Hornsea 3

Building the single largest offshore wind farm in the world

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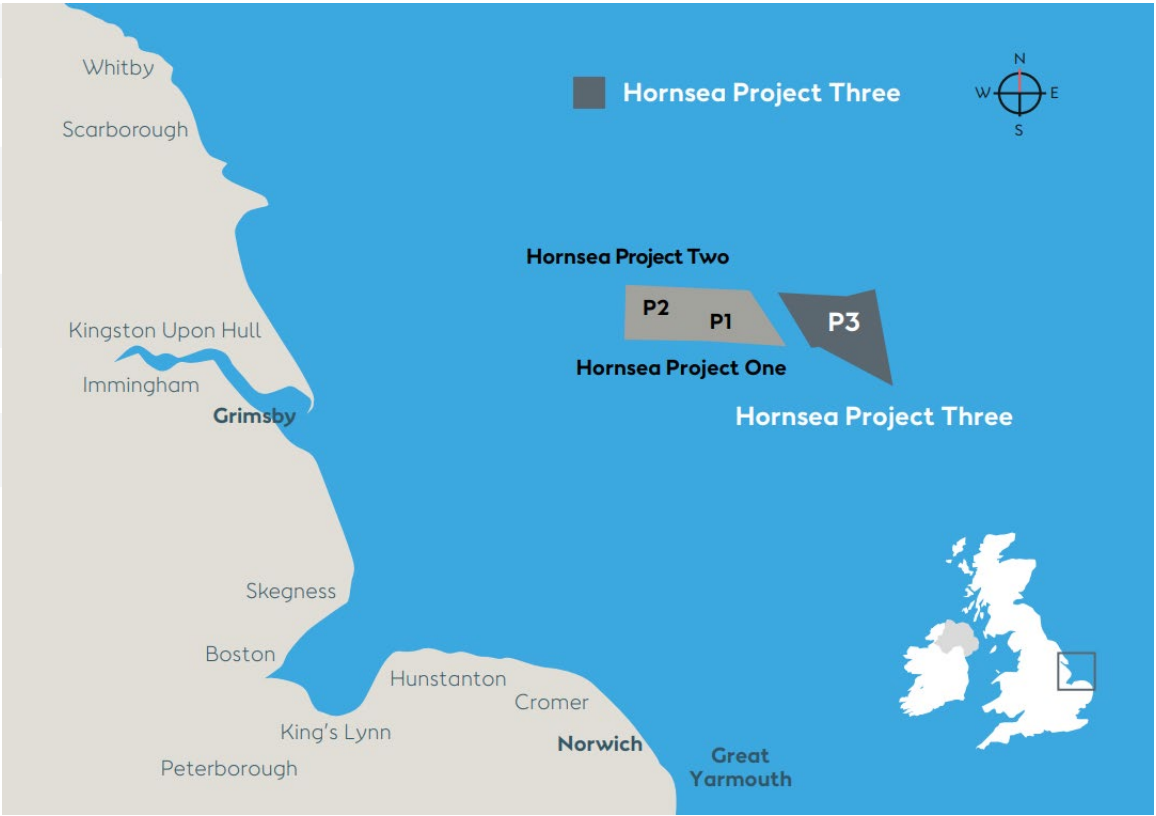
EPC Deputy Director

Ørsted

Hornsea 3 offshore wind farm

We’re building the world’s largest windfarm 121km off the Norfolk coast and 160km off the Yorkshire coast.

- Up to 231 offshore wind turbines
- An area of 696km2
- 2.85 GW of green electricity
- Enough clean energy to power 3 million UK homes

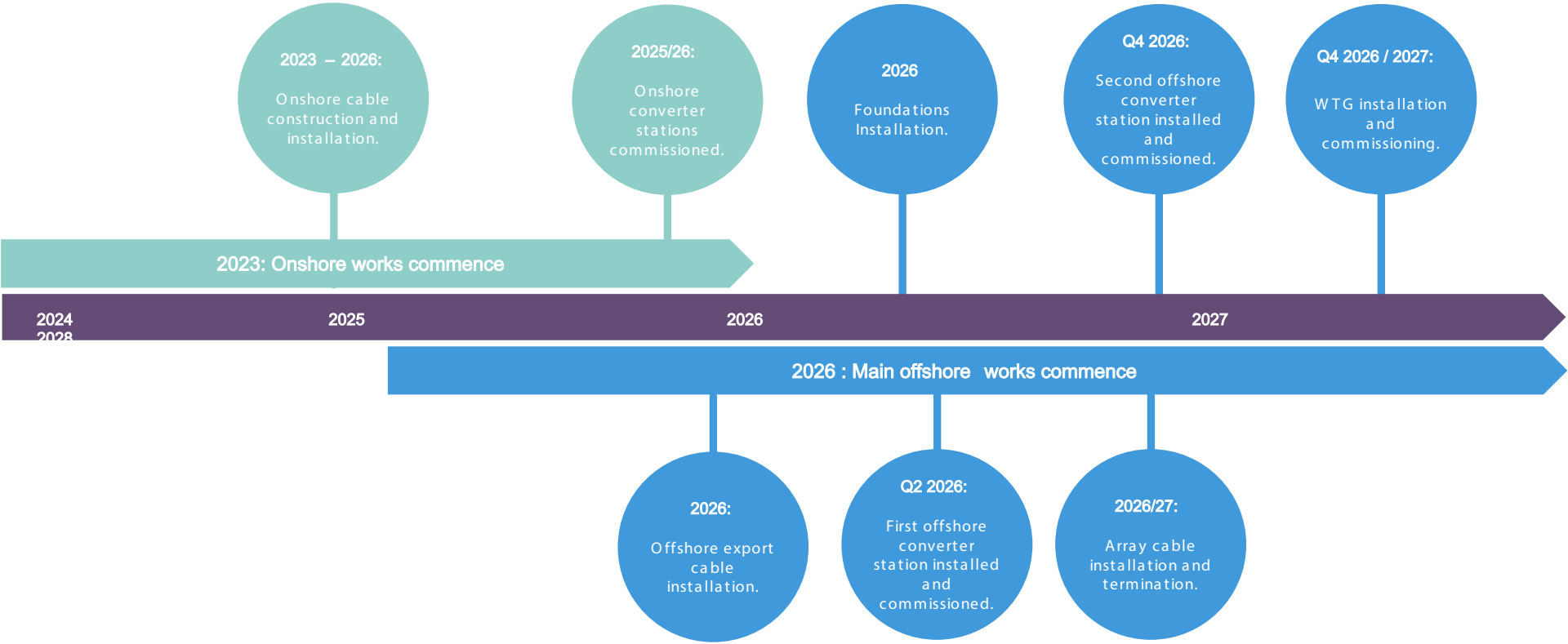


To Build Hornsea 3

We are building the world's largest offshore wind farm.

- 696km2, 160km from the Yorkshire coast & 120km from the Norfolk coast.
- 2.85GW of clean energy from up to 231 turbines. Power for over 3 million homes.
- A direct positive impact on climate change.
- Helping to meet the UK Government's net zero targets.
- A major contribution to energy independence for the UK.
- Benefiting the local and national economy through supply chain investment.
- Providing £7million in funding to enrich local communities and help them to thrive and feel safe.
- Inspiring future generations of engineers and renewable energy advocates.

Hornsea 3 works schedule



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Onshore Construction

- Working in phases along the cable corridor - 'leap frog' effect
- Working from North to South

Land Drainage

Land drainage is being installed to maintain the drainage of the arable land. This is key to preventing physical damage and ensuring food soil structure.

Horizontal Directional Drilling

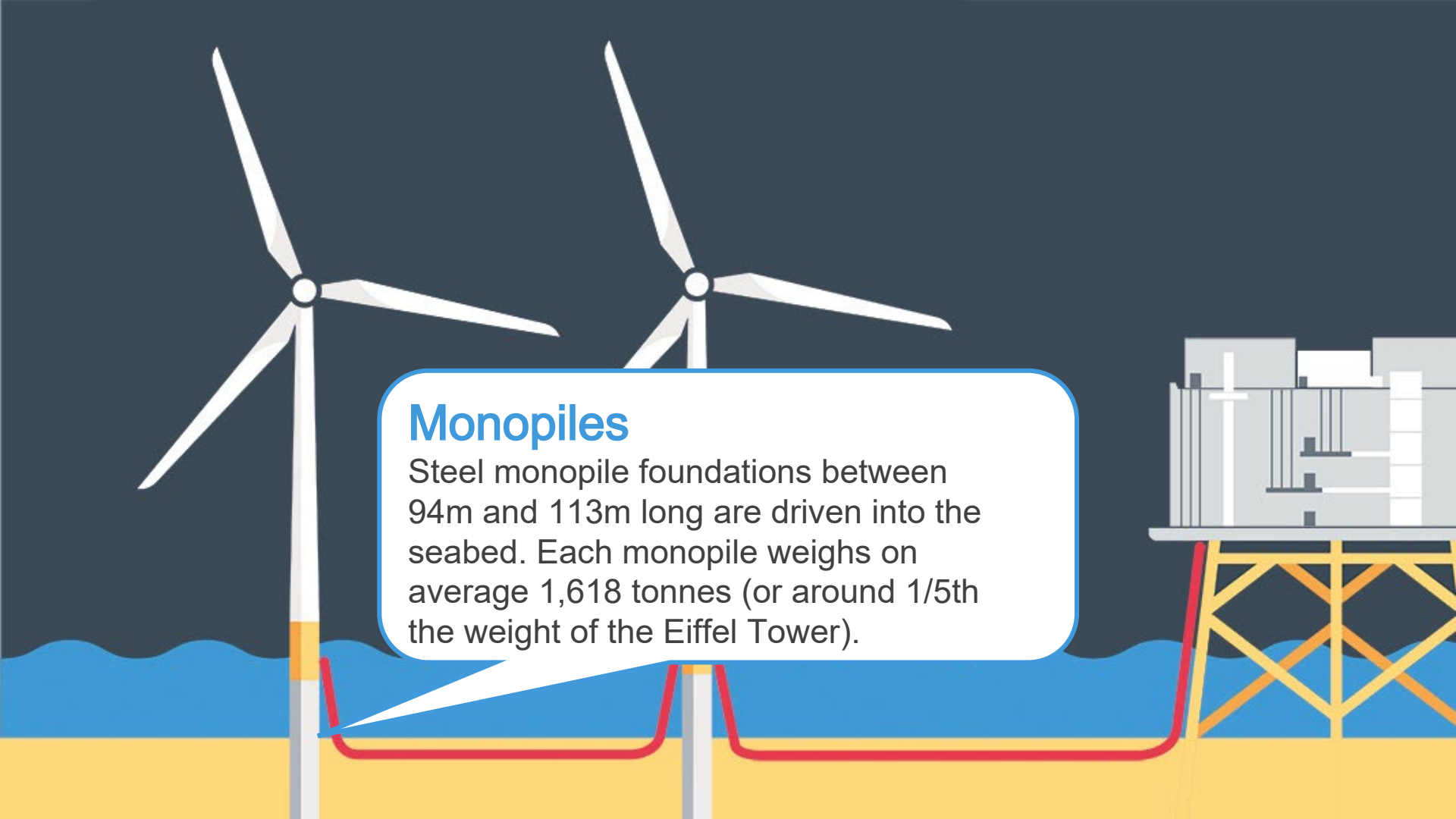
Minimal impact trenchless method of installing the ducting for the HV cables. Involves going under roads, rivers, etc.

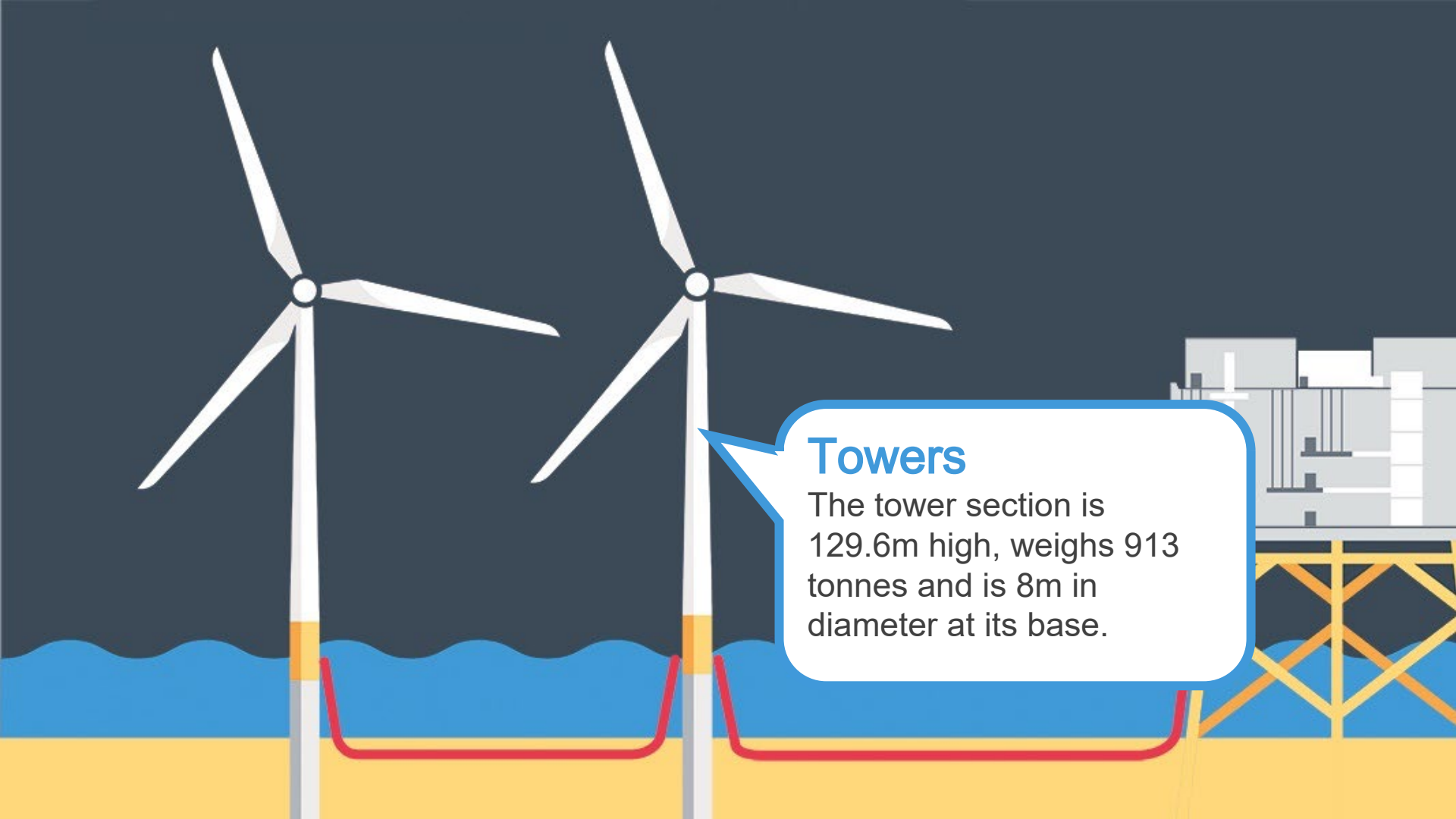
Duct Installation

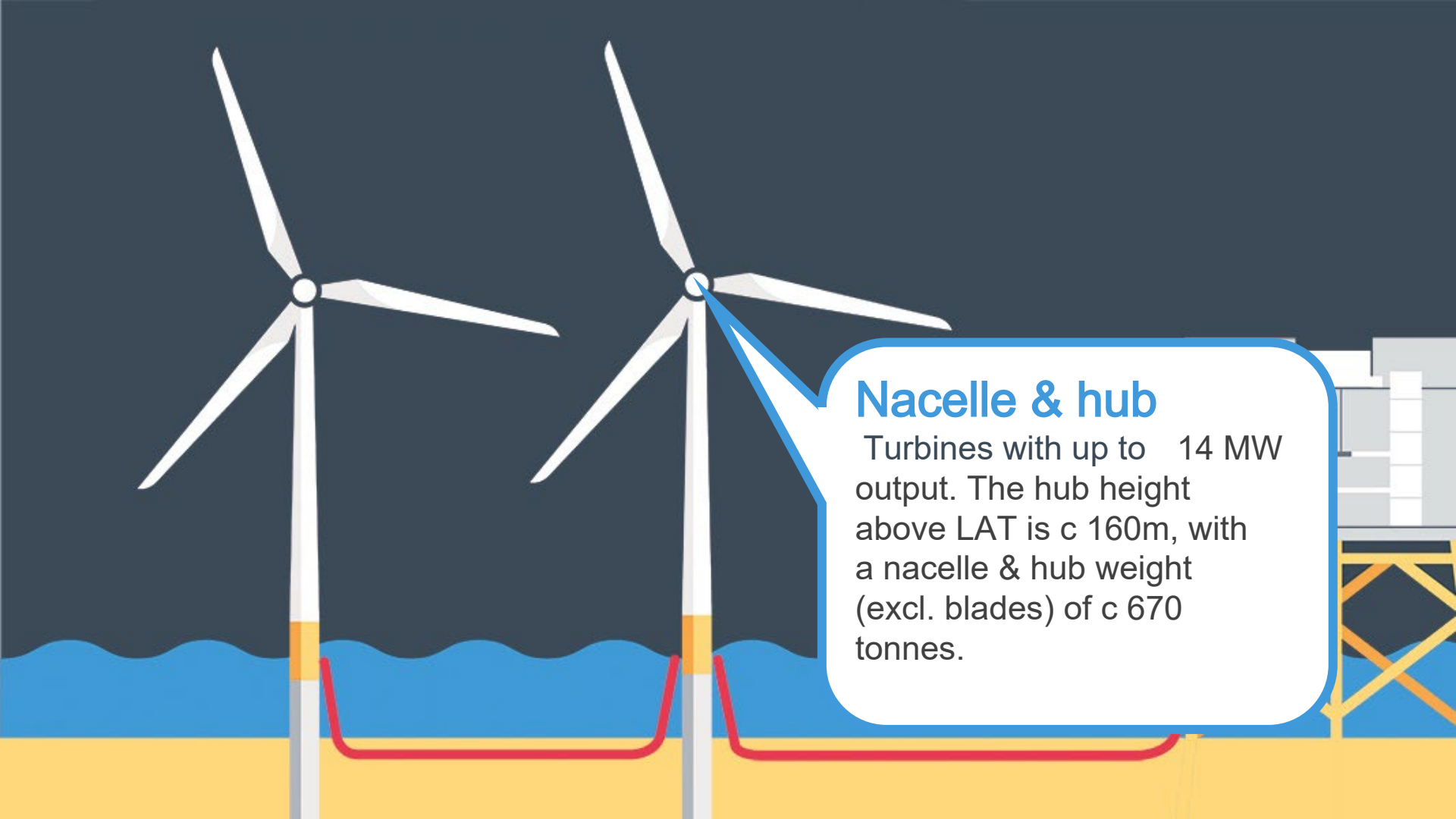
Ducting is being laid to act as protective casing and pulling conduit for the HV cables being installed at a later date.

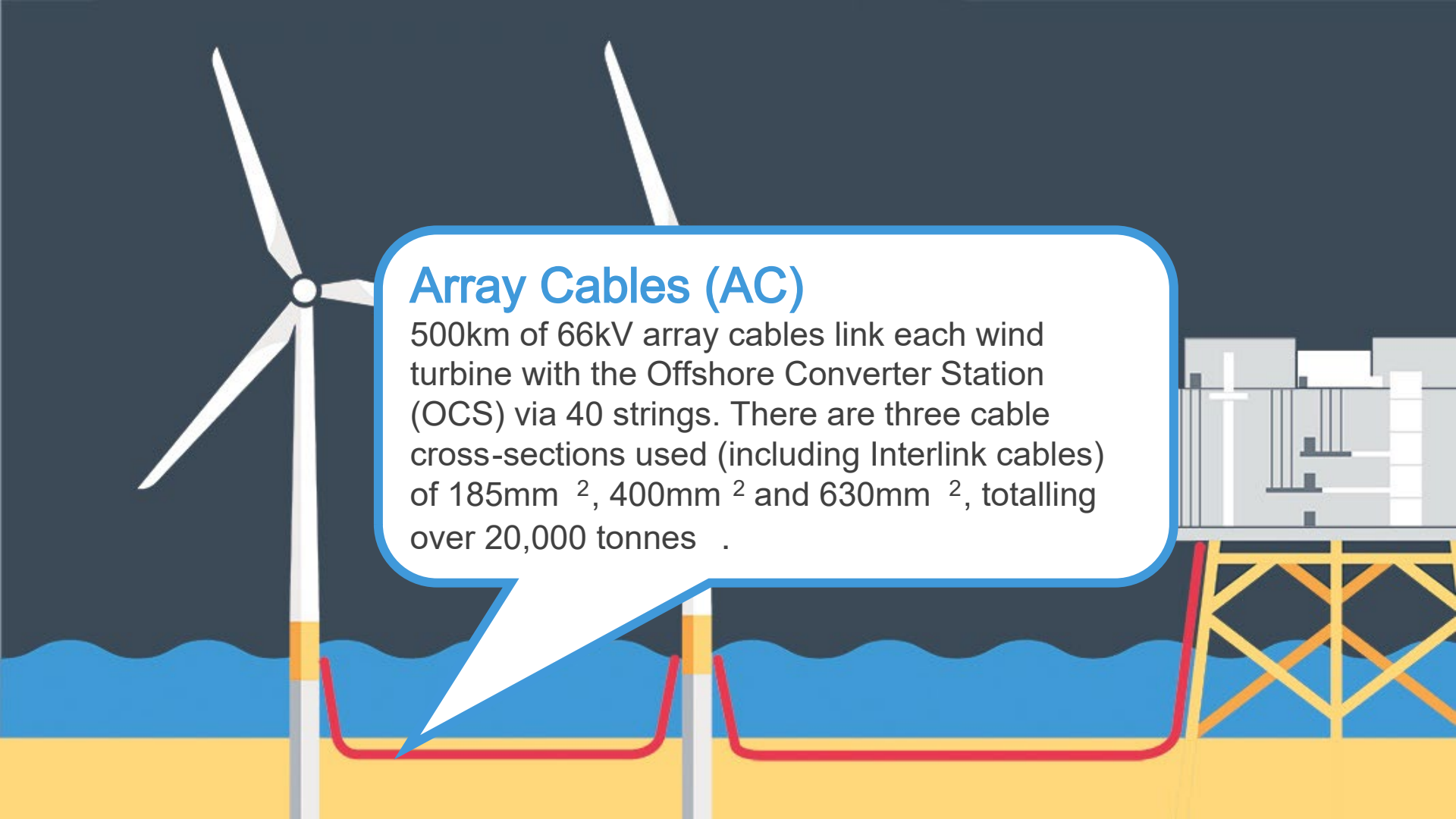
Topsoil Stripping

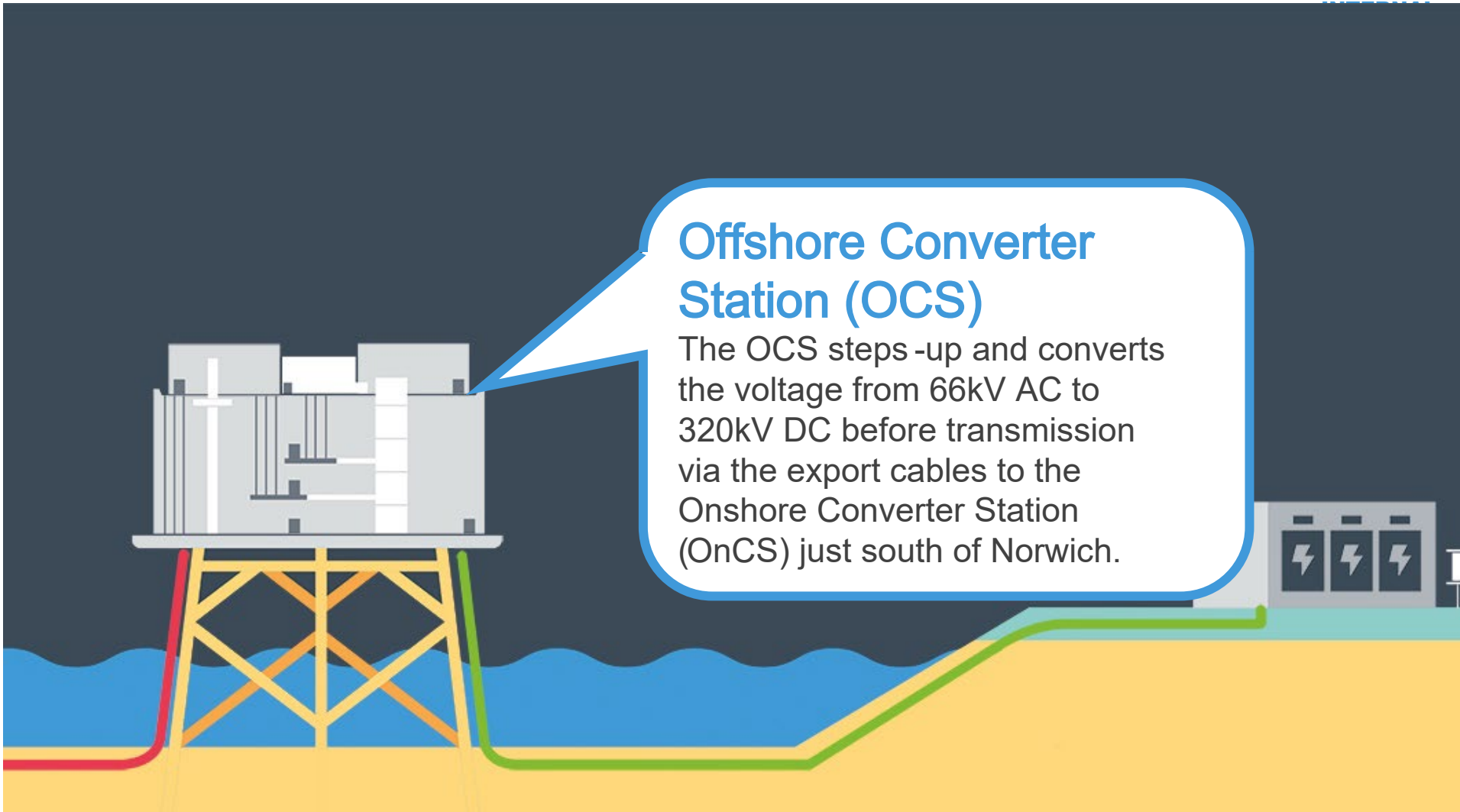
Removing the top layer of soil to remove any seeds, this is to avoid any organic matter growth and stop the topsoil being damaged.

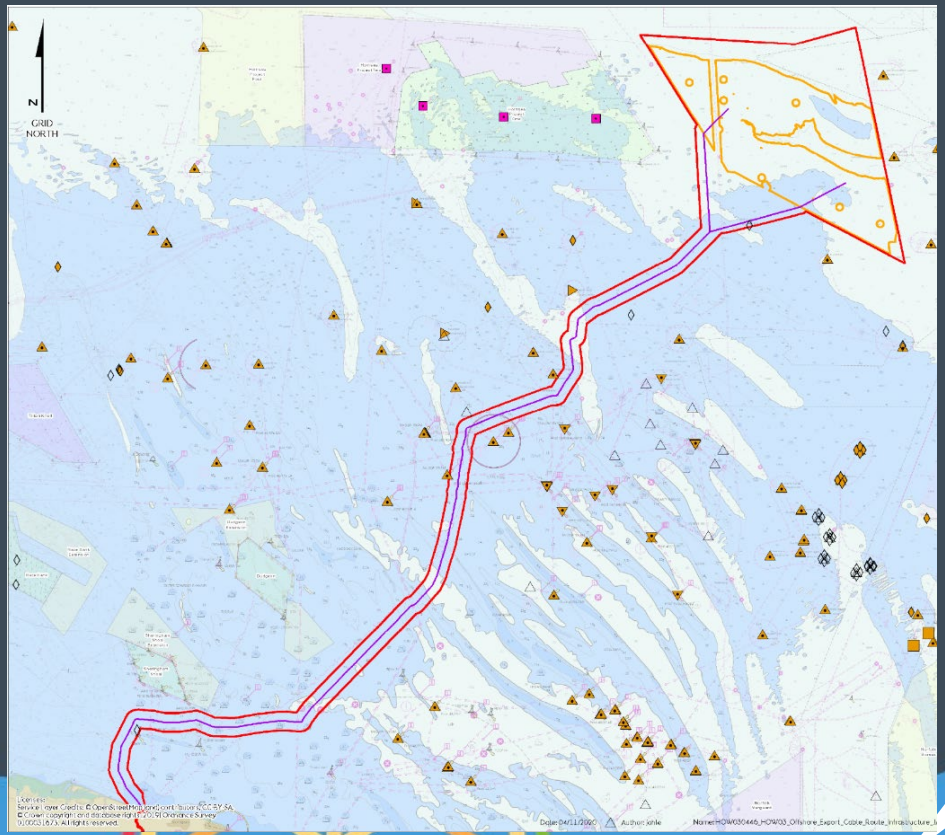

Monopiles
Steel monopile foundations between 94m and 113m long are driven into the seabed. Each monopile weighs on average 1,618 tonnes (or around 1/5th the weight of the Eiffel Tower).


Towers
The tower section is 129.6m high, weighs 913 tonnes and is 8m in diameter at its base.


Nacelle & hub
Turbines with up to 14 MW output. The hub height above LAT is c 160m, with a nacelle & hub weight (excl. blades) of c 670 tonnes.


Array Cables (AC)
500km of 66kV array cables link each wind turbine with the Offshore Converter Station (OCS) via 40 strings. There are three cable cross-sections used (including Interlink cables) of 185mm 2, 400mm 2 and 630mm 2, totalling over 20,000 tonnes .


Offshore Converter Station (OCS)
The OCS steps-up and converts the voltage from 66kV AC to 320kV DC before transmission via the export cables to the Onshore Converter Station (OnCS) just south of Norwich.



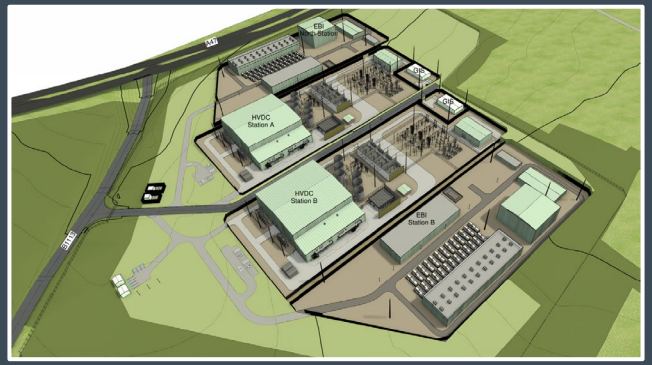
Export Cables (DC)

Offshore :

165km offshore cable route.
674km of 320kV cable, 53.5km of interlink cable between OCS,
4 offshore joints, 4 TJB joints.

Onshore Converter Station (OnCS)

HVDC converter station south of Norwich. Steps voltage up to 400kV for onward transmission. Battery storage facilities (Electricity Balancing Infrastructure - EBI) adjacent to OnCS. Biggest battery in Europe!



Our UK supply chain

A sustainable and competitive UK supply chain supporting our offshore wind farm projects in the UK and around the world

215+

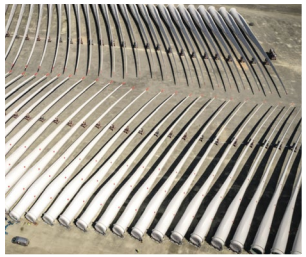
UK suppliers have secured major contracts with us

60

UK suppliers have supported our global portfolio

To find out more visit

orsted.co.uk/supply-chain



Thank You

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