HyNet Supply Chain Summit

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Welcome

FEATURING

MERSEY TIDAL POWER

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Partneriaeth Sgiliau Rhanbarthol Gogledd Cymru North Wales Regional Skills Partnership

Origin

GMCA GREATER MANCHESTER COMBINED AUTHORITY

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North West Hydrogen Alliance

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John Leer

Head of Stakeholder & Business Engagement

NOF

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The Opportunity for the Region

Tom Ventre
Managing Director / North West Regional Chair
Laker-Vent Engineering / ECITB

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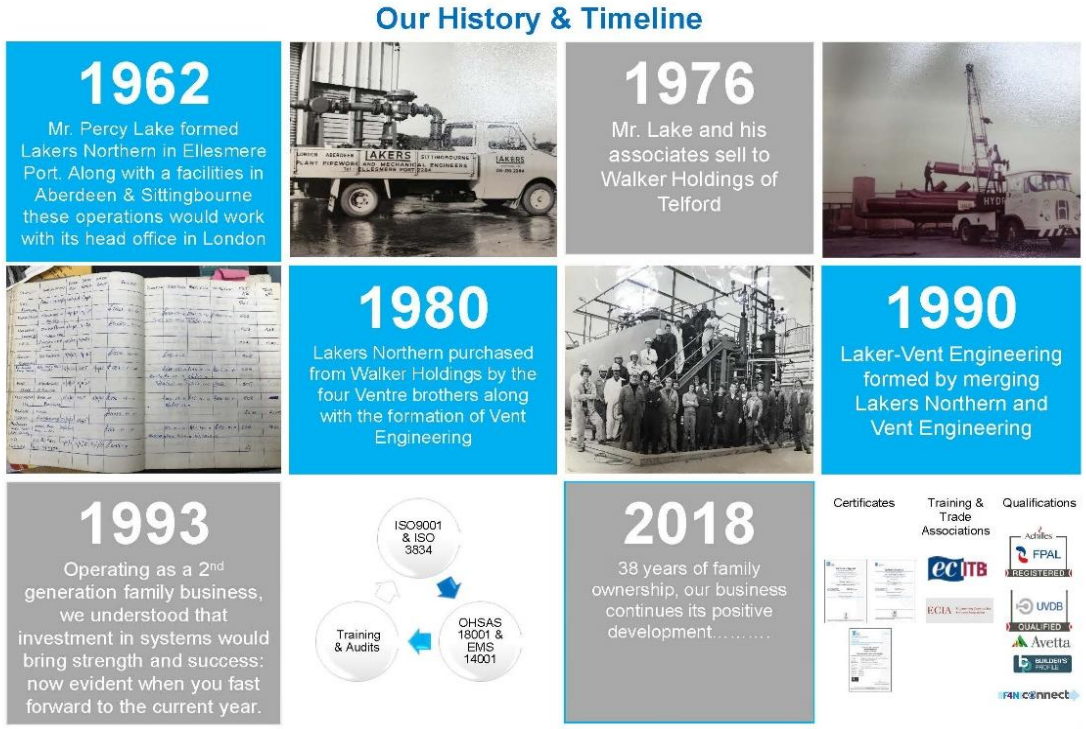
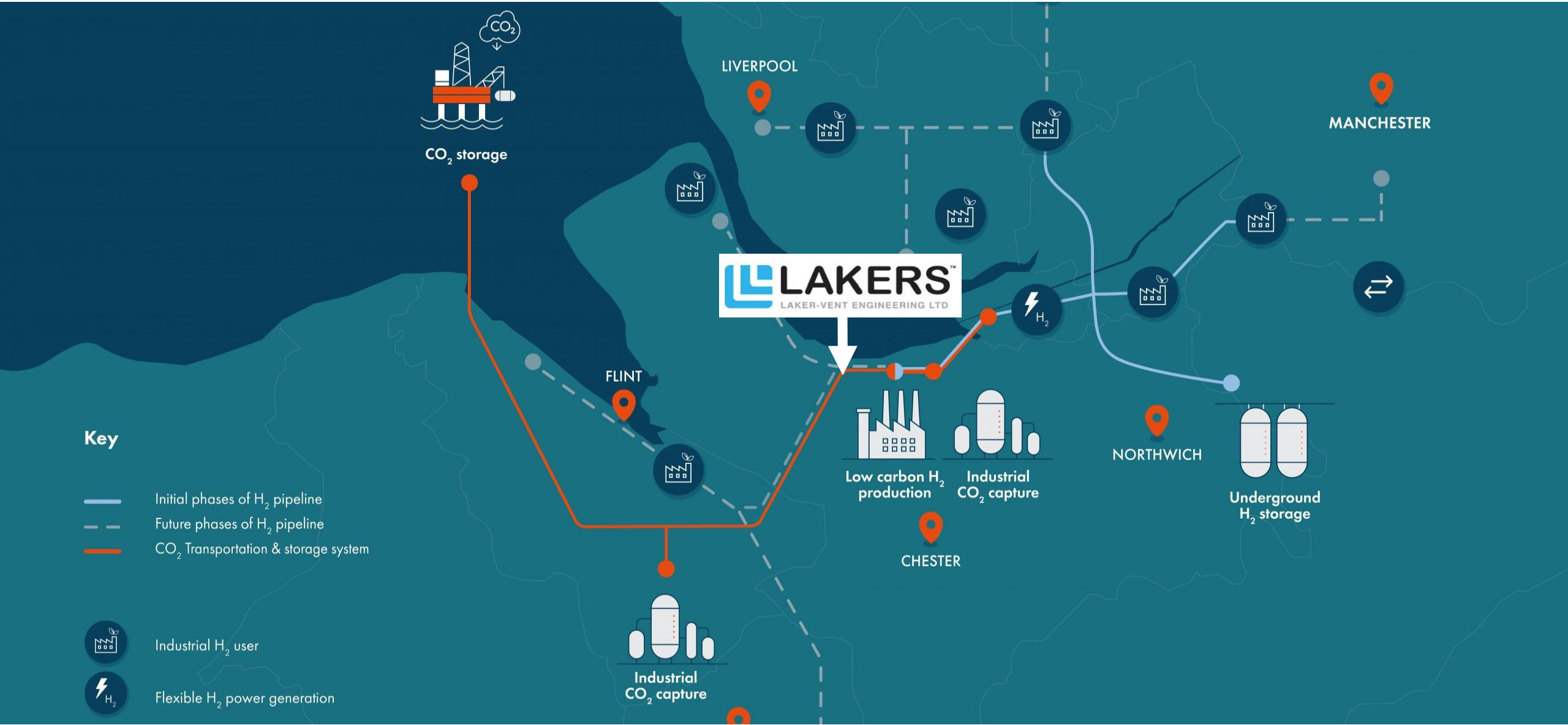
Brief Introduction to Laker Vent

- Engineering business specialising in off-site fabrication & on-site installations of process piping systems for highly regulated industries.
- We work with clients across power generation, process, chemicals, petro-chem and nuclear industries.
- Head office and three workshops based and Ellesmere Port + regional offices and workshops in Teesside.
- We employ around 250 trade staff directly, with over 300 including management and white-collar staffing

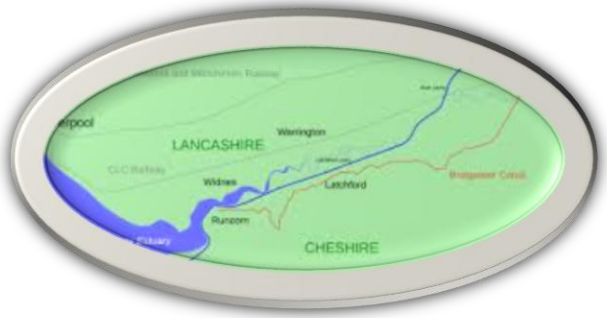


LAKERS™
LAKER-VENT ENGINEERING LTD

Laker Vent – Centrally located in the heart of the network
Come & speak with us at stand 11



North West England's Proud Industrial Heritage



➢**Ellesmere Port** where transport links via the ship canal provided soda ash for a growing chemical industry;

➢We had the first industrial chemical facility in England established in **Widnes** in 1847

➢Industry went on to develop in **Runcorn**, where chlorine & caustic soda has been produced for over 100 years;

➢That chemical production in Runcorn was assisted using brine piped from **Northwich**.

Inter-Regional Links & Collaboration Providing Confidence to Invest

- The history and long establishment of these links & this collaboration helped develop the industrial heartland but has now also provided confidence that we can move towards decarbonising the region;
- The projects that link within the Hynet programme are providing opportunities for the supply chain to help deliver the regions success;
- The regional status slightly ahead of the other Track 1 clusters; an opportunity to path the way and show the industry what can be achieved;
- There will of course be challenges but with focus and collaboration we can not only seize upon the opportunities in the region but provide the long-term sustainable skills the industry needs throughout all areas of the UK;
- We will hear more on the specifics throughout the day, but between the hydrogen production project at Stanlow, the numerous carbon capture projects at Protos, Heidelberg & Viridor, the supply chain must provide engineering, technology, skilled trades & project / construction management.

Existing Regional Capabilities Able to Handle the Demand

- The supply chain is already here—and it's strong.
- The businesses around the room here today demonstrates the regional strength we have—and the potential we can unlock together.

Skills, Training & Collaboration

- The region will need to invest in the next generation of engineers, fabricators, and project managers
- The ECITB are doing vital work to ensure we have the talent pipeline to meet the demands of projects like HyNet—and beyond
- Collaboration is key
- Open engagement
- Taking action!

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LAKER-VENT ENGINEERING LTD

HyNet

EC ITB

Thank you

Come and chat to us at Stand 11

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HyNet: An Overview

David Parkin
Chair
HyNet Alliance

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Supply Chain Conference

David Parkin | HyNet Alliance
12th June 2025

HyNet infrastructure

New and reused pipeline network transporting carbon dioxide to storage

Facilities to capture CO_2 emissions

Underground salt cavern hydrogen storage for times of high demand

New pipeline network to transport hydrogen from production to use

Low-carbon hydrogen production plants

initial capacity 4.5 MTPA
potentially rising to 10 MTPA

HyNet Alliance

Heidelberg Materials

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Viridor

INEOS
Inovyn

PILKINGTON™

Cadent
Your Gas Network

ENCYCLIS

ENGIE

RWE

evero

storengy

uniper

avioxx
Sustainable Jet Fuel

encirc

Honeywell
UOP

KNAUFINSULATION

SSE

enfinium

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FUELS

Fulcrum
BIOENERGY

Cargill™

Novelis

HyNet

HyNet: A modern industrial cluster

Delivering net zero

Carbon capture and hydrogen are essential to reach 2050 emissions targets for difficult-to-decarbonise sectors such as cement and energy from waste.

Enabling clean power

HyNet's geological hydrogen storage is unmatched anywhere else in the country, enabling low-carbon electricity to be delivered on-demand.

Revitalising industry

Green investment will safeguard jobs in historic industrial heartlands with thousands of high-paying roles being generated through construction.

Stimulating growth

New technologies like greenhouse gas removals and sustainable aviation fuels are already being attracted by the opportunities present in the North West.

Delivering net zero for difficult-to-decarbonise sectors

Heidelberg Materials

ENCYCLIS

enfinium

Viridor

encirc

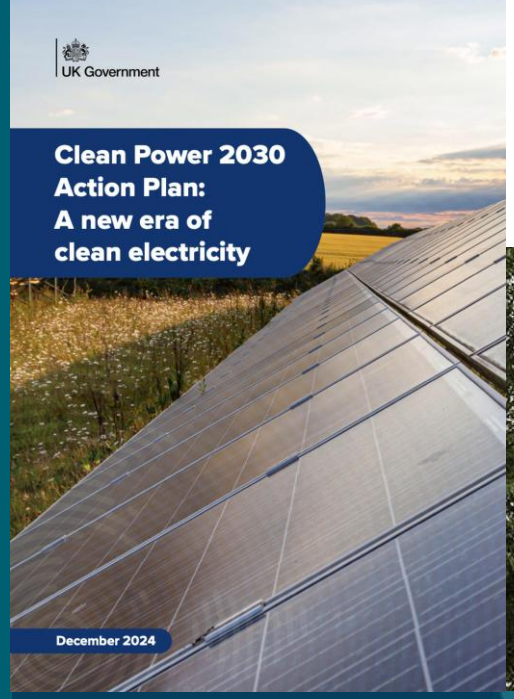
Novelis

PILKINGTON™

ESSAR ENERGY TRANSITION EET FUELS

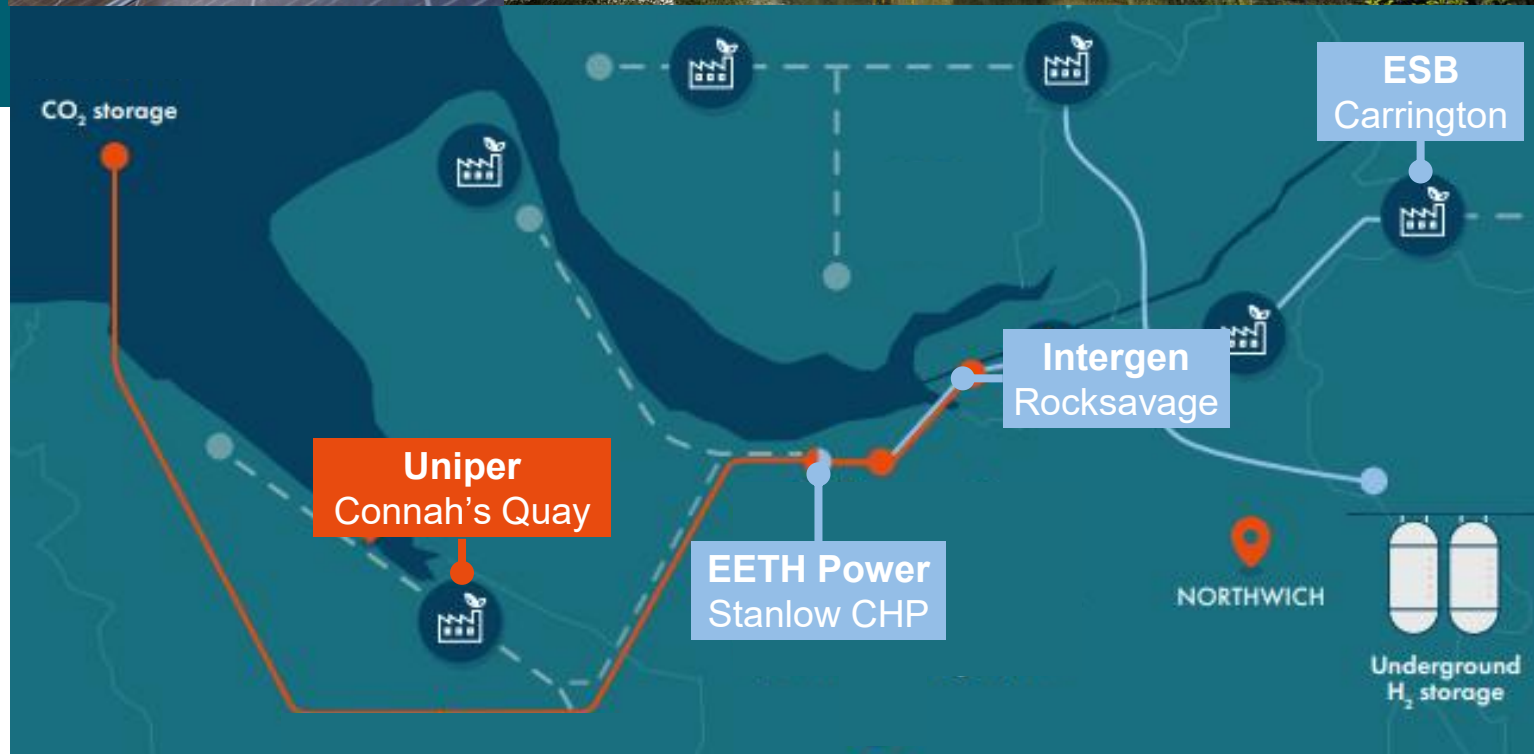
Cargill™

Enabling clean power through carbon capture and hydrogen



+2.4 GW GCCS/H2

-16.9 GW WIND/BESS LDES/DSR



uniper

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ESB
Energy for generations

INTERGEN

Revitalising industrial heartlands

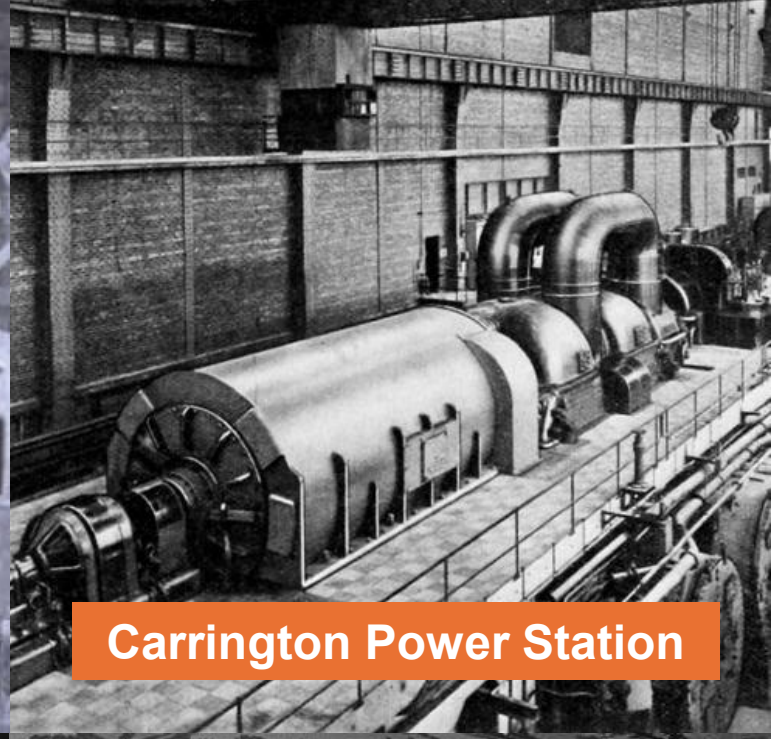
1,200
years of history

6,700
operational roles

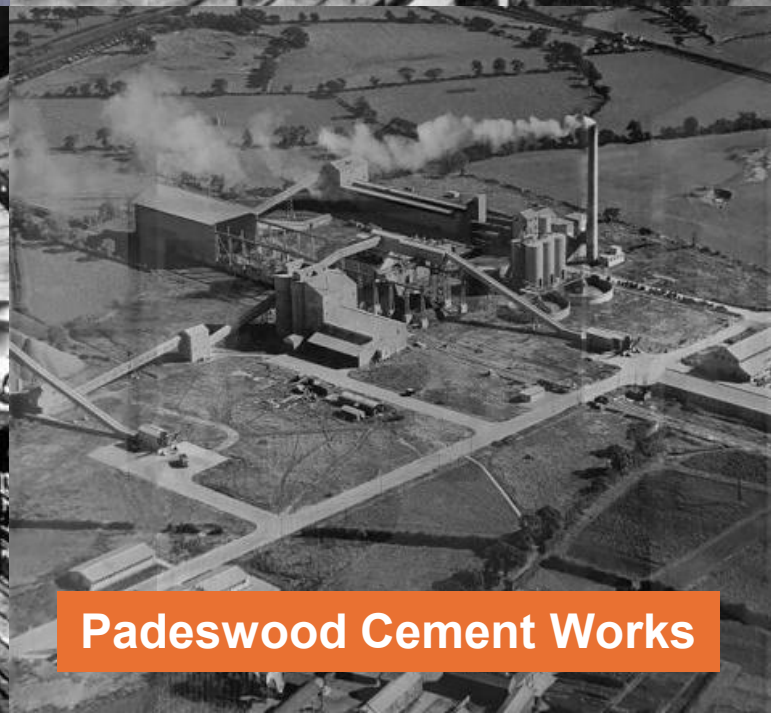
16,000
construction jobs

6,000
on average


Pilkington Glass


Carrington Power Station

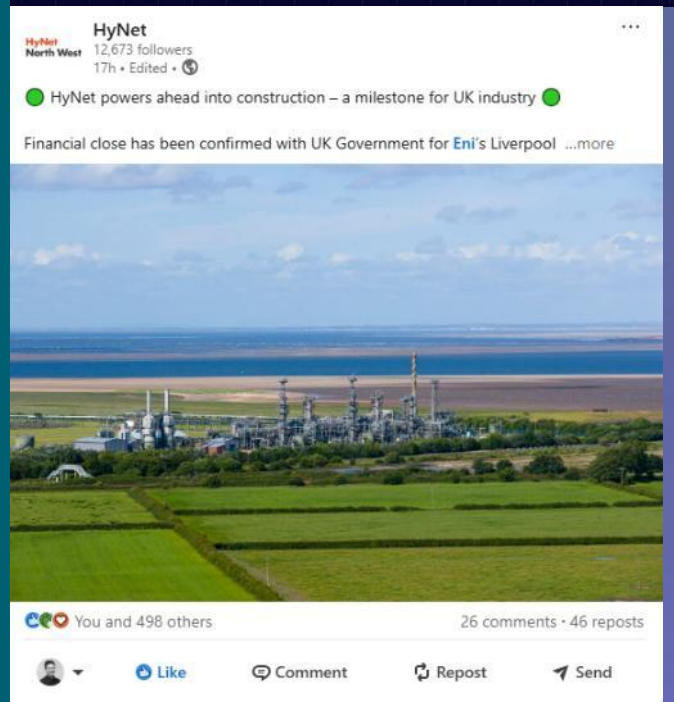

Castner-Keller / ICI


Padeswood Cement Works

Stimulating growth of new technologies and the supply chain

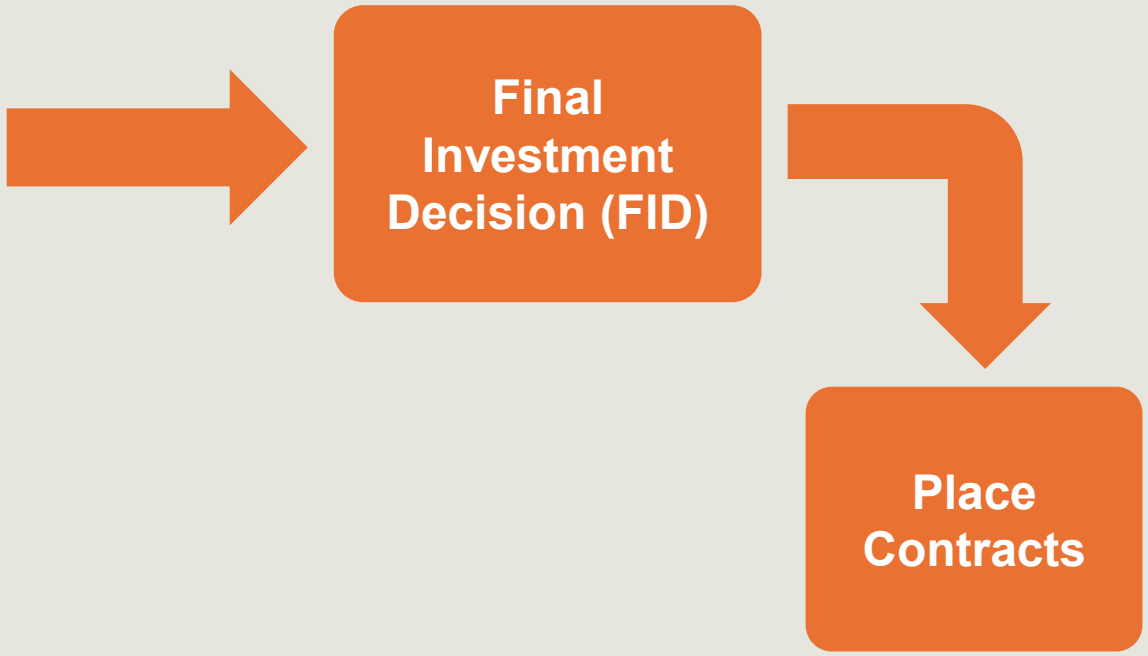
HyNet gets the green light

Eni *and the* **UK Government** *reach Financial Close for* **Liverpool Bay CCS**



What does it take for a project to get built?

- Selection by Government (T1 / T1X / HAR / HTBM etc)
- Planning Permission / Permits (TCPA / DCO etc)
- FEED Engineering Complete
- EPC / OEM Contract Ready
- Government Support Contract (ICC / LCHA / DPA etc)
- Financing Complete (equity and debt)



HyNet Project Landscape

	FID	Value
CO_2 Transport and Storage (Eni)	☑	£2b
Track 1 Capture Plants (Encyclis / EETH / Heidelberg / Viridor)	2025 / 26	Ca. £2-3b
Track 1 Expansion Capture Plants (Enfinium, Evero, EETH, EETF, Uniper)	2027 / 28	Ca. £2-3b
Hydrogen Transport (Cadent) and Storage (Storengy / INEOS)	2027 / 28	TBC

HyNet

Thank you

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From Development to Delivery

Daniella Carneiro
Specialist, Hydrogen & CCUS
Department for Business & Trade

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Department for Business & Trade

HyNet Supply Chain Summit

12th June 2025

From Development to Delivery

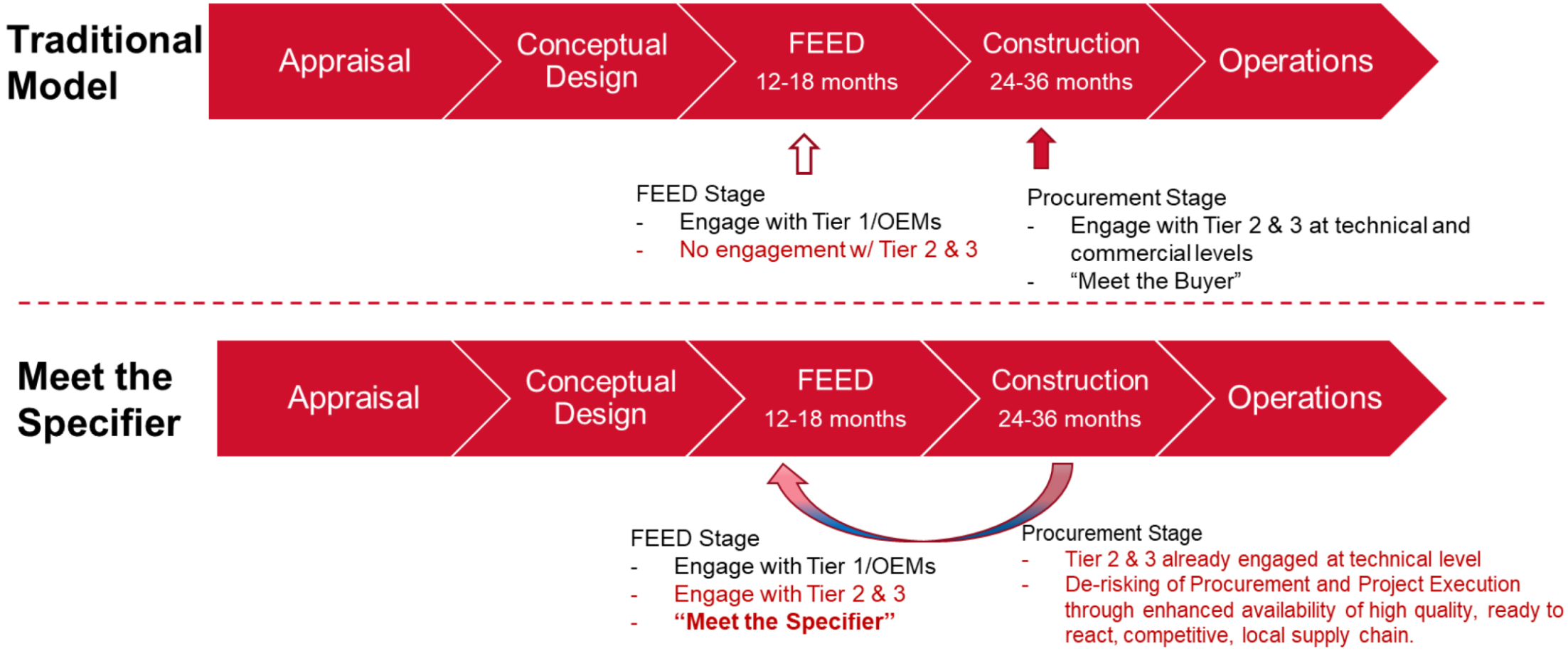
Let's Celebrate

- 10+ years
- Funding
- FID's!

And Carry On

- Supply chain transition and growth
- Project execution
- Ways that DBT can support?

Meet the Specifier = Early Supply Chain Engagement



Meet the Specifier = Target Outcomes

Thank You

Daniella Carneiro

DBT Business Specialist, Hydrogen & CCUS

Daniella.Carneiro@businessandtrade.gov.uk

Department for
Business & Trade

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Networking Break

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Welcome back

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EET HYDROGEN Hydrogen Production Plant 1 & 2

Vincent O'Donnell
Procurement Manager
EET Hydrogen

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ESSAR ENERGY TRANSITION

EET HYDROGEN

From ambition to action

Vincent O'Donnell

Contracts and Procurement Lead

12 June 2025

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EET HYDROGEN

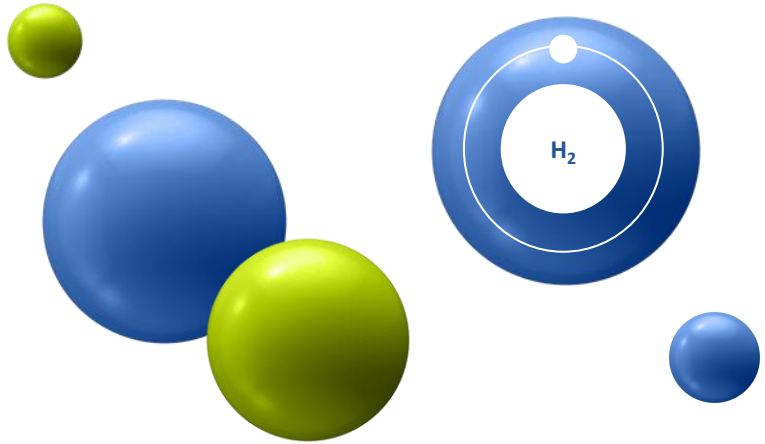
HyNet Supply Chain Summit

Vincent O'Donnell

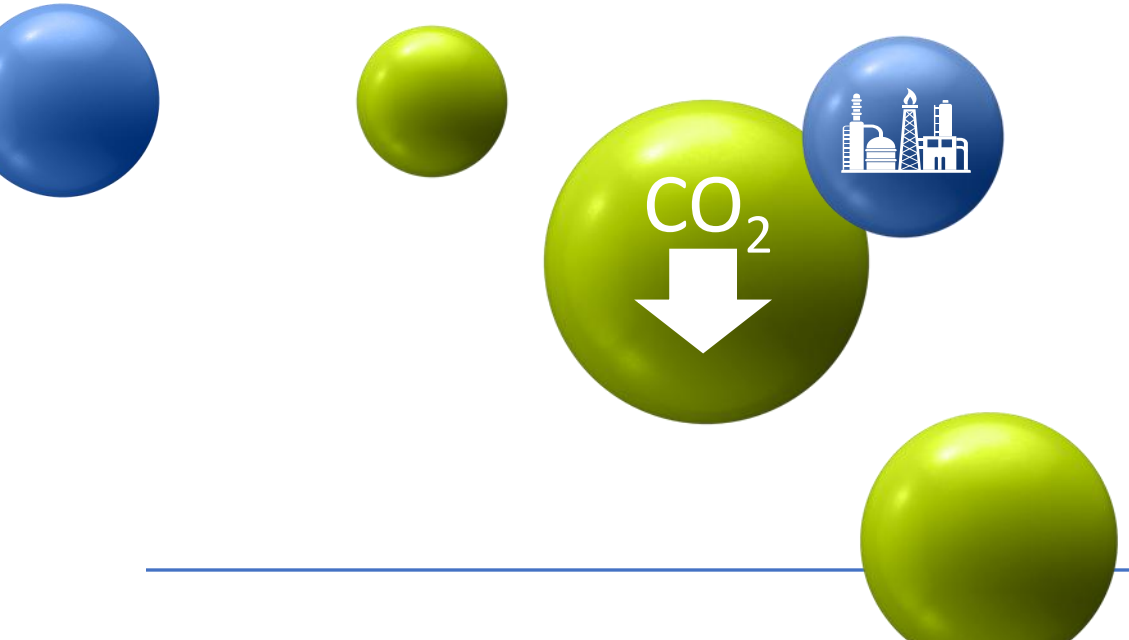
Contracts and Procurement Lead

12 June 2025

What we'll cover today



HyNet Supply Chain Summit



- Introduction
- The Heart of Hynet
- HPP1 overview
- HPP1 stakeholders
- HPP1 projects schedule
- HPP1 key procurement packages
- HPP2 overview
- HPP2 project status
- HPP2 key procurement packages

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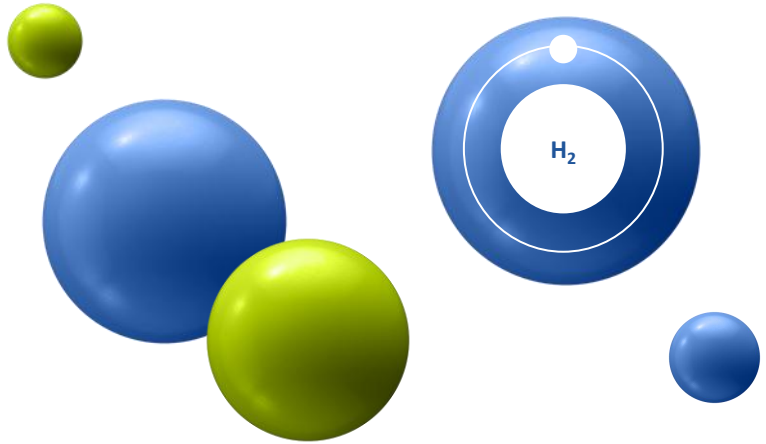
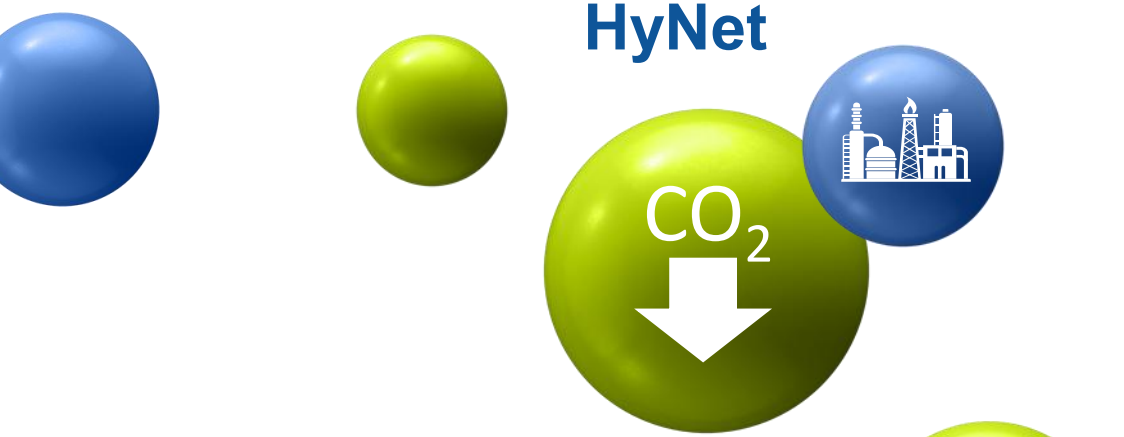
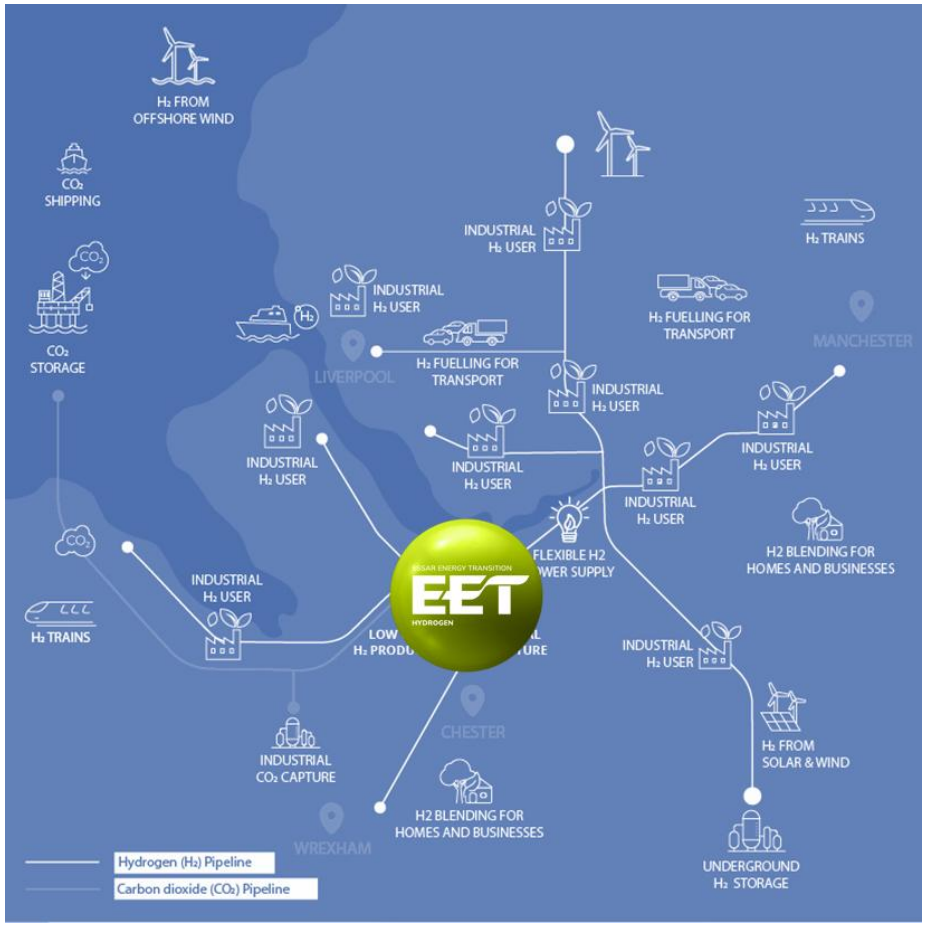
The heart of hydrogen



EET Hydrogen is at the heart of HyNet





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Hydrogen Production Plant 1 Overview

Hydrogen Production Plant 1 (HPP)

Stanlow Manufacturing Complex,
Ellesmere Port, Cheshire

350MW

Land: EOUK
Power: SPEN
H_2 Network: Cadent
CO_2 Supply & Storage: ENI
Water: UU
H_2 Offtakers: CHP & EOUK

HPP1 Stakeholders

HPP1
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JM BASF

Licensor: Johnson Matthey (JM): Low Carbon Hydrogen (LCH^{TM}) Plant, GHR-ATR, Process Technology Package

BASF: Carbon Capture Process Technology

KENT

FEED Contractor & DEC

ENKA

EPC Contractor

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HPP1 project schedule

Project start: Feb 2025

LNTP schedule: 4 months from project start

Project schedule: Full notice to proceed +42 month

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HPP1 key procurement packages

Sno.	Equipment Packages
1	Feed Fired Heater Package
2	H_2 Compressor Package
3	CO_2 Compressor Package
4	Purification Recycle Blower
5	Flash Gas Recycle Compressors
6	Reciprocating ROG Compressors
7	Isothermal Shift Converter
8	Process Columns & Vessels
9	CO_2 Dehydration Package

Sno.	Equipment Packages
10	Shell & Tube Heat Exchangers
11	Steam Boiler Package
12	Deaerator
13	Demineralisation Plant Package
14	Pressure Swing Adsorption (PSA) Package
15	Plate and Frame Heat Exchangers
16	DCS/ESD/F&G
17	Flare Package

Hydrogen Production Plant 2 Overview

Under Government Approval

- Hydrogen Production Plant 2 (HPP2)
- Stanlow Manufacturing Complex, Ellesmere Port, Cheshire
- 1000MW*
- Licensor: KBR
  FEED Contractor: KBR

* Subject to approval from DESNZ

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HPP2 Project Status

- Completed basic engineering package for 1000MW plant
- Completed FEED
- Completed major Health, Safety and Environmental studies
- Appointed WSP as a consultant to support future planning and consenting applications
- Responses on Expressions of Interest (EOI) received from potential EPC bidders

Completion timelines:

	Planned start	Planned completion
Pre-FEED	Feb 2023 (A)	Apr 2023 (A)
FEED	Aug 2023 (A)	Aug 2024 (A)
FID		Q2 2026 (P)
COD		Q2 2030 (P)

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A: Actual, P: Planned

HPP2 key procurement packages

Sno.	Equipment Packages
1	Steam Methane Reformer
2	ROG Compressor Package
3	NG Compressor Package
4	Sour ROG Sulphur Removal Package
5	CO_2 Gas Compressor Package
6	H_2 Compressor Package
7	Tail Gas Compressor Package

Sno.	Equipment Packages
8	Electrical Cables
9	Modular E-House & Transformers
10	Analyzer with Shelter
11	Mechanical Static
12	Air Cooled H.E
13	Fiscal Metering Package

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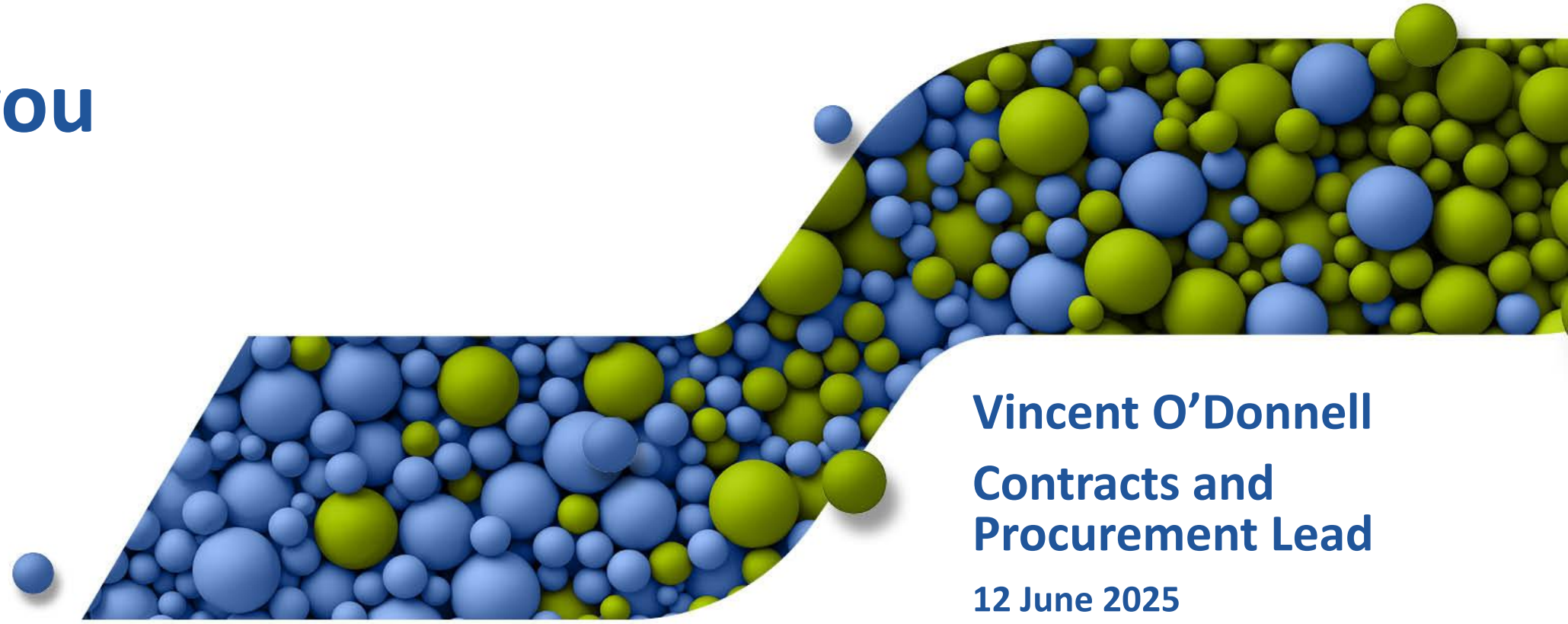
Thank you



Vincent O’Donnell

Contracts and Procurement Lead

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ENCYCLIS Protos Energy Recovery Facility Capture Plant

David Carruthers
Head of Procurement
Encyclis

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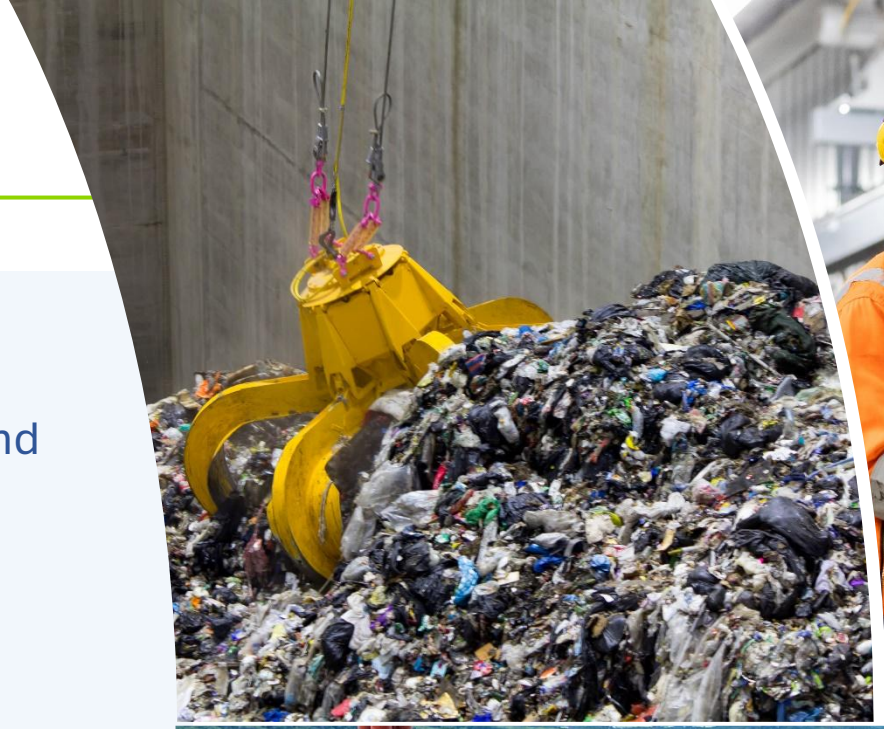
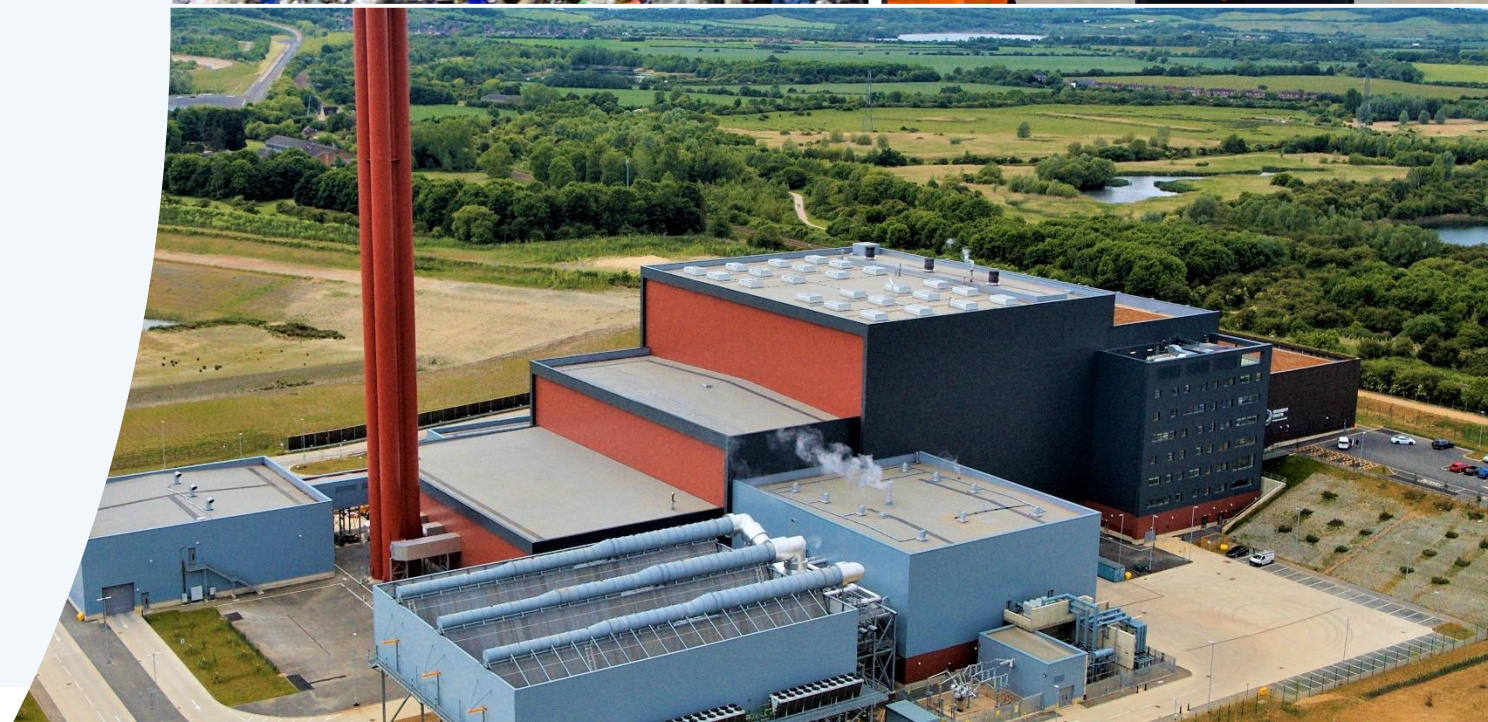
An EQT portfolio company

About Encyclis

- One of the largest pure play owners and operators of EFW plants in the UK and Ireland
- 4 operational plants and 2 in construction, plus a fully-owned development project in Northamptonshire
- Over 250 employees across seven sites
- Supporting industry’s 2040 net-zero target
- Strong track record in bringing plants to financial close
- Owned by EQT Infrastructure, a Sweden-based purpose-driven global investor managing funds of €210B.





Our growing fleet

ENCYCLIS

Earls Gate

- Capacity: 218kT / 22MW
- Ownership: Encyclis (50%)
  Brockwell Energy (50%)
- O&M: HZI

Protos

- Capacity: 500kT / 44MW
- Ownership: Encyclis (75%)
  Biffa (25%)
- EPC: METKA / SBG
- O&M: Encyclis

Dublin

- Capacity: 690kT / 61.5MW
- Ownership: Encyclis (50%)
  DIF / MEAG (50%)
- O&M: Encyclis

Walsall

- Capacity: 478kT / 44MW
- Ownership: Encyclis (100%)
- EPC: KVI
- O&M: Encyclis

Newhurst

- Capacity: 455kT / 40MW
- Ownership: Encyclis (50%)
  Biffa (50%)
- O&M: Encyclis

Corby

- Ownership: Encyclis (100%)

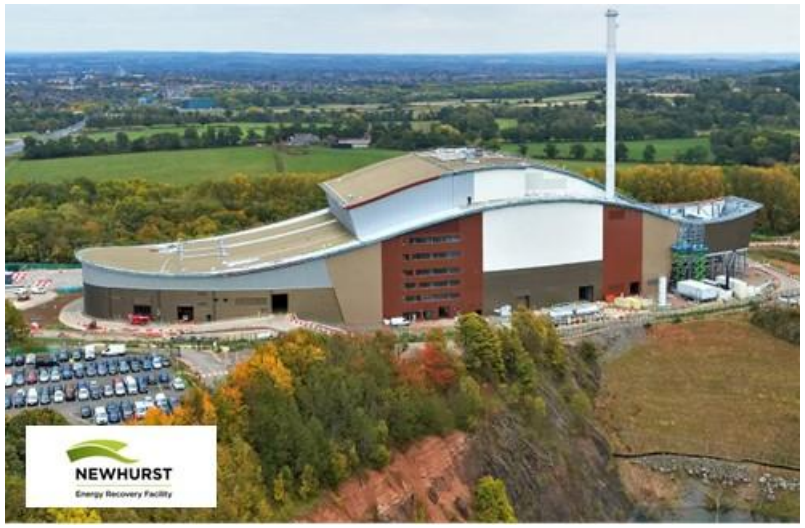
Wellingborough
IBAA Plant

Rookery South

- Capacity: 657kT / 60MW
- Ownership: Encyclis (80%)
  Veolia (20%)
- O&M: Encyclis

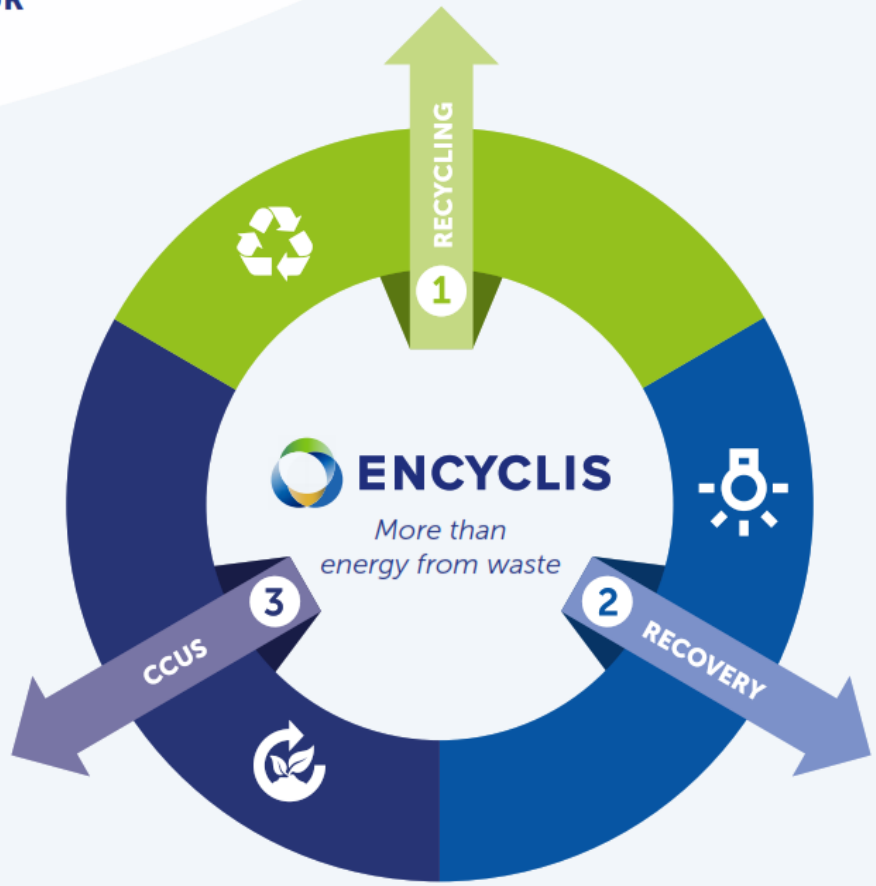
Existing fleet capacity
2.7m
tonnes p/a

Our facilities



About Encyclis

RECOVERING AND RECYCLING RESOURCES FUNDAMENTALLY MEANS THE DELIVERY OF THREE WIDER ENVIRONMENTAL OBJECTIVES BEYOND OUR ROLE IN TREATING NON-RECYCLABLE WASTE AND GENERATING BASELOAD ELECTRICITY.



1. ENSURING RESIDUES FROM THE PROCESS ARE RECYCLED OR REUSED:

The ash that results from Encyclis' waste treatment process is recycled in specialist plants to create aggregate materials for the construction industry. However, Encyclis continues to work toward increasing this rate to 100%.

In addition, metals are recovered from that ash for re-use. Through this, Encyclis returns valuable resources to the production cycle and avoid the need for mining or extracting new material, which is both energy intensive and harmful to the environment.

2. DELIVERING ENERGY BEYOND ELECTRICITY:

Encyclis provides a core public hygiene service and generates sustainable baseload electricity to power communities. In addition to this, it is committed to supporting other critical infrastructure through the deployment of district heating for local communities, playing a vital role in further decarbonising UK homes.

Encyclis is actively progressing opportunities to export heat to support its decarbonisation journey.

3. CAPTURING CARBON EMISSIONS THROUGH CARBON CAPTURE AND STORAGE (CCS):

CCS is critical to a sustainable pathway to net zero for the industry. However, technology at sufficient scale is still at an early stage, and uncertainty around carbon pricing or transport networks make the economics unclear.

Encyclis is investing in understanding how CCS can work for its facilities. The company is at the forefront of delivering CCS, with its Protos plant being identified as a preferred option for funding by the UK Government as part of the HyNet cluster.

Protos is just the beginning. Through this process, Encyclis and the industry will work to improve the technology and will increase its expertise to be able to roll-out this technology to its other plants.

Our values

Safety first

A safe, healthy and risk-aware workplace improves the wellbeing of our colleagues, customers, the local communities we serve, and the planet we must protect.

Succeeding together

Empowering our people, collaborating with partners and working together as a diverse, inclusive team help us adapt to a fast changing world, while adding value to our enterprise.

Focused on circularity

We focus on a circular value chain, recovering energy and by-products from waste that would otherwise end up in landfill, supporting the transition to renewable energy and a more circular economy.

Responsible partners and good citizens

We take our responsibilities seriously, whether that's with our partners, regulators or local communities. We always aim to achieve the highest standards of compliance and accreditation.

100% and beyond

Every day we strive to do better, in a process of continuous improvement that impacts everything we do, from high plant availability to 100% waste recovery from energy to ash and metals recycling.

Our Energy Recovery Portfolio

ENCYCLIS

COMBINED, OUR EXISTING AND PLANNED FACILITIES DELIVER A NUMBER OF BENEFITS TO THE UK AND IRELAND:

OVER
2.7M
TONNES

Total residual waste processing capacity per annum

282
MW

of sustainable baseload electricity generated

562,500
HOMES

powered through our electricity per annum

UP TO
350,000
TONNES

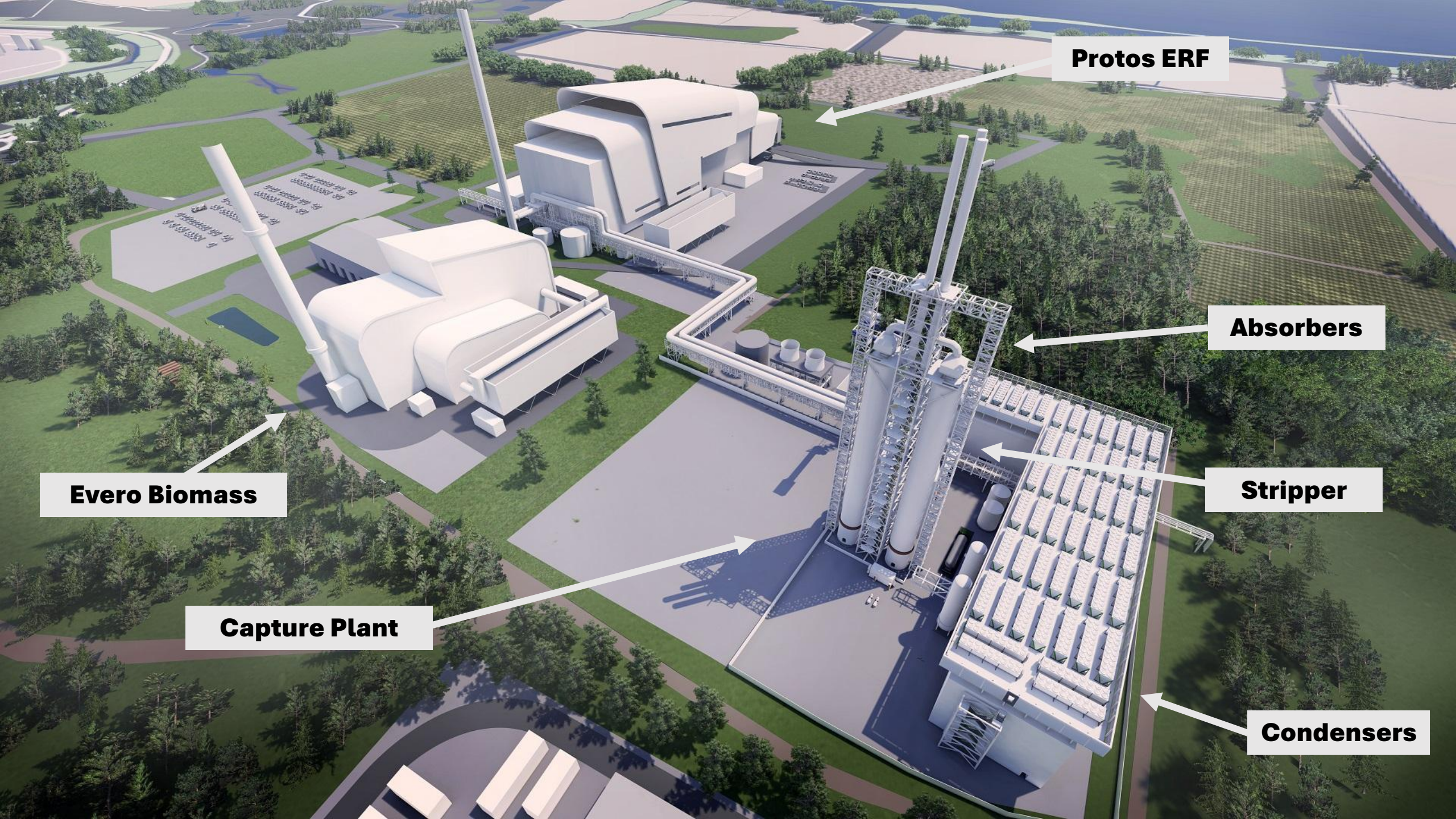
of CO_2 to be captured per annum through first carbon capture facility

UP TO
200,000
TONNES

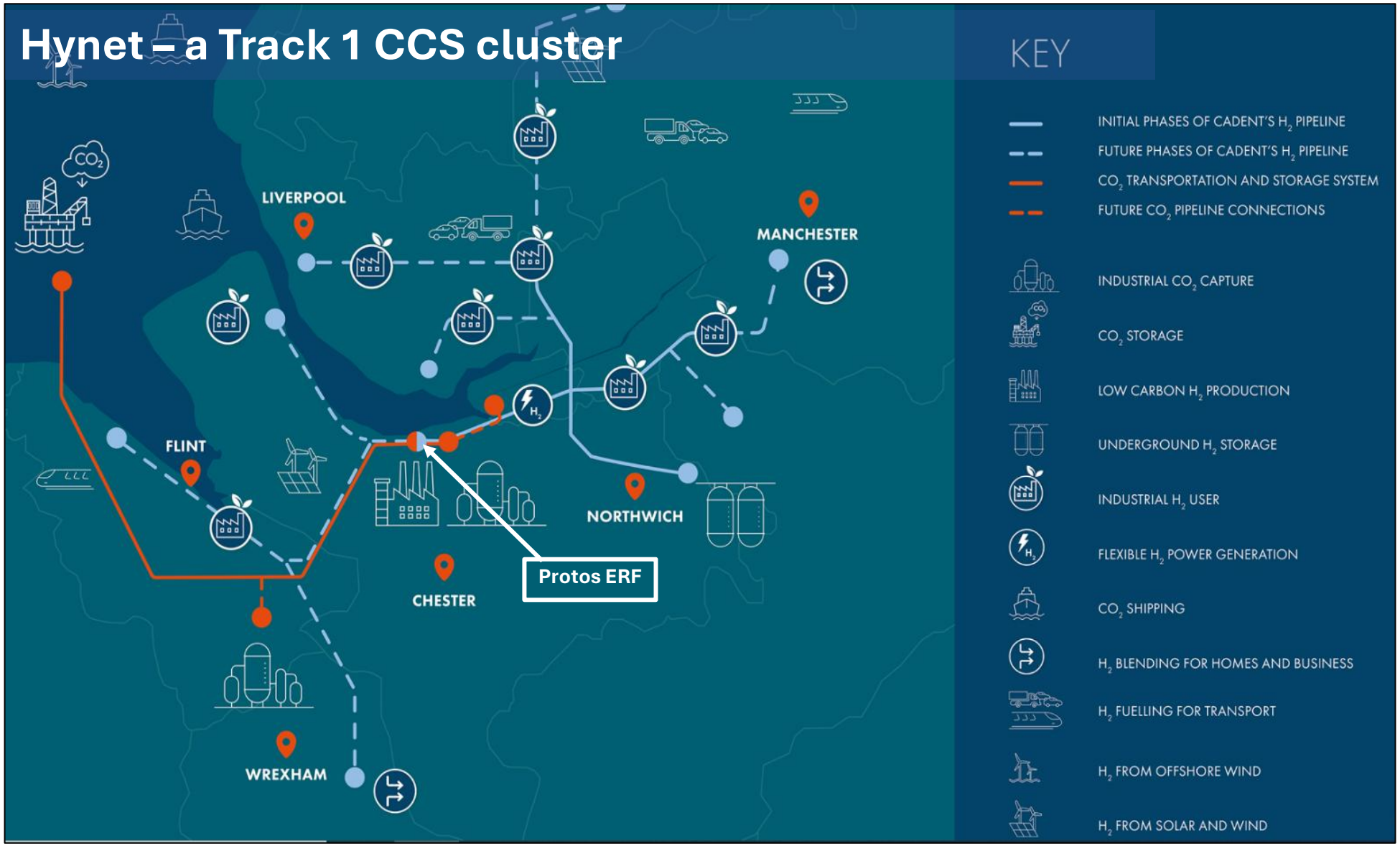
of IBA to be processed per annum at new Wellingborough treatment facility

250
PEOPLE

FTE staff employed throughout the UK and Ireland


Protos ERF
Absorbers
Evero Biomass
Stripper
Capture Plant
Condensers

Key part of the Hynet industrial decarbonisation cluster



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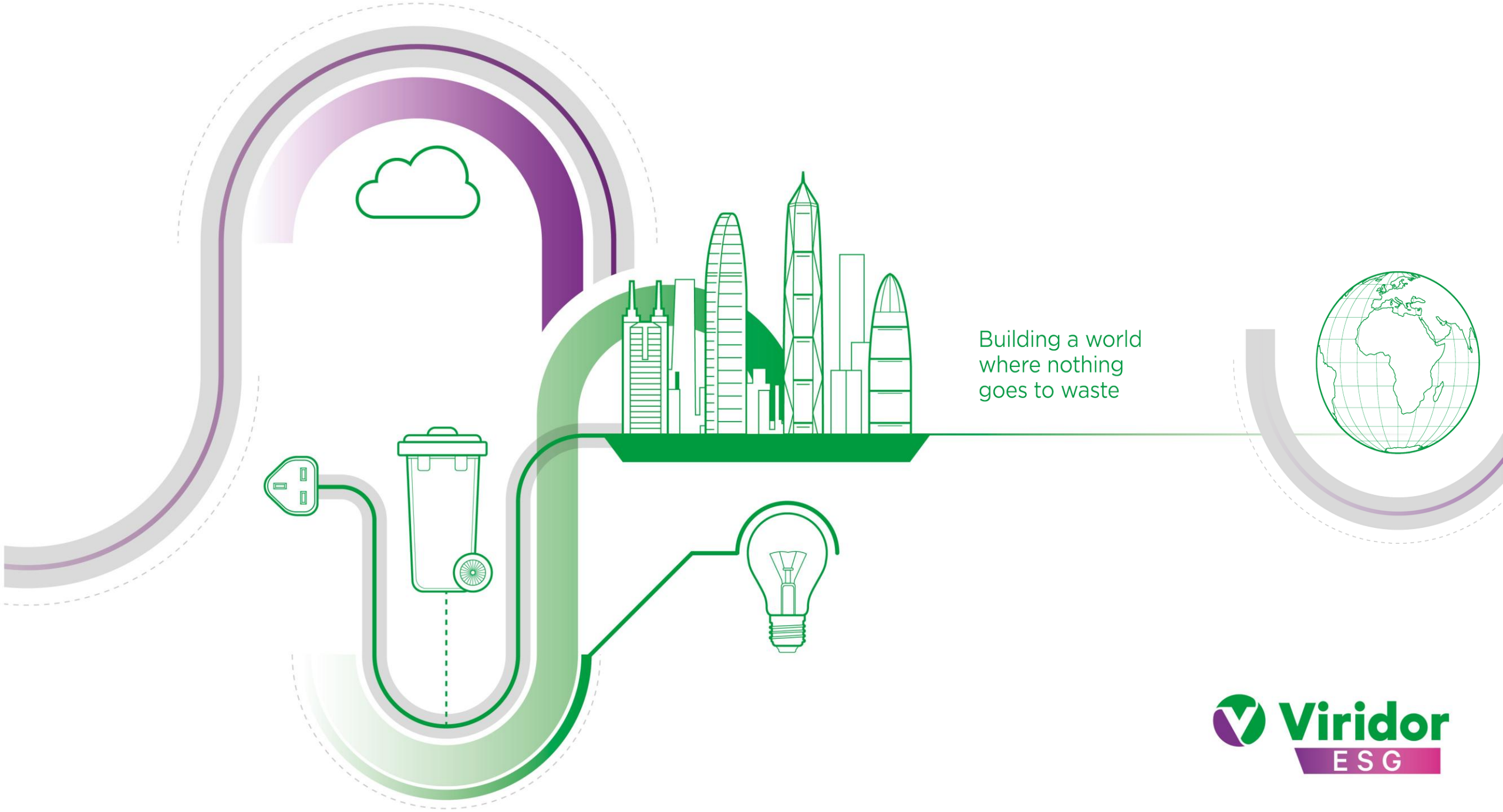
VIRIDOR Runcorn Energy from Waste Capture Plant

Aren Houghton, CCS Project Manager**, Viridor**

Steve Critchley, Technical Engineering Manager**, Viridor**

FEATURING

SUPPORTED BY



Building a world
where nothing
goes to waste

Viridor
ESG

Runcorn CCS Project

Viridor

Pathfinding
1st
ERF CCS Project of its scale globally

Capturing
c.950ktpa
CO_2 from flue gas vented by the ERF

Removing
c.500ktpa
CO_2 from the atmosphere via biogenic waste

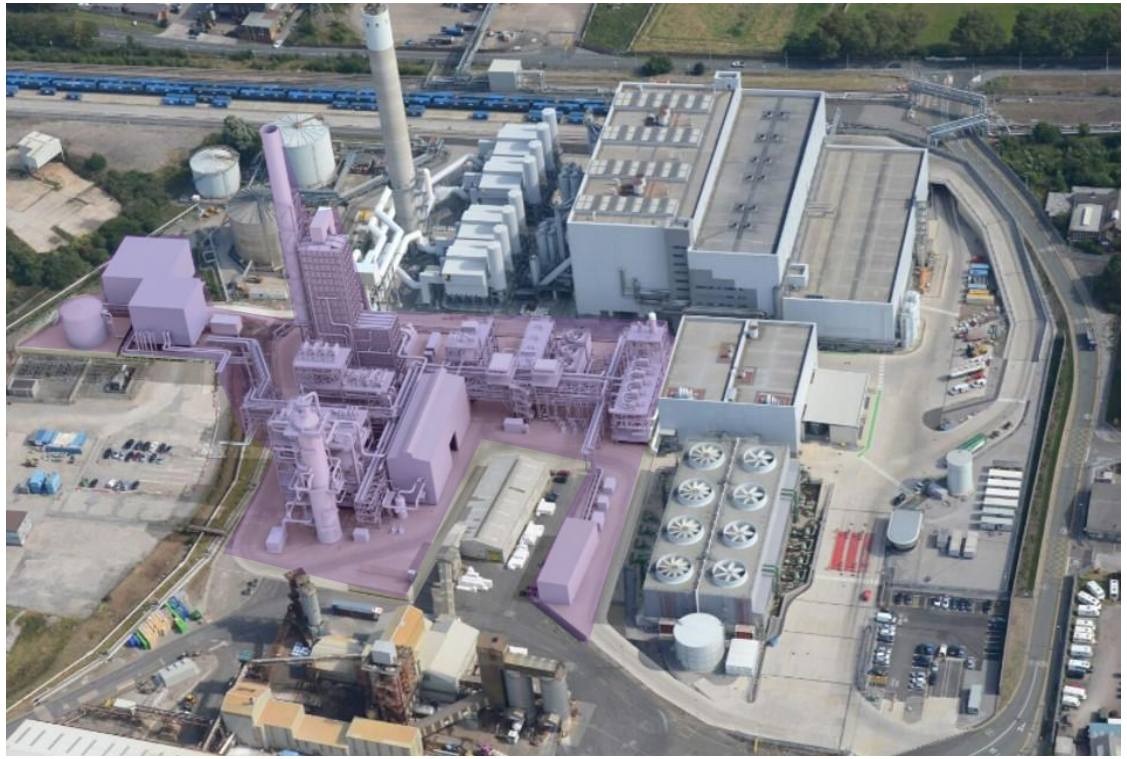
Providing
c.5%
UKG's 2030 annual carbon capture volumes target

Utilising
95%
Capture rate efficiency

Decarbonising
c.45%
Viridor's total fossil carbon footprint

Creating
c.60
High skilled permanent jobs in O&M

Investing
c.£1 Billion
In carbon capture equipment



Illustrative images based on preliminary modelling for the CCS Project

Runcorn Energy Recovery Facility

- Located at Weston Point, Runcorn
- UKs Largest operational ERF and CHP (proving electricity and steam to local industry)
- More than 1 million Tonnes of Waste processed annually
- Generates approximately 90MW of Electricity & 100MWth Heat
- Producing circa 1 million Tonnes of CO_2 annually

Runcorn CCS Project – Enabling and Demolition

- Enabling and demolition works will be executed under Viridor supervision prior to FID on the full CCS construction

- Unlocking the opportunity to develop CCS is a collaboration with Ineos/Inovyn
- Inovyn are Landowners for the CCS project and the existing ERF and part owners in ERF Facility
- Project involves demolition of
  - Redundant CHP Plant (operational prior to ERF build)
  - Existing salt warehousing
  - Existing car park (to be relocated to facilitate CCS)
- Reconfiguration of the site involves building:
  - Workshop
  - Warehouse extension
  - Services diversions
  - Replacement gas skid
  - Replacement car park

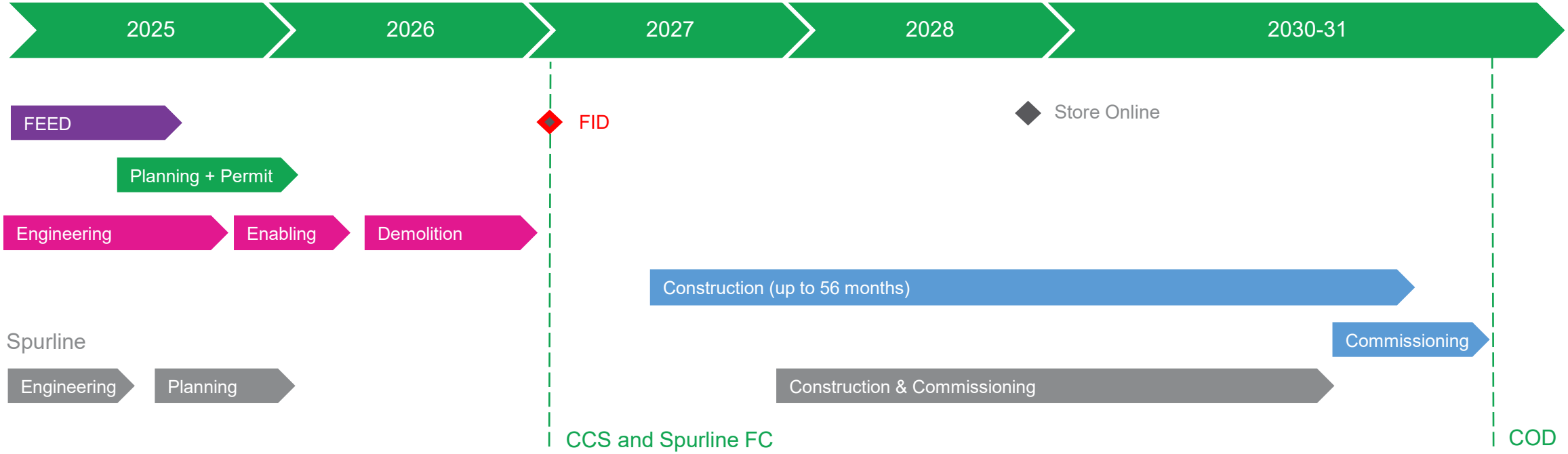
Runcorn CCS Project - Construction

- Integration with existing ERF key to project success.
- Sharing of utilities and services to minimise CAPEX and OPEX costs and maximise benefits to both operations.
- Main Packages include:
  - Civils
  - Mechanical and Electrical
  - CO_2 Gas Compression
  - Back-pressure Steam Turbine
  - Waste Water Treatment Plant
  - Cooling Towers
  - Heat Exchangers

- Construction of the CCS project is intended to be executed under EPC contract with site supervision handed over to an EPC contractor under CDM

Runcorn CCS Project Timeline

- FEED Completion July 2025
- Enabling & Demolition Works Commence Q1 2026
- FID Q1 2027
- Construction Start Q3 2027
- COD Target 2031



- The dedicated spurline for the Runcorn CCS will be delivered by Liverpool Bay CCS (ENI)

Runcorn CCS Project - Supply Changes Opportunities & Challenges

Viridor

Challenges

- Nascent market – limited standardisation allows for more innovation but can be a challenge, especially in risk-sharing mechanisms
- Limited pool of UK precedent and opportunity to learn lessons and adopt best practices
- Transferability of existing skills, technology and products
- Many suppliers don't realise their potential to be part of the CCS market and contribute to the government's net zero vision
- Regulatory framework: generally broadly defined in the UK, but EU regulations can add layers of complexity

Opportunities for local businesses through all stages of the project

- Anticipated to create a net impact of approximately 1,300 person years of employment during construction phase
- 300 to 400 People on site over 4-to-5-year period
- Being part of a worldwide first of its kind retrofit of CCS at scale to an ERF facility
- Finding creative solutions and setting standards in the UK CCS market

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Networking Lunch

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Welcome back

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Track 1 Expansion Overview

David Parkin
Chair
HyNet Alliance

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Evero

Matthew Bridgeman
Development Manager
Evero

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InBECCS

HyNet supply chain summit

12 June 2025

217,000 tonnes p.a. of Carbon Dioxide Removals (CDR)

100% domestically sourced waste wood feedstock

Direct connection to HyNet Transportation and Storage network

MHI chosen as CCS technology partner. Expecting to commence FEED imminently.

2025	Project Negotiation List for Track 1 expansion
2026	FID
2029	Operational

InBECCS

is set to become the pathfinder project for the UK BECCS and GGR sector

InBECCS

- Retrofit onto existing Ince Bio Power plant at the Protos energy park in Cheshire
- Condensers and compressors will be located adjacent to the Protos AGI
- The remainder of InBECCS plant is laid out around the Ince Biopower perimeter
- This enables InBECCS construction concurrent with the build of the adjacent Encyclis CCS plant, and during continued operation of Ince Biopower
- Planning application being submitted in August 2025.

InBECCS – Timeline for Delivery

	2025				2026				2027				2028		2029	
Activities	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	H1	H2	H1	H2
FEED			■	■	■	■										
FID							■									
Vendor pre-qualification				■	■	■	■									
Mechanical								■	■	■						
Piping								■	■	■						
Long lead items								■	■	■						
Civils/Elec/C&I										■	■					
Construction								■	■	■	■	■	■	■		
Commissioning														■	■	
COD																■

Procurement challenges

- Want proven, low-risk solutions
- Availability of contractors/skilled personnel
- Multiple projects, limited capacity
- Tight schedules, fixed obligations for GGR
- Price fluctuations
- Supply chain good practice

evero

Thank you

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CADENT HyNet North West Hydrogen Pipeline

Robert Donovan
HyNet North West Hydrogen Pipeline Project Director
Cadent

FEATURING

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HyNet North West Hydrogen Pipeline

Delivering clean growth

Robert Donovan
Cadent Project Director

Hydrogen Pipeline Network Overview

Phase 1B (Q4-2027)

- Connects 1st industrial user
- 2.3km in length
- Detailed Design, Long Lead Items and construction 2026-2027

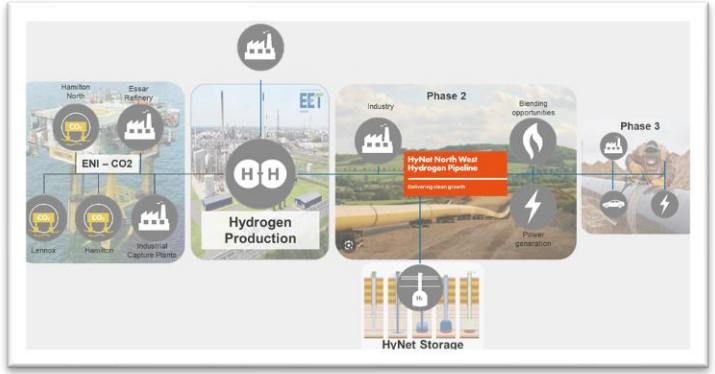
Phase 2 (Q2-2030)

(Phase 2 Spurs)

- 6 Industrial users
- 2 large Power Stations and 3 smaller generators
- Growth in smaller production connection enquiries
- 100km in length; inc. 82 km 42” / 30” / 18” HP steel trunkline
- 9 Above Ground Installations and 2 Block Valve Sites
- 24 Major Road, Rail and River Crossings
- >1000 Utility Interactions
- Detailed Design, Long Lead Items and construction 2027 – 2030

Phase 3 (2032 onwards)

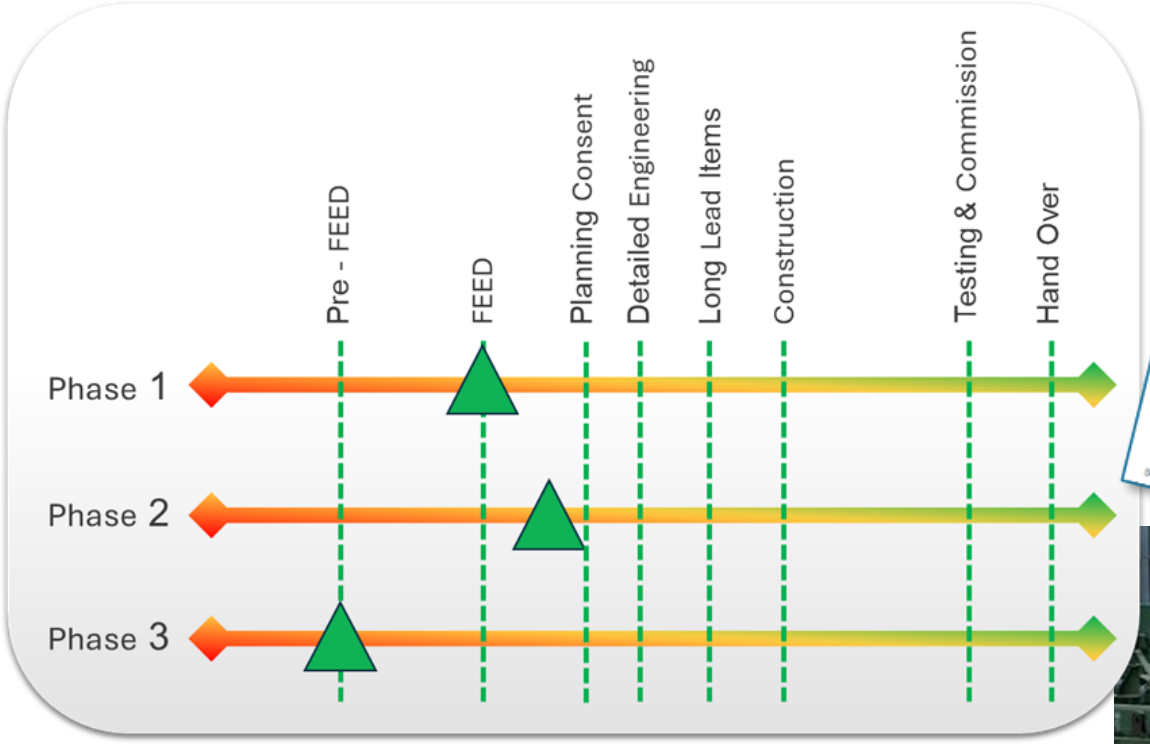
- Scoping of users / demand commenced
- Pre-FEED in 2026
- Commission 3 yrs. post Phase 2
- Potentially a 250km extension

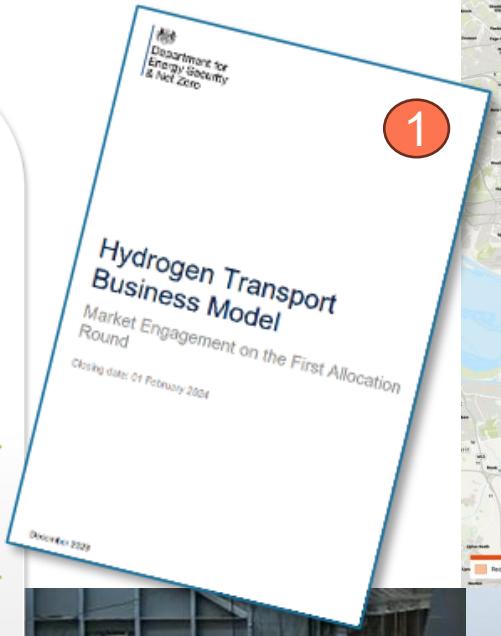


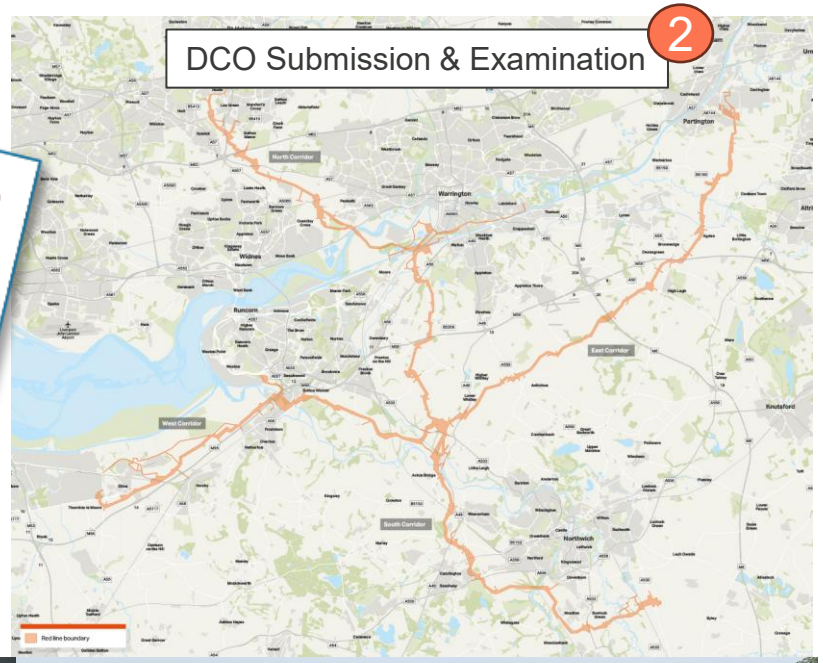
Cadent
Your Gas Network

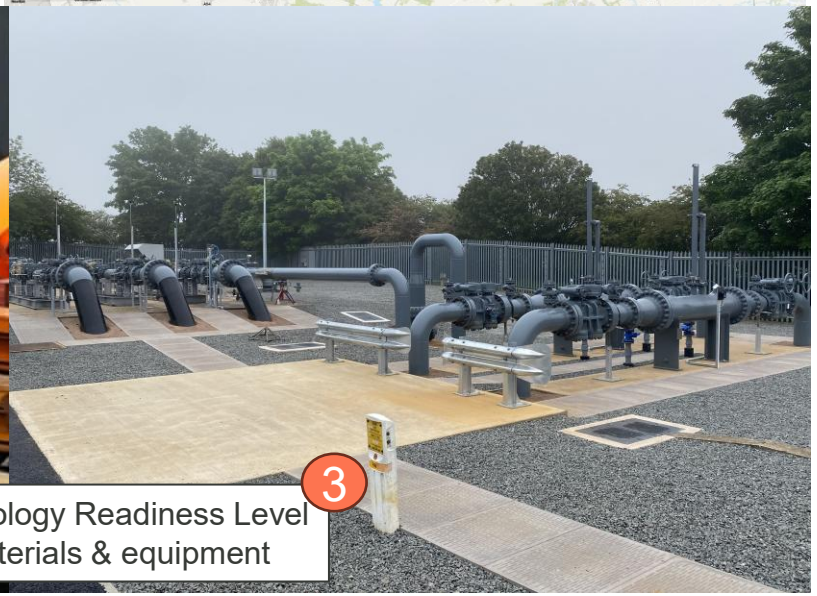
HyNet North West Hydrogen Pipeline
Delivering clean growth

What's next

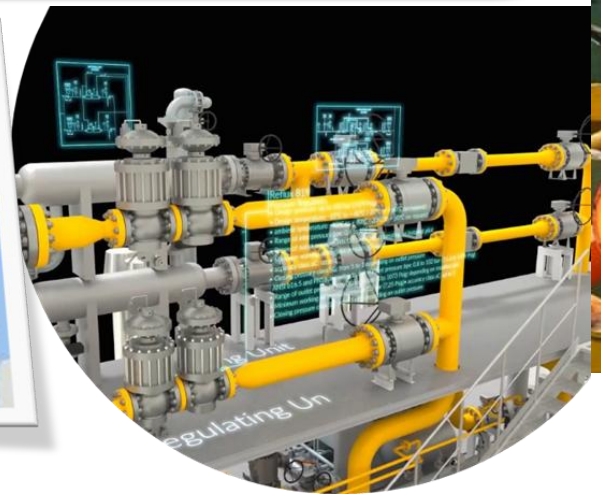








Long Lead Item Technology Readiness Level works for specialist materials & equipment



4 Local Content & Skills strategies

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Delivering clean growth

How to get in contact

QR Code for the Project Website

QR Code for the interested supplier registration

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STORENGY HyKeuper Hydrogen Storage

Tom Hay
Contract Management & Ethics Director
Storengy

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storengy

A company of ENGIE

INEOS

12th June 2025

Supply Chain Event

Executive Summary

- HyKeuper will deliver 19 underground salt caverns for hydrogen storage
- Each cavern will have a nominal working gas volume of up to 400,000m^3 (a bigger volume than St. Paul's cathedral)
- The overall facility will store circa. 1.3TWh to support the HyNet network, both to balance supply/demand for industrial users and as a store for power generation
- A Gas Processing Plant ("GPP") will transfer hydrogen from the network into the caverns, and vice versa
- The GPP will incorporate reciprocating compressors to compress the Hydrogen and an adsorption based dehydration system to remove water moisture post-storage and achieve the required network specification

Stublach

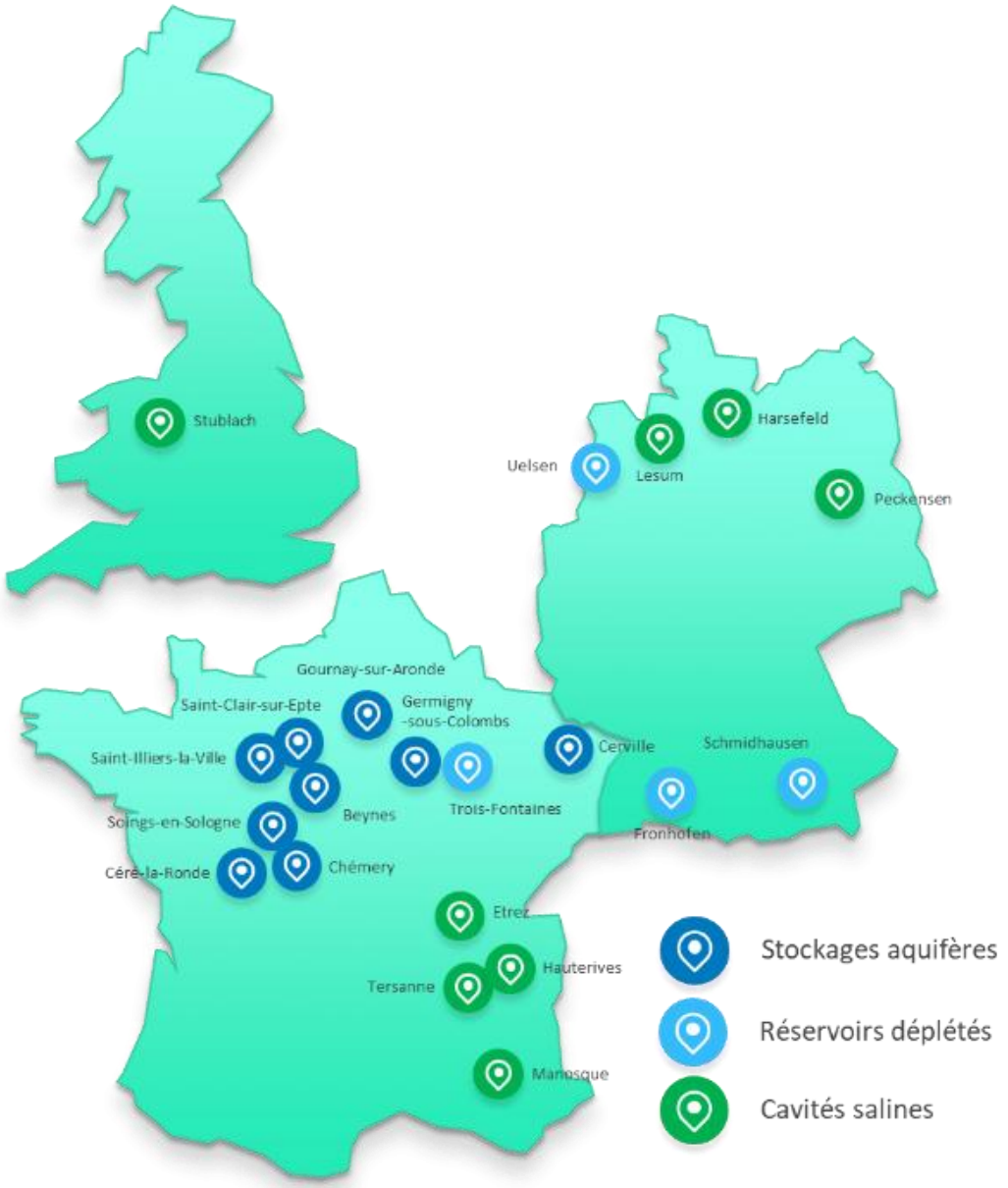
- Storengy owns and operates the Stublach Gas Storage Facility, located adjacent to the HyKeuper project site

- Stublach is the UK's largest onshore gas storage site, comprising 20 salt caverns storing 5TWh of natural gas (enough to supply the UK for 2 days)

- More information can be found at: www.storengy.co.uk/storengy-uk-stublach-site or www.storengy.com

Storengy

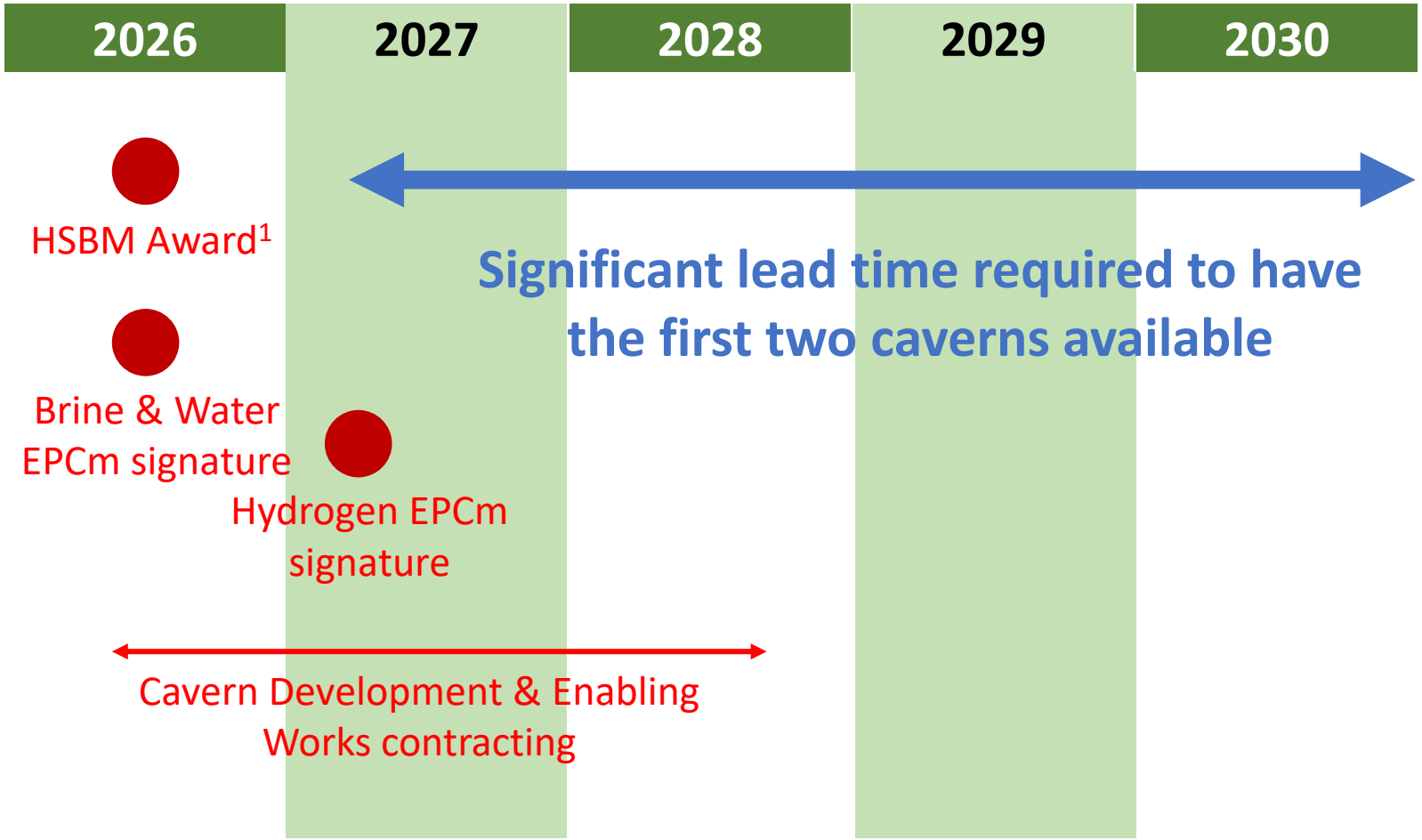
- Storengy is a subsidiary of ENGIE, responsible for underground gas storage
- Storengy operates 21 underground storage sites in Europe (in aquifers, salt caverns and depleted fields)
- Storengy is one of the world leaders in underground gas storage, with expertise across subsurface sciences (geophysics, geostatistics, rock mechanics, solution mining) and surface engineering (compression, processing, command control, etc.)



HyKeuper Contract Packages & Contract Approach

Cavern Creation	"SMC" refurbishment	Brine & Water	Hydrogen Plant ("GPP")
• Drilling • Leaching • De-brining • Completions • Work-overs	• Refurbishment of the existing Solution Mining Compound (pumps, valves etc)	• Pipelines from SMC to caverns • Wellhead compounds • Nitrogen compound • Road network	• Compression • Dehydration • Connections to hydrogen above ground infrastructure ("HAGI") • Pipelines to caverns
Multi-lot EPC (Client co-ordinated)	**EPCm**	**EPCm**	**EPCm**

Timetable (illustrative)



Note: 1. Hydrogen Storage Business Model timetable has not been released

HyKeuper Attendees

Tom Hay – Director of Contract Management

- Tom has worked for ENGIE since 2011 in a variety of roles
- Tom has particular expertise in long duration power storage, and was previously the commercial lead for the mid-life replanting of Dinorwig and Ffestiniog pumped storage power stations in Wales

Tim Howe – Contracts Engineer

- Tim has worked on various large infrastructure projects within the energy, utility, chemical, telecoms and nuclear industries
- Tim was involved in the procurement and contract management of the Stublach gas storage facility from 2010 to 2021

James Kidd – Project Manager

- James has worked in various petrochemical & pharmaceutical projects at various project stages over the past 5 years
- James worked for 7 years in local cement manufacturing at Padeswood

storengy

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Rob Beresford
Technical Manager
Costain

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Costain Overview

For HyNet Supply Chain Summit June 2025

Together we
shape, create, deliver

A clear strategy

Delivering essential infrastructure to meet critical national needs

Driving economic growth

Addressing climate change, targeting net zero and climate adaption

Safeguarding the environment and securing future water supply

Ensuring national security

Broadening our Tier 1 long-term customer base

Transportation

national highways, HS2, Gatwick Airport Storage & Hydrant Co, Heathrow, Network Rail, ABP Associated British Ports, eastwest Rail, Transport for London, Department for Transport, City of Bradford, MAG

Defence and Nuclear Energy

AWE, Westinghouse, NRS, babcock, EDF, BAE Systems Inspired Work, Sellafield Ltd, Rolls-Royce, urenco

Water

United Utilities, Tideway, Thames Water, love every drop anglianwater, Northumbrian Water living water, YorkshireWater, Severn Trent, Southern Water

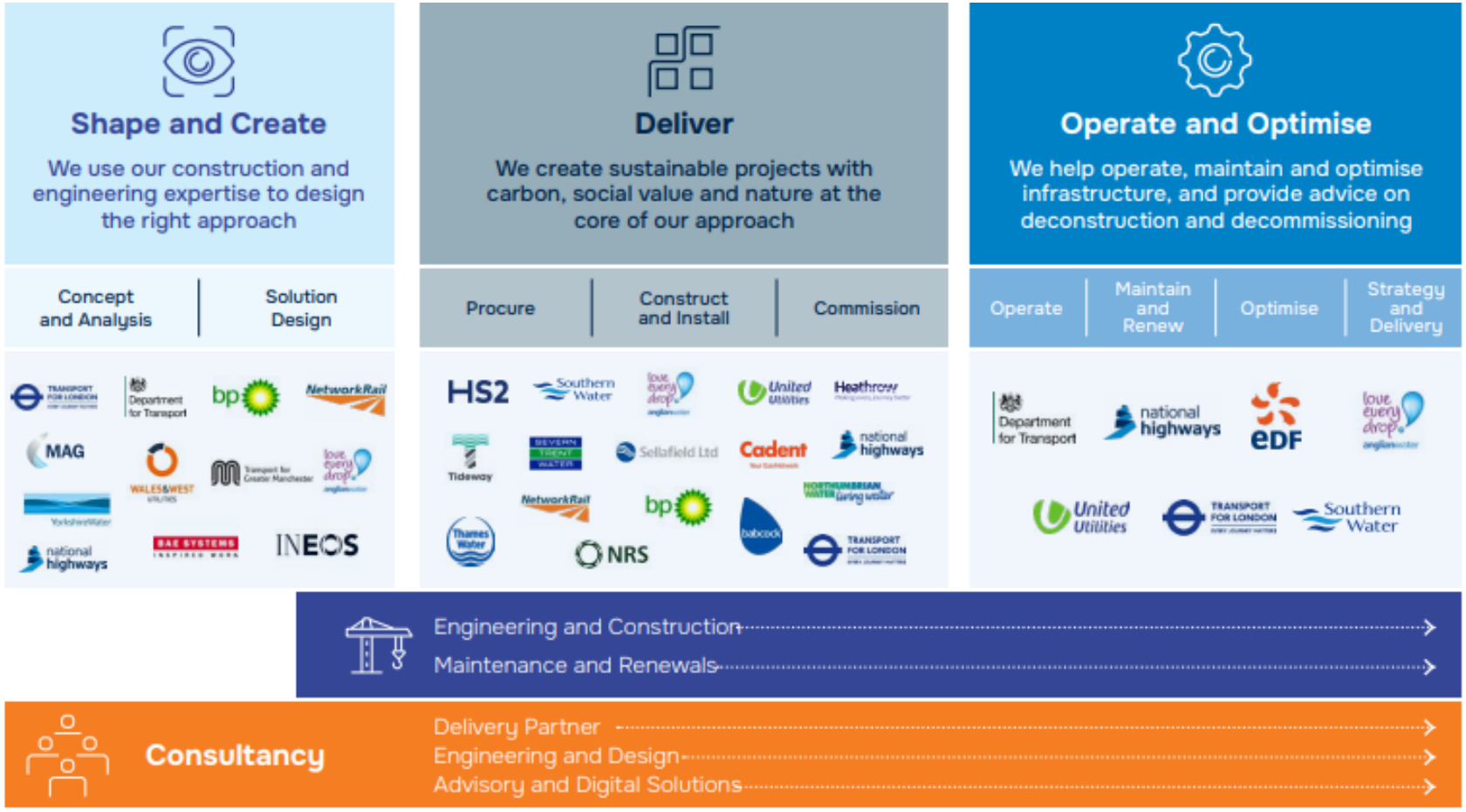
Energy

Cadent Your Gas Network, bp, DANA, HyNet, petroineos, INEOS, sembcorp, SGN, Shell, uniper, storengy, Wales&West Utilities

Pioneering Infrastructure Solutions Across the Lifecycle

Bringing our expertise to solve complex delivery challenges across the UK

From procurement, through construction and installation, to decommissioning, we create the opportunities and environment to deliver programmes safely, quickly and cost effectively.



About us

Key facts and locations

160 year
track record

c.3,200
people across a broad mix of disciplines

600+
chartered professionals, with deep sector knowledge

Five offices
and multiple project sites across the UK

Best Companies
accreditation as a ‘A Very Good Company to Work For’

Six sectors
with experts in Water, Energy, Defence and Nuclear Energy, Road, Rail and Integrated Transport

Strong 2024 Results

- Revenue £1,251m
- Operating Profit £31m

Industry leading safety record

- 0.11 LTIR

Costain Contact Team

Brine & Water Packages

Costain Contact Team

Hydrogen Packages

Costain Contact Team

HyKeuper FEED

Project Manager – Rob Beresford

- Over 25 years in gas industry with Costain
- Delivered Keuper Hydrogen Concept and Targeted FEED for INOVYN and several similar gas storage project FEEDs
- Involved in Keuper for over 7 years

Procurement Manager – Lisa Prue

- Over 15 years experience in Energy sector procurement with Costain
- Involved in Keuper for over 4 years
- Led Keuper supply chain engagement in 2024

Project Sponsor – Dave Richardson

- Delivered the build for the existing Stublach B&W and led several similar gas storage project FEEDs
- Involved in Keuper for over 7 years
- Over 10 years hydrogen experience

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Networking Break

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Mersey Tidal Power

Shaun Benzon
Head of Tidal Project Development
Liverpool City Region

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Mersey Tidal Power Project

Project Overview- 12th June 2025

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Mersey Tidal

ICE – State of the Nation

30 Jan 2025

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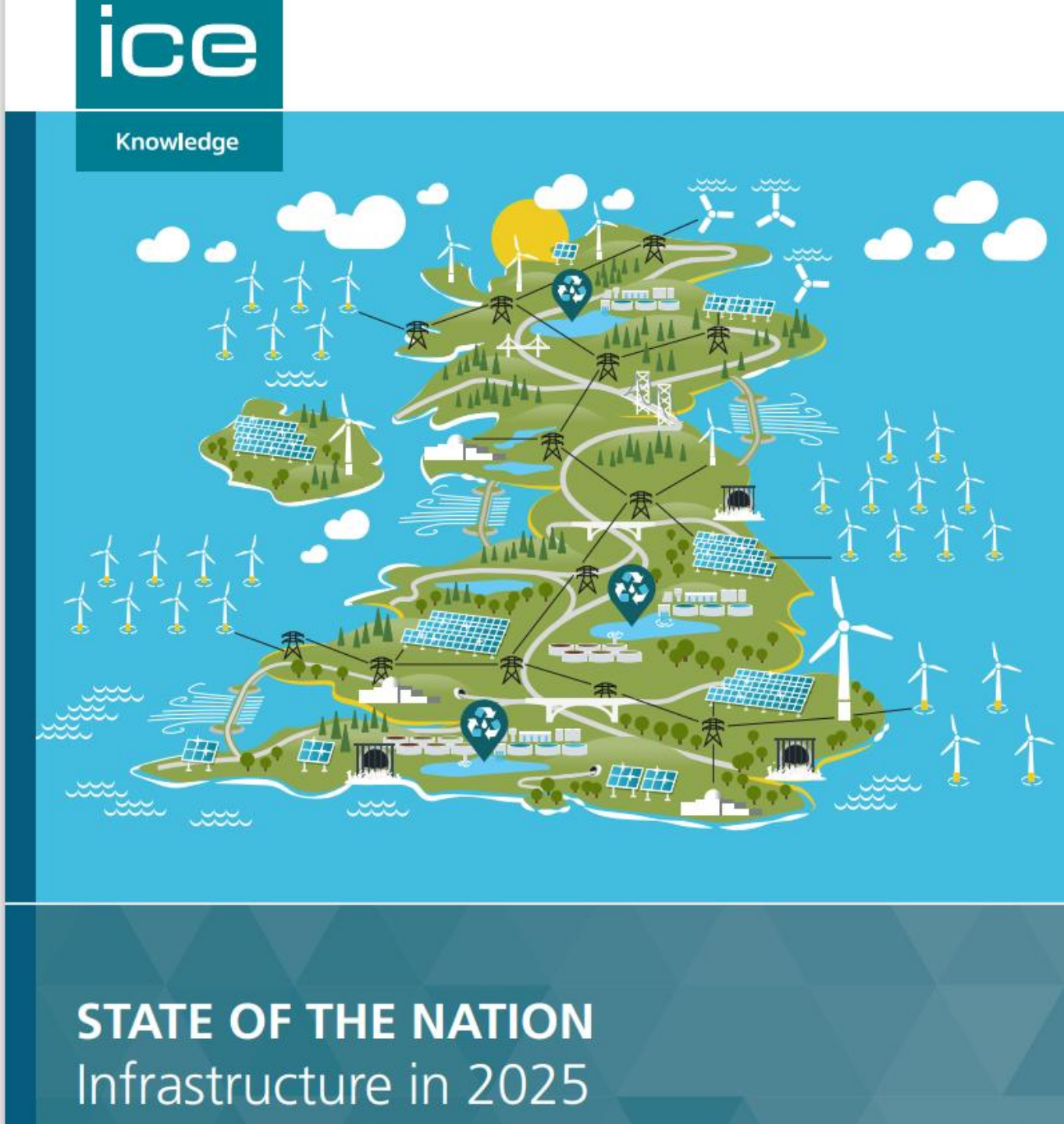
METRO MAYOR LIVERPOOL CITY REGION



MERSEY TIDAL POWER

Liverpool City Region Combined Authority

Five Year Climate Action Plan

2023-2028

LIVERPOOL CITY REGION COMBINED AUTHORITY

LIVERPOOL CITY REGION COMBINED AUTHORITY

METRO MAYOR LIVERPOOL CITY REGION

The **Mersey Tidal Power Project** is looking to harness the abundant natural marine resource (**tidal range**) within the region and unique shape of the river estuary.

Providing reliable and predictable domestic renewable generation next to our large (and growing) urban and industrial demand

Tried & Tested Technology

La Rance, St Malo, France, Operating since 1967
24 x 10 MW Units installed
500 GWh generation per year

Sihwa – South Korea - K-Water Operating since 2014
10 x 25 MW Units installed
550 GWh generation per year

LIVERPOOL CITY REGION COMBINED AUTHORITY

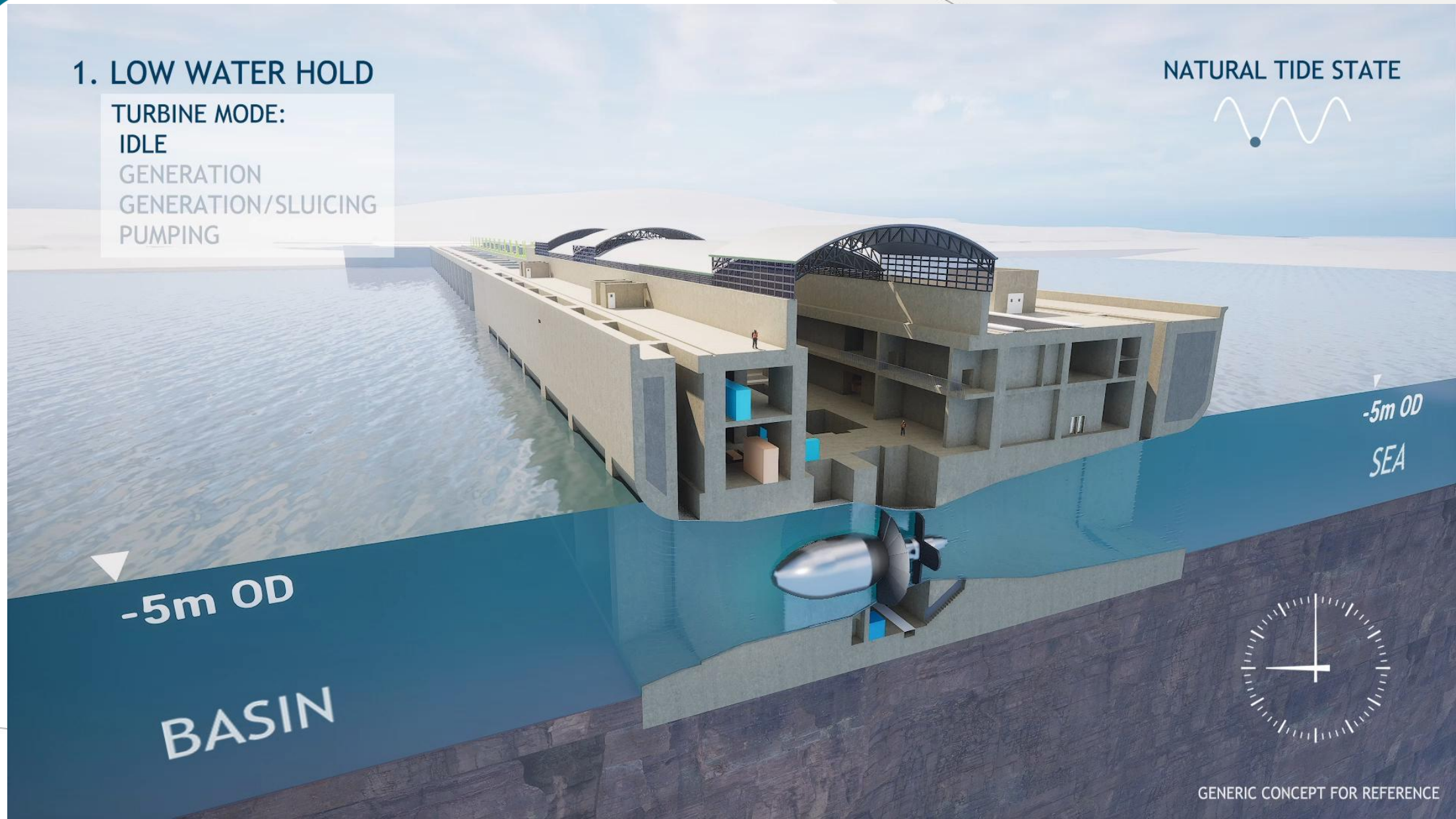
METRO MAYOR LIVERPOOL CITY REGION

MERSEY TIDAL POWER

Concept for a Barrage Scheme

MERSEY TIDAL POWER

How it Works

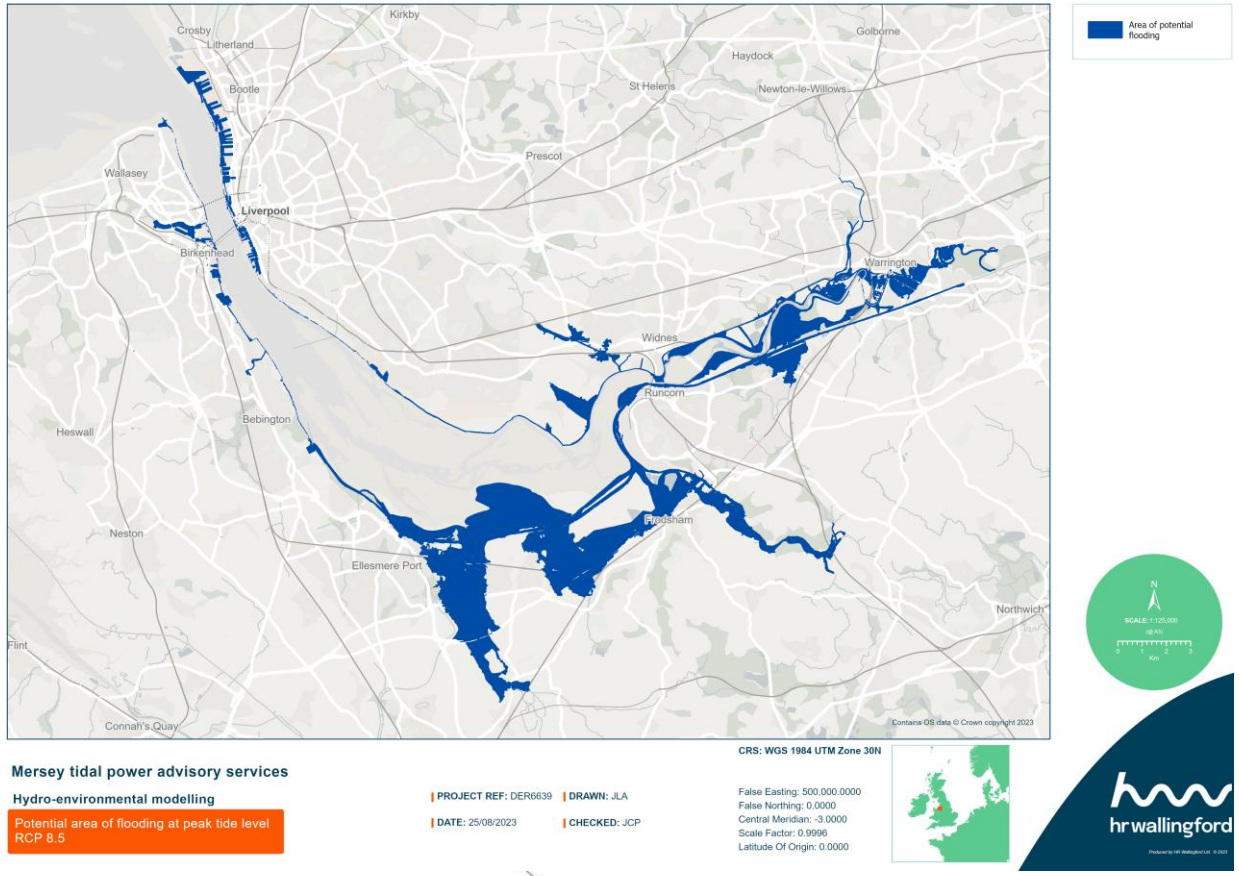


Flood Levels– Initial findings

Climate Change Scenarios

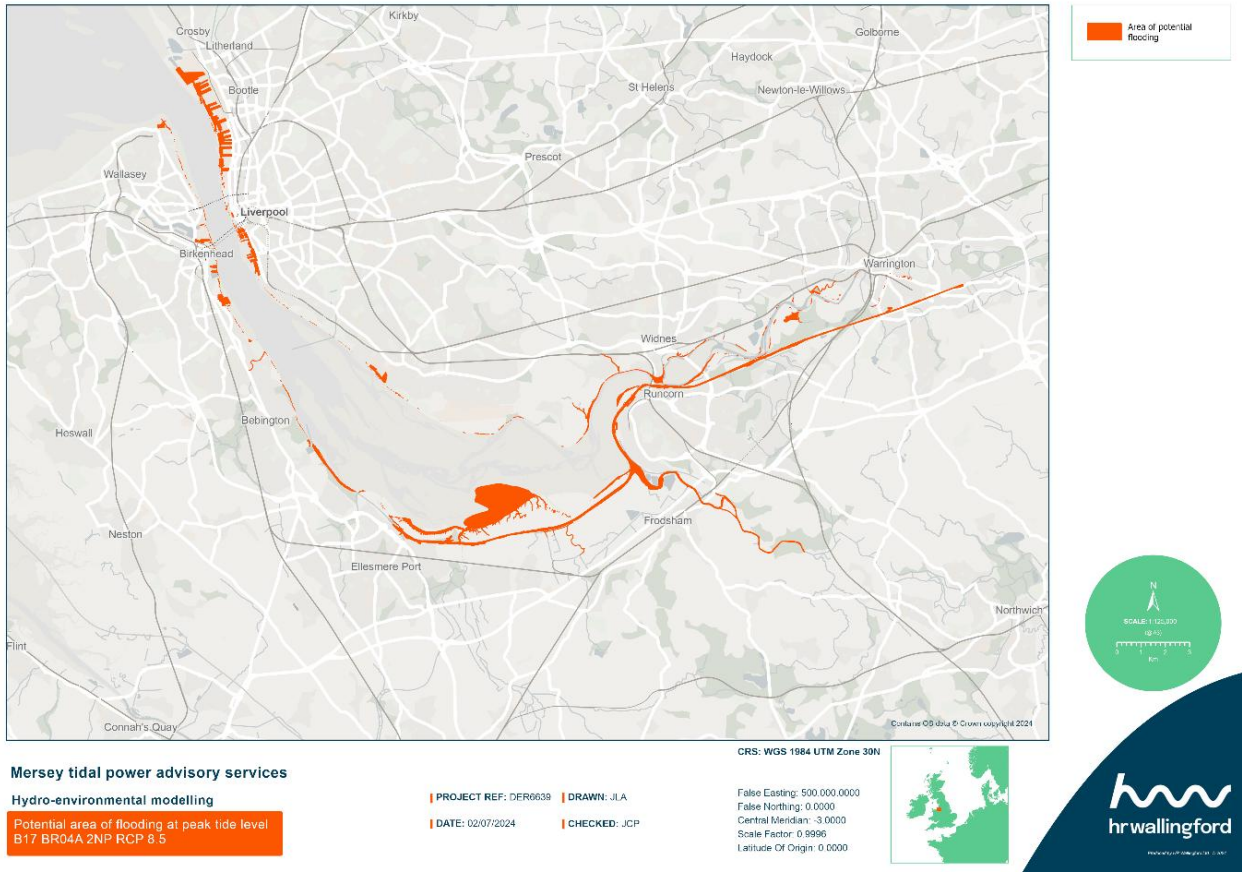
“Do Nothing”

RCP8.5 2150–open river based on model

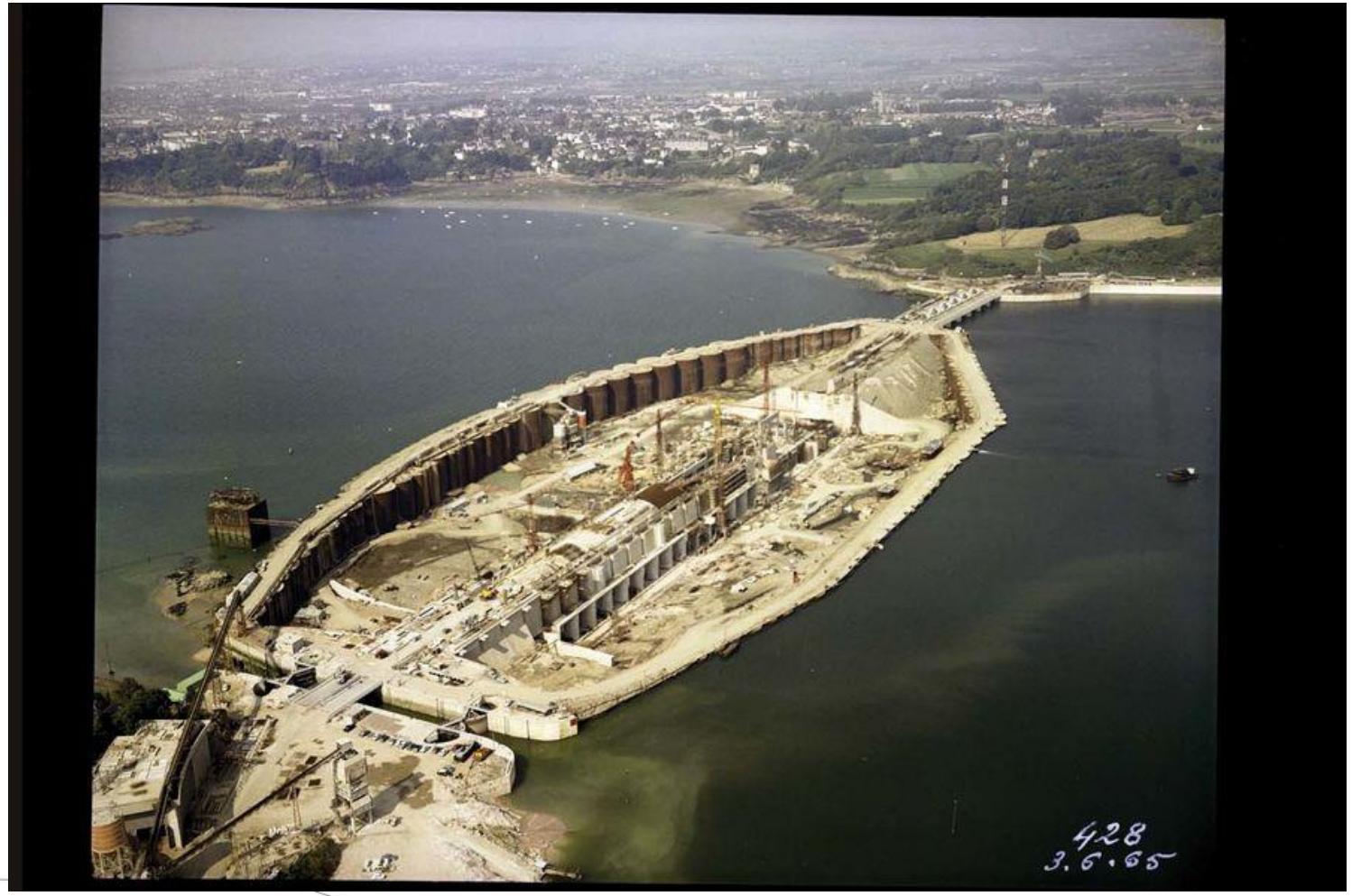


“Barrage”

RCP8.5 2150- BR04 2 way, no pumping



Construction Examples



La Rance Tidal Power Project

Construction involved a cofferdam approach using a combination of techniques.

Site photos from June 1965 show construction progress with Sluice gates already in place (top right)

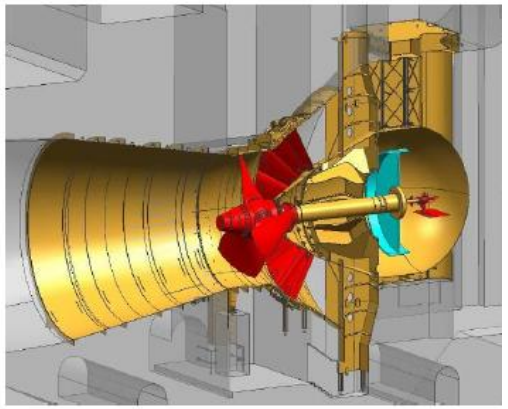
Construction Examples

Sihwa Tidal Power Project

The Mersey Tidal Power Project team has carried out several visits to Sihwa, South Korea.

Construction was achieved with a large cofferdam allowing construction, assembly and installation within a ‘dry’ workspace.

Construction Examples



Sihwa Tidal Power Project

Construction involved a combination of techniques.

Site photos from Nov 2007 show draft tube installation of early units.

Caisson Construction

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Supply Chain – UK Content – Non-Price Factors

UK Supply Chain

Work starting to explore marine civil methods to build on Thames Tideway, HS2 and HPC / SZC experience.

High potential for major marine facility that can translate to a maritime facility – regional maritime priority

Current example of major works for Fehmernbelt tunnel works is relevant

Liverpool Advanced manufacturing and materials experience makes this a high priority investment area for future skills similar to Modern Methods of manufacture for Buildings (new and retrofit)

Supply Chain – UK Content – Non-Price Factors

UK Supply Chain - Turbine Generator

Work starting to explore manufacturing in UK for period 2028 to 2035 – updating and extending the studies from Swansea TPL.

High potential for rotating equipment factory in Liverpool to service Mersey Tidal and other Tidal projects and similar production.

The future ambition for Net Zero in UK and globally, through electrification, relies on rotating equipment of all sizes.

Liverpool Advanced manufacturing expertise and Automotive experience makes this a high priority investment area for 2025-2026.

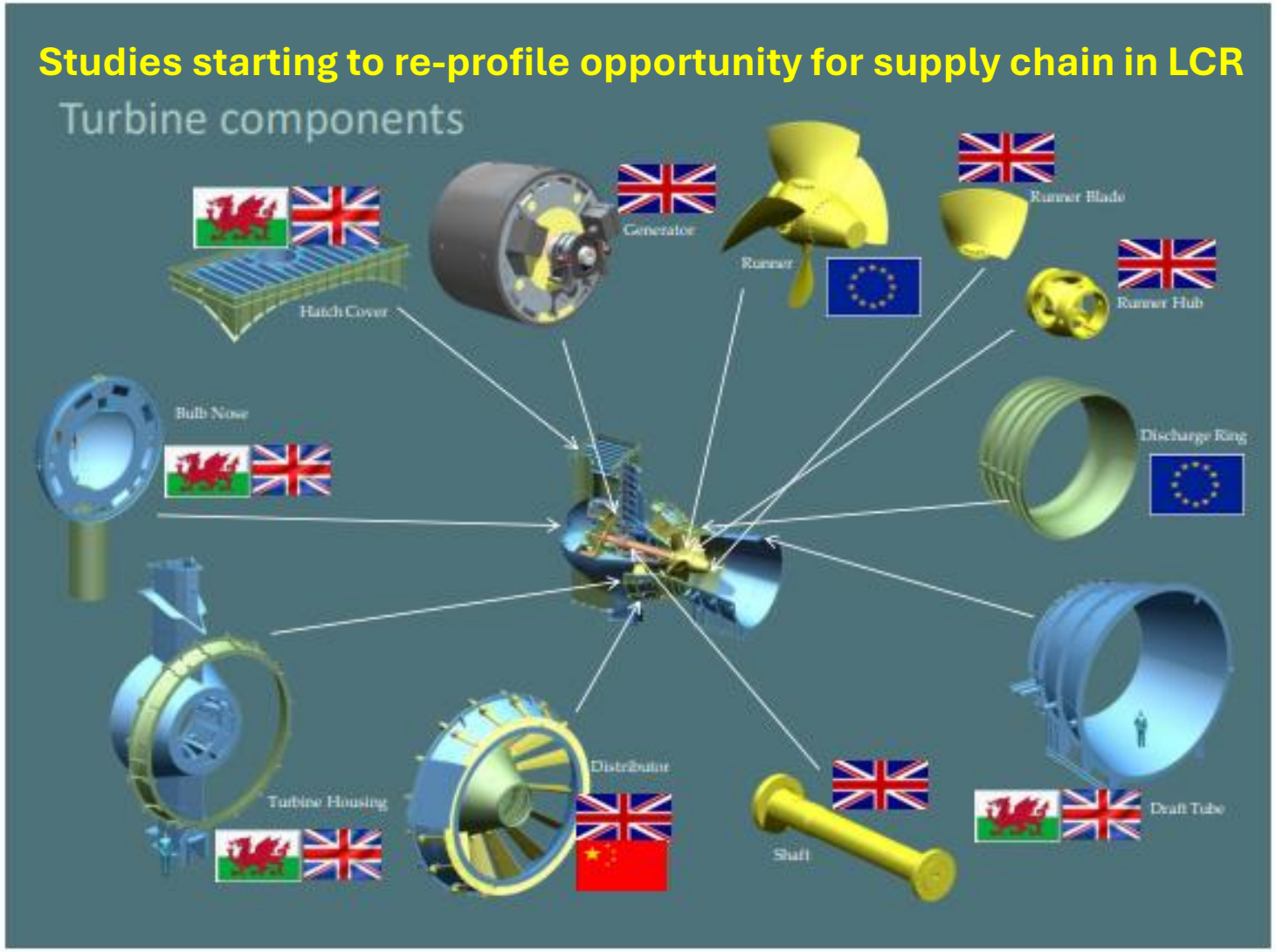


Image: Andritz Hydro plan for Swansea Bay Tidal Lagoon

International Relationship
Republic of Korea

International Axis – Focused

MOA signed with K Water

Meetings with ROK Ambassador to UK in Liverpool

Attendance at Industrial session of ROK State Visit to UK

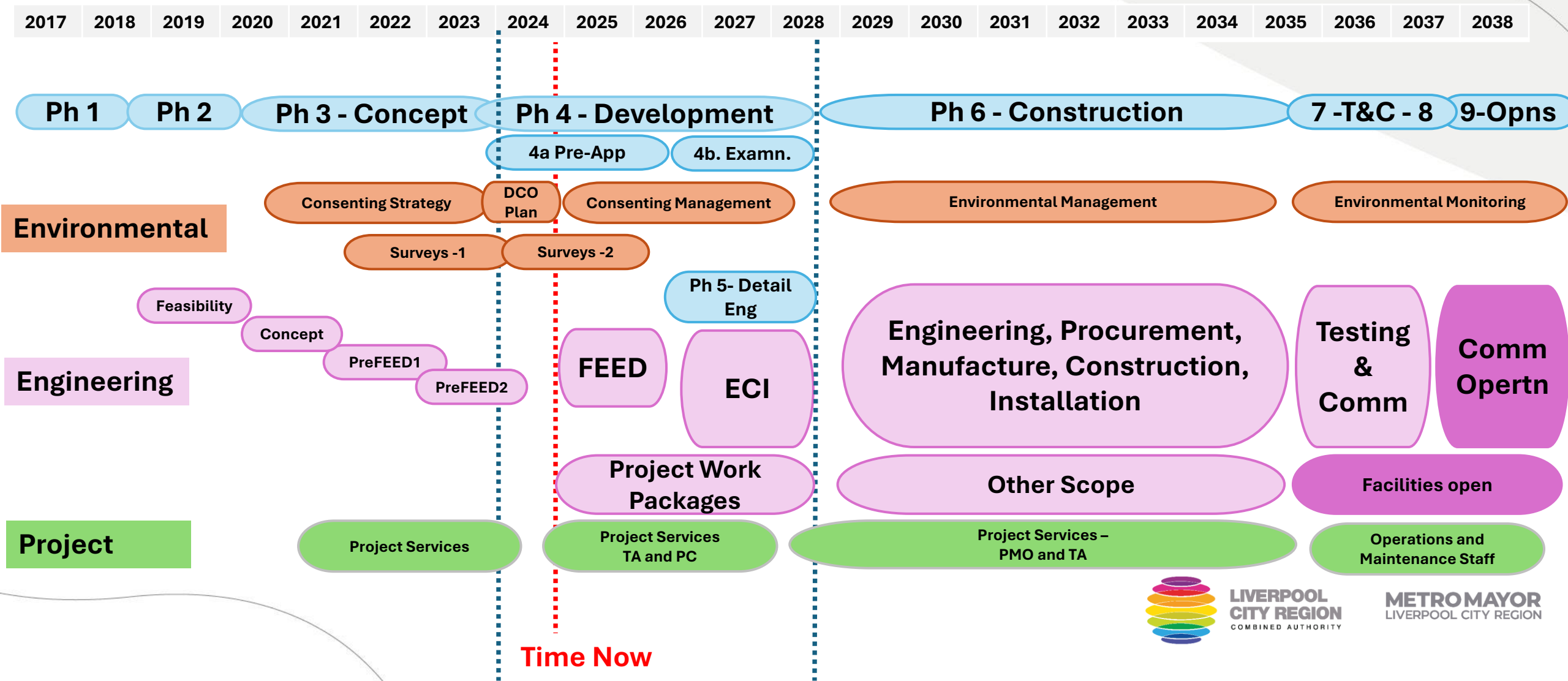
Meetings with UK Ambassador in Seoul

UK – Republic of Korea Energy Axis
- New Nuclear
- Offshore Wind
- Tidal Range should be added

Liverpool – Busan International Innovation Twins

Samsung CT part of Mersey Gateway Bridge Build Team

Project Overview



MERSEY TIDAL POWER

Thank you

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COMBINED AUTHORITY

METRO MAYOR
LIVERPOOL CITY REGION

HALTON BOROUGH COUNCIL

Knowsley Council

Liverpool City Council

Sefton Council

ST HELENS
BOROUGH COUNCIL

WIRRAL

HyNet Supply Chain Summit

Organised by NOF

FEATURING

Mersey Tidal Power

SUPPORTED BY

Partneriaeth Sgiliau Rhanbarthol Gogledd Cymru
North Wales Regional Skills Partnership

Origin

GMCA Greater Manchester Combined Authority

Enterprise Cheshire + Warrington

Halton Borough Council

North West Hydrogen Alliance

HyNet Supply Chain Summit

Organised by NOF

Open for Business Panel Session

Host: Duncan Birtwistle, Progressive Energy

Rose McArthur, Cheshire West & Chester Council

Andrea Stott, Enterprise Cheshire & Warrington Business Advisory Board

Sian Lloyd Roberts, Ambition North Wales

Mark Knowles, Liverpool City Region CA

Vicky Wilding, Greater Manchester Growth Company

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Closing Remarks

John Leer
Head of Stakeholder & Business Engagement
NOF

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