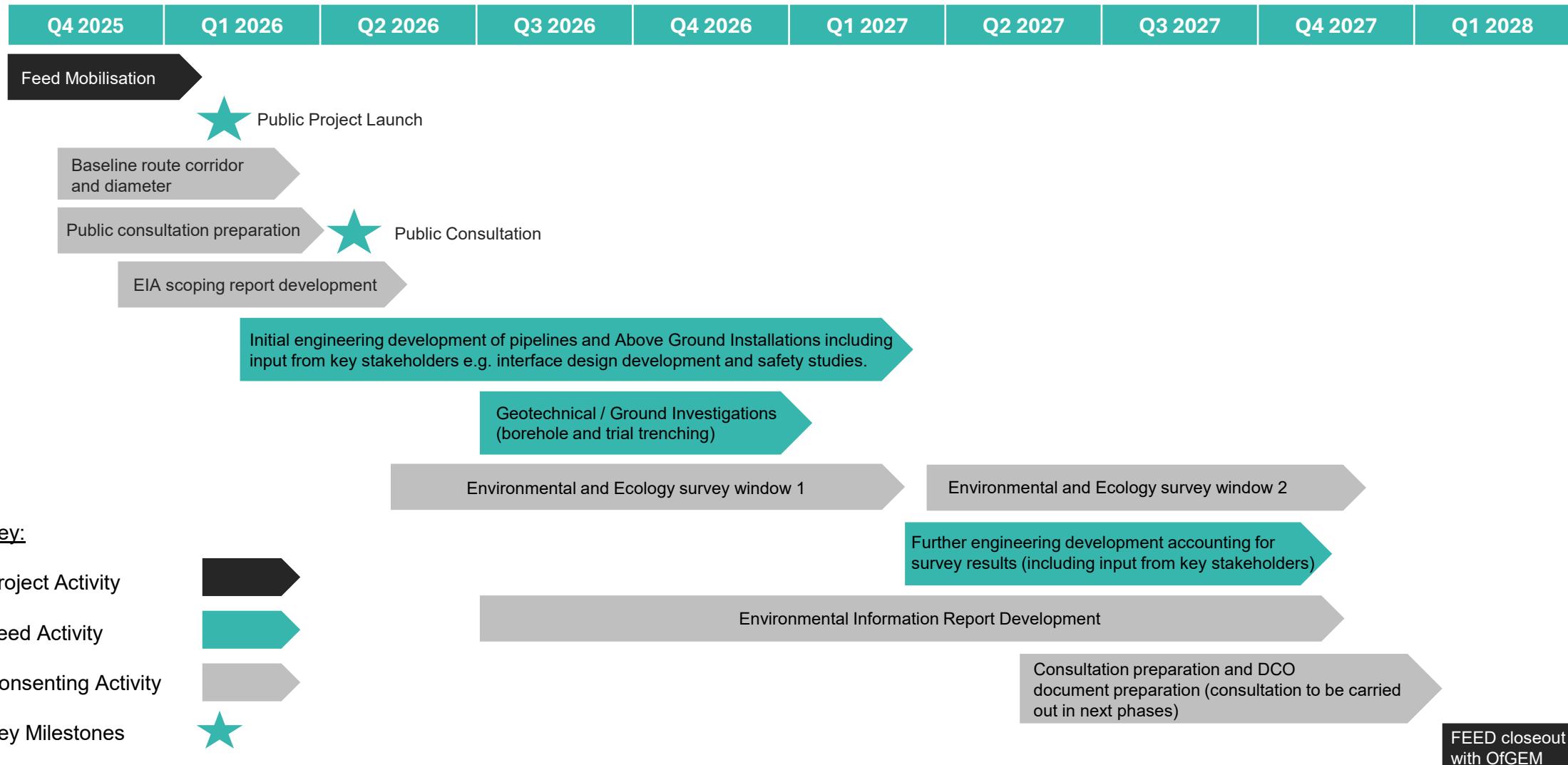
Low carbon hydrogen produced at HyMarnham Power



## Humber H<sub>2</sub>ub®



# Outline Timescales





# Questions

