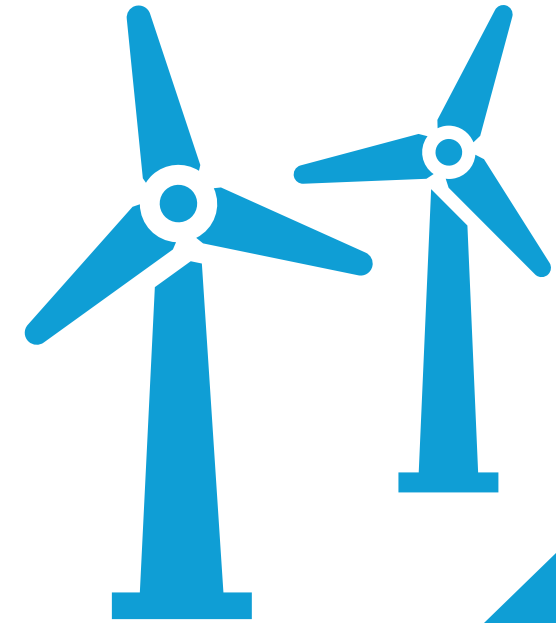


EASTME Energy in the marine environment

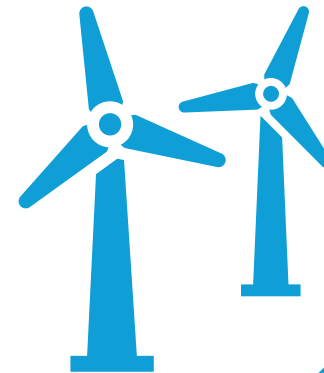


21st May 2026

Contributors: WDC (Vicki James), National Grid (Ben Green), MMO (Evangeline Wilby), Orsted (Jenny Ford), OWIC (Oscar Wilkie)

State of play for energy for 2025

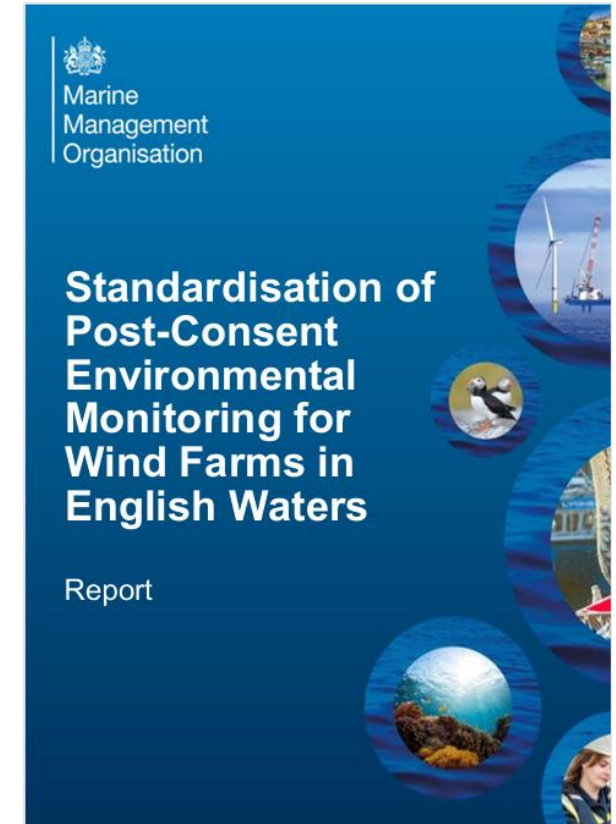
- Publication of the Marine Recovery Fund (MRF)
- Marine net gain assessment framework report
- Publication of Marine Noise Policy by Defra
- WDC published an anthropogenic noise report and are running a 'quiet seas please' campaign
- FLOWW best practice guidance updated
- MMO published 'post consent monitoring standardisation' report
- Great grid upgrade is progressing
- New publications and updates from OWIC



Status	Wind farm name	Number of turbines	Capacity (MW)	Status	Wind farm name	Number of turbines	Capacity (MW)
Fully Commissioned	Westermost Rough	35	210	Pre-Construction	East Anglia TWO	64	960
Fully Commissioned	Triton Knoll	90	857	Support Secured	Norfolk Vanguard East	92	1380
Fully Commissioned	Thanet	100	300	Support Secured	Norfolk Vanguard West	92	1380
Fully Commissioned	Sheringham Shoal	88	316.8	CfD eligible	Outer Dowsing	100	1500
Fully Commissioned	Scroby Sands	29	58	CfD eligible	Five Estuaries	72	1080
Fully Commissioned	Race Bank	91	573	CfD eligible	Dudgeon Extension	37	558
Fully Commissioned	Lynn and Inner Dowsing	54	194.4	CfD eligible	Sheringham Shoal Extension	29	442
Fully Commissioned	London Array Phase One	175	630	CfD eligible	East Anglia ONE North	53	800
Fully Commissioned	Lincs	75	270	CfD eligible	Norfolk Boreas	92	1380
Fully Commissioned	Humber Gateway	73	219	In Planning	Dogger Bank South - East	100	1500
Fully Commissioned	Hornsea Project One	174	1218	In Planning	Dogger Bank South - West	100	1500
Fully Commissioned	Hornsea Project Two	165	1386	In Planning	North Falls	57	900
Fully Commissioned	Gunfleet Sands 1 & 2	48	172.8	Consented	Hornsea Project Four	173	2600
Fully Commissioned	Greater Gabbard	140	504	Site Exclusivity Agreed	Dogger Bank D	71	1500
Fully Commissioned	Galloper	56	353	Development Area	East and Humber Area of Opportunity	0	0
Fully Commissioned	East Anglia ONE	102	714	Development Area	East and Humber Priority Area – Medium Term	0	0
Fully Commissioned	Dudgeon	67	402				
Partial Operation	Sofia	100	1400				
Partial Operation	Dogger Bank B	95	1235				
Partial Operation	Dogger Bank A	95	1235				
Offshore Construction	Hornsea Project Three	197	2955				
Offshore Construction	East Anglia THREE	95	1396.5				
Offshore Construction	Dogger Bank C	87	1218				

Offshore wind post consent monitoring standardisation

- MMO's Strategic Renewables Unit – report aiming to make post consent monitoring requirements clear and data more useable
- Used best practice literature and examined post consent monitoring reports to create a list of standards
- Feedback through stakeholder workshops and industry surveys
- Published recommended standards across 6 environmental receptors
- Draw stronger feedback loops between data, evidence and decision making
- Allow data to be in the same format and more easily comparable



MMO underwater noise management

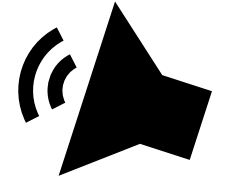
- MMO supports the Developer Coordination Forum to track noisy activity across industry, such as pile driving and unexploded ordnance clearance ensuring cooperation to reduce noise levels
- Developed the Dispute Resolution Process, ran jointly with OPRED
- Ran a fictional test scenario as a ‘Rehearsal of Concept’

Table 3: Confirmed impact data for the Summer 2025 season (1 April 2025 – 30 September 2025), showing the maximum daily disturbance and seasonal average disturbance as the percentage area of the SNS SAC affected by impulsive noise from offshore activities.

Disturbance Type	Percentage area predicted to be disturbed (%)
Maximum daily	18.26
Seasonal average	2.01



Defra underwater noise update



Piloting of Offshore Wind Environmental Mitigation (POWEM) – piling project:

- A collaborative initiative testing innovative measures to further reduce the environmental impacts of offshore wind development - trialling an offshore wind piling noise limit to lessen construction noise impacts on marine mammals such as harbour porpoise.

Marine Noise Registry:

- The JNCC-led Marine Noise Registry has recently been updated, with details published online.

Defra Noise Policy:

- The Marine Noise Policy (2025) sets out the UK government's strategic approach to managing and reducing underwater noise from human activities to protect marine mammals and other noise-sensitive species.

WDC Anthropogenic noise report 2025 – in collaboration with SAMS Enterprise

Aims of the report:

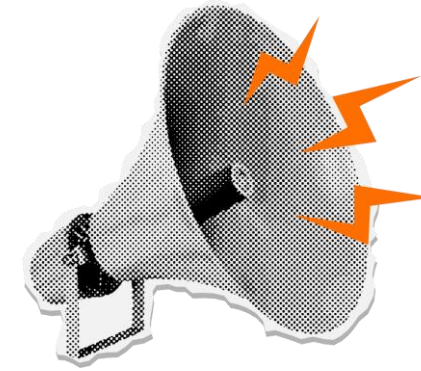
- Summarise the impacts of underwater anthropogenic noise on cetaceans from both established and emerging sources;
- Evaluate current UK legislation, management practices and mitigation measures in place to reduce impacts on cetaceans;
- Provide clear, actionable recommendations for regulators, industry, researchers and NGOs to improve the protection of cetaceans from underwater noise.
- **The focus was on cetaceans but some of the recommendations will be applicable to other marine receptors.**



WDC Noise campaign **#QuietSeasPlease**

Campaign goal: Secure meaningful UK-wide legal noise limits for offshore renewables that protect whales, dolphins and porpoises, while supporting the transition to clean energy

Activities: Stakeholder workshops, distribution of noise report, blogs, website, videos, increase supporter awareness of issues



Underwater noise work going forward...

- WDC continuing to advocate for piling noise limits
- Attendance at conferences, presenting anthropogenic noise report recommendations
- Getting the UK governments to quantify GES (Good Environmental Status) threshold values for underwater noise for both continuous and impulsive noise and for the UK governments to develop a noise management strategy to keep noise below these threshold values.
- Continued engagement with government consultations relevant to offshore industries and UK marine policy.
- Continued engagement with UK stakeholders (Defra, SNCBs etc) and key international bodies e.g. ASCOBANS.
- Continued engagement with key offshore developments including responding to key stages in the development process. This includes emerging renewable technologies such a FLOW, tidal and wet storage.






The Great Grid Upgrade (GGU)

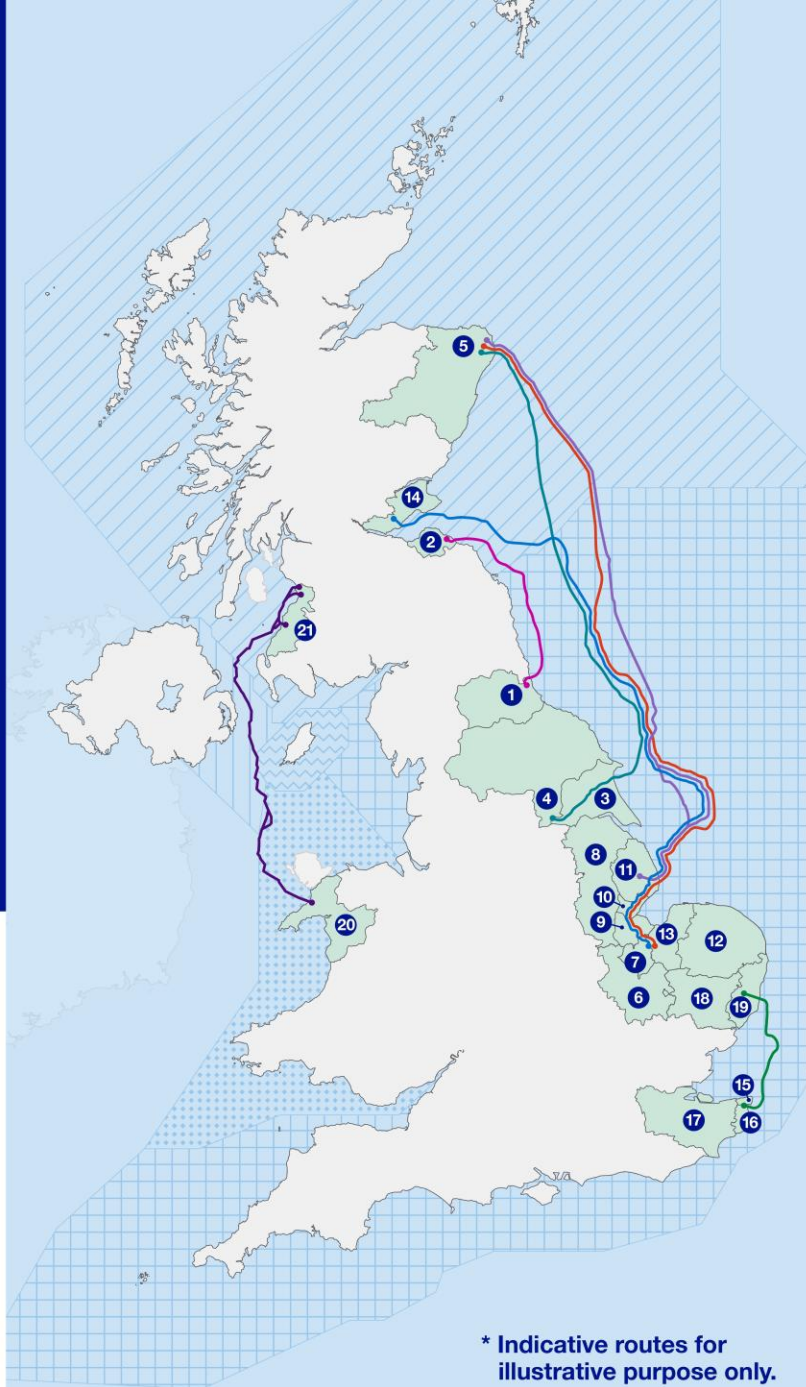
National Grid: Strategic Infrastructure (SI) – Offshore projects in development and delivery

This infographic shows the scale and geographical reach of National Grid's current portfolio of strategic offshore electricity transmission projects.

Together, these projects will comprise c2800km of subsea cable, c400km of terrestrial cable, and 14 converter stations. These will route and site across the jurisdictions of 5 marine licensing authorities and 21 local planning authorities. All of the Eastern Green Link (EGL) projects, together with the Western Link 2 project, are being developed and delivered in partnership with the Scottish Transmission Owners, Scottish Power and Scottish & Southern Energy.

Marine Licensing Authority jurisdictions

	Scottish Government – Marine Directorate
	Marine Management Organisation
	Northern Ireland Department of Agriculture, Environment & Rural Affairs
	Isle of Man Government
	Natural Resources Wales



* Indicative routes for illustrative purpose only.

Projects	Local Planning Authorities	Subsea cable (km)	Onshore cable (km)	Converter stations
EGL1	1 Durham County Council (CC) 2 East Lothian Council (C)	176	22	2
EGL2	3 East Riding of Yorkshire (C) 4 North Yorkshire (C) 5 Aberdeenshire (C)	438	69	2
EGL3	6 Cambridgeshire (CC) 7 Fenland District Council (DC) 8 Lincolnshire (CC) 9 South Holland (DC) 10 Boston Borough Council (BC) 11 East Lindsey (DC) 12 Norfolk (CC)	578	111	2
EGL4	13 King's Lynn and West Norfolk (BC) 5 Aberdeenshire (C) 14 Fife (C)	530	116	2
EGL5	8 Lincolnshire (CC) 11 East Lindsey (DC) 5 Aberdeenshire (C)	565	20	2
Sea Link	15 Thanet (DC) 16 Dover (DC) 17 Kent (CC) 18 Suffolk (CC) 19 East Suffolk (C)	122	13.6	2
Western Link 2	20 Gwynedd (C) 21 South Ayrshire (C)	350	45	2
Total		2779 km	398.6 km	14

HVDC Cables

- 525kV, 2GW HVDC cables
- DC/AC Converter stations required at each end.
- Horizontal Directional Drilling under the intertidal zone at the landfall sites.



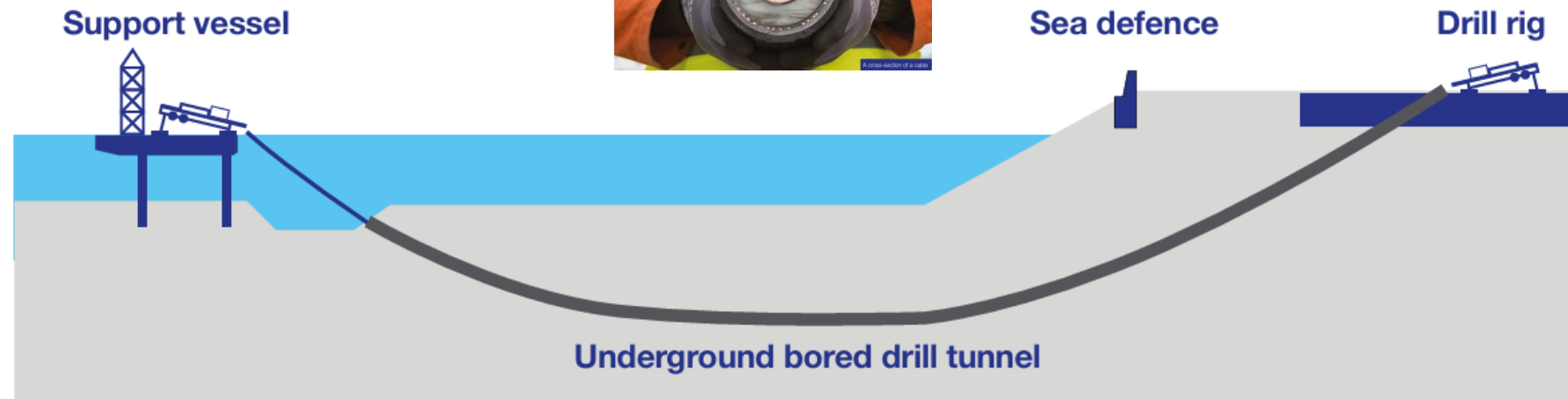
HVAC Electricity | **HVDC Electricity** | **HVAC Electricity**

HVAC = High Voltage Alternating Current
 HVDC = High Voltage Direct Current

1. Existing network
 2. Substation

3. Converter station
 4. Underground cable

5. Submarine cable



Great Grid Upgrade in EASTME Region



Under construction – marine HVDC cables installed 2028, expected completion 2029

Sea Link

DCO Examination complete, awaiting decision later in 2026. Construction completed by 2031 if approved.



Single DCO submission for both projects planned for late 2026. Construction to start in 2029, operational by 2033.



Stage 2 (statutory) consultation planned for Summer 2026
DCO submission in 2027, operational by 2035.



Other energy interests

Carbon Capture and Storage

- 2025 was a significant year, cementing the Plan area as the centre of England's CCS rollout.
- **Northern Endurance Partnership (NEP) / Endurance Store** = UK's most advanced offshore CCS project, fully financed (Dec 24) and entering construction mid-25 (due to complete 2028).
- **East Coast Cluster (ECC)** links Teesside and Humber Carbon Capture projects, with shared offshore transport and storage in the Plan area.
- **Viking CCS** is the second major CCS route in the region beyond the East Coast Cluster – still under development.



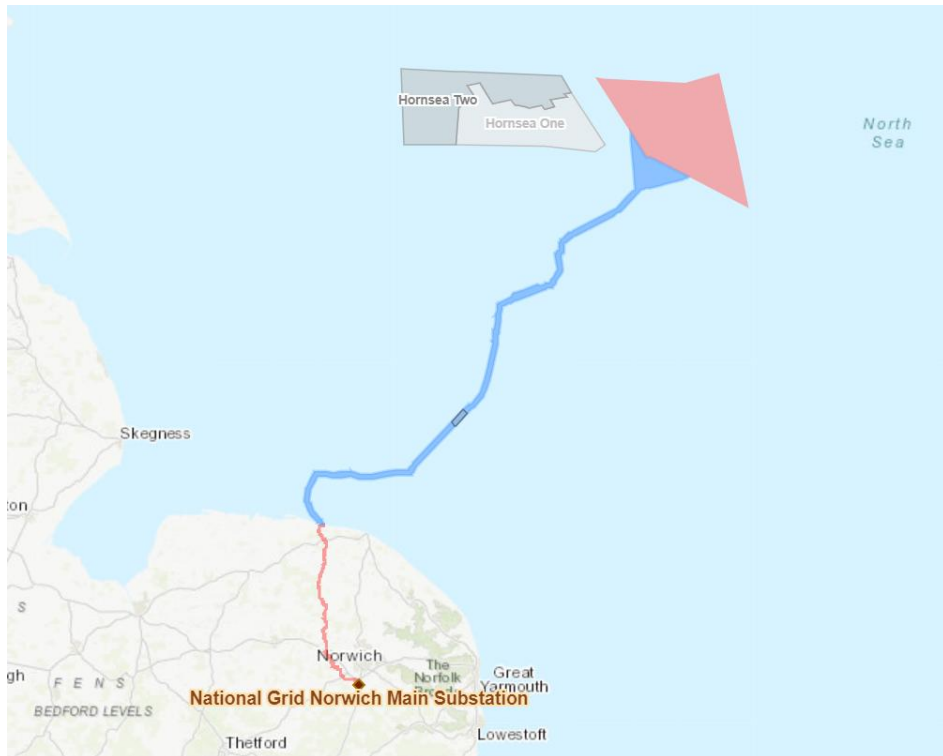
OWIC Environment & Consents Pathways to Growth 2025 outputs

P2G Focus Area	OWIC E&C outputs
Cross Cutting issue	<ul style="list-style-type: none"> ✓ Offshore wind consenting e-learning modules updated and published here.
Strategic compensation	<ul style="list-style-type: none"> ✓ HRA reform legal support complete, amendments put forward by Lord Hunt to the Planning & Infrastructure Bill and informed RUK response to consultations. ✓ MRF legal support – completed, fed into RUK response. ✓ OWEC-funded Strategic Compensation Studies, now fully on track. Outputs available here.
Strategic planning	<ul style="list-style-type: none"> ✓ Engaging in TCE Marine Delivery Routemap workshops and are attending in-person Stakeholder Advisory Forum. ✓ Project managing OWEC Disco Scallops project, with trials taking place in Northern England.
Adaptive management	<ul style="list-style-type: none"> ✓ Engaged with the JNCC/TCE review of the OWGRE OWEER underway on closing evidence gaps.
Underwater noise	<ul style="list-style-type: none"> ✓ Cooperation and conflict resolution report published ✓ SIMOPs coordinator for 2025 appointed, lessons learnt from 2025 underway. Position secured for 2026. ✓ 3 Evidence notes complete and work ongoing.
CIA in seabirds	<ul style="list-style-type: none"> ✓ As-built register development: data collected and tool developed on EnergyPulse platform. Dashboard available EPUKAsBuiltV1. ✓ Input into OWEKH evidence notes, OWGRE project, OWSMRF, amongst others.
Biodiversity	<ul style="list-style-type: none"> ✓ Began work on blog series on positive OWF stories and initiative.
Proportionate EIA	<p><i>No OWIC E&C funded workstreams</i></p>

Hornsea 3

Construction updates

- Hornsea 3 will generate enough green electricity 120 km off the Norfolk coast to power more than 3 million UK homes
- The first of two offshore converter stations was installed in March 2026
- Wind turbine foundation installation commenced in April 2026
- First power is planned for early 2027 and site is intended to be fully operational by end of 2028



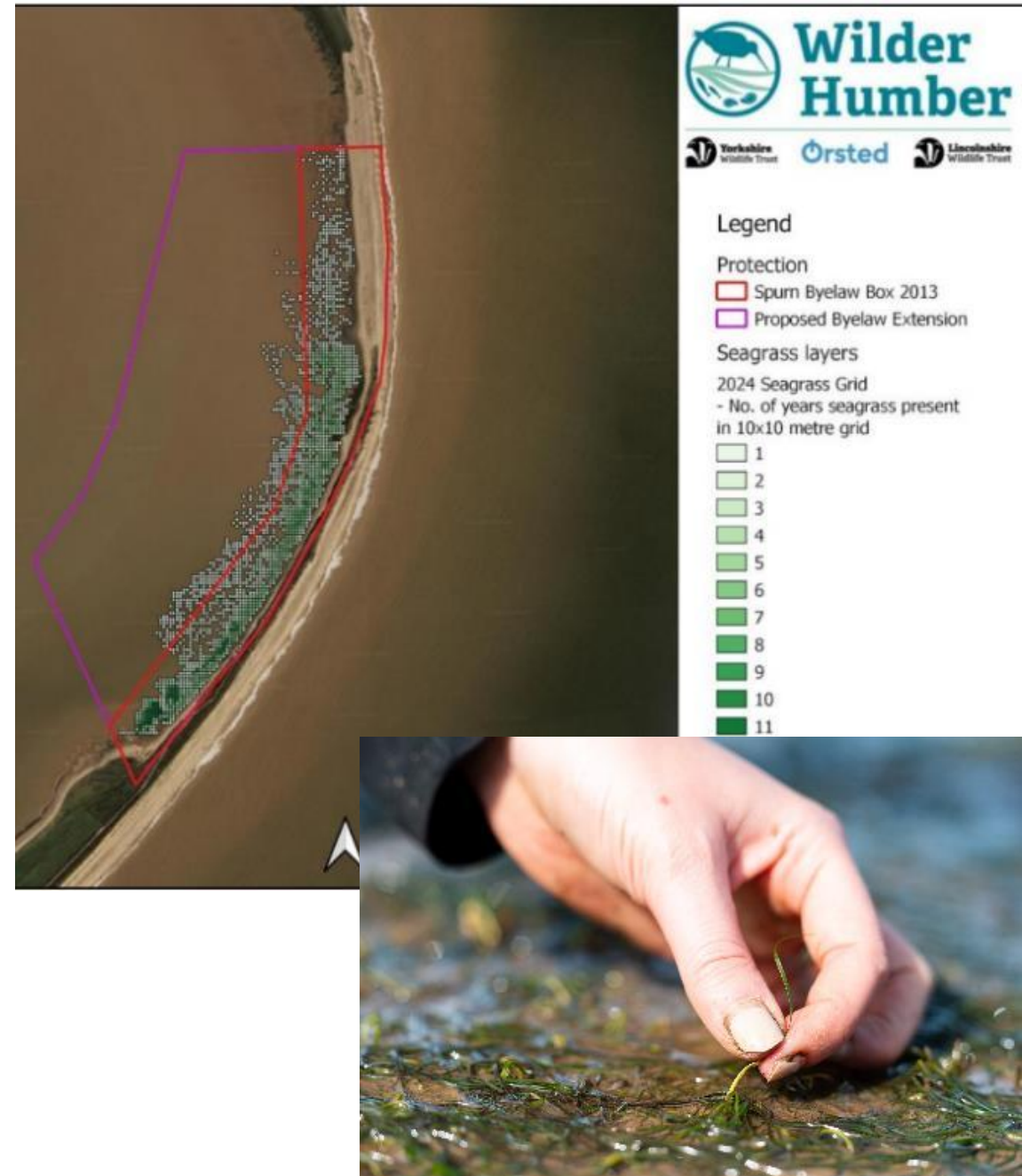
Export cable pull through

Wilder Humber

Wilder Humber is a seascape-scale marine restoration programme initiated in 2022 by Ørsted together with the Yorkshire Wildlife Trust and Lincolnshire Wildlife Trust

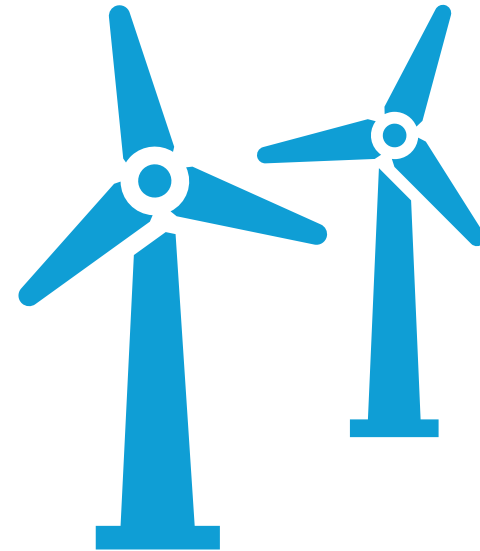
Using a combination of tried and tested as well as novel restoration science the Wilder Humber team are:


- Restoring 32Ha of seagrass (18Ha planted so far), **the largest seagrass restoration project in Europe**
- Reintroducing >500,000 native oysters (first oysters in the water this year), through 'remote setting' a technique never used in the UK before
- Revegetating saltmarsh (starting this year) with potential for several hundred hectares on both the north and south banks of the Humber Estuary
- Just scratching the surface of the vast scope that exists for measurable carbon sequestration, as well as biodiversity uplift in the Humber



Future considerations

- Decommissioning – Cross government working group
- Oil and gas –North Sea Future Plan, November 2025
- WDC engagement with stakeholders for piloting noise limits





Thank you very much for listening and to the EASTME Energy COP for creating this collaborative presentation



Marine
Management
Organisation

national**grid**

OffshoreWind
IndustryCouncil

Orsted