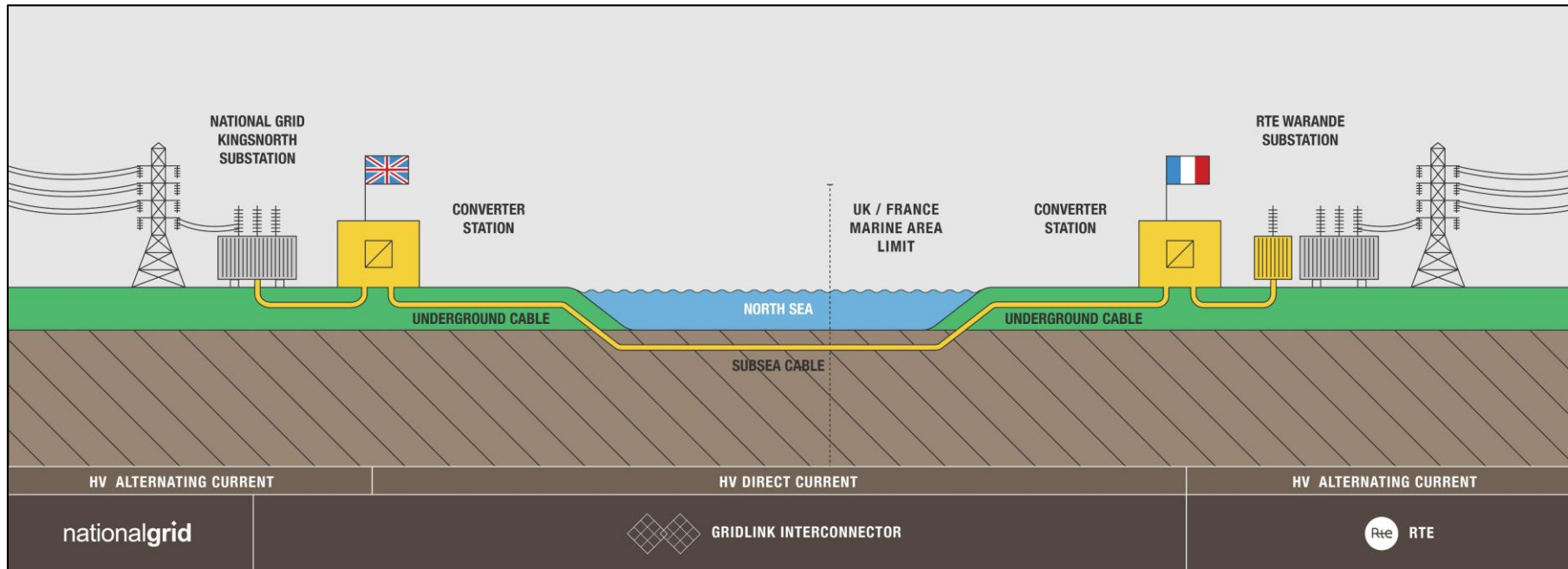


GridLink Interconnector

Medway Council Members Briefing

October 2019

GridLink Project Summary

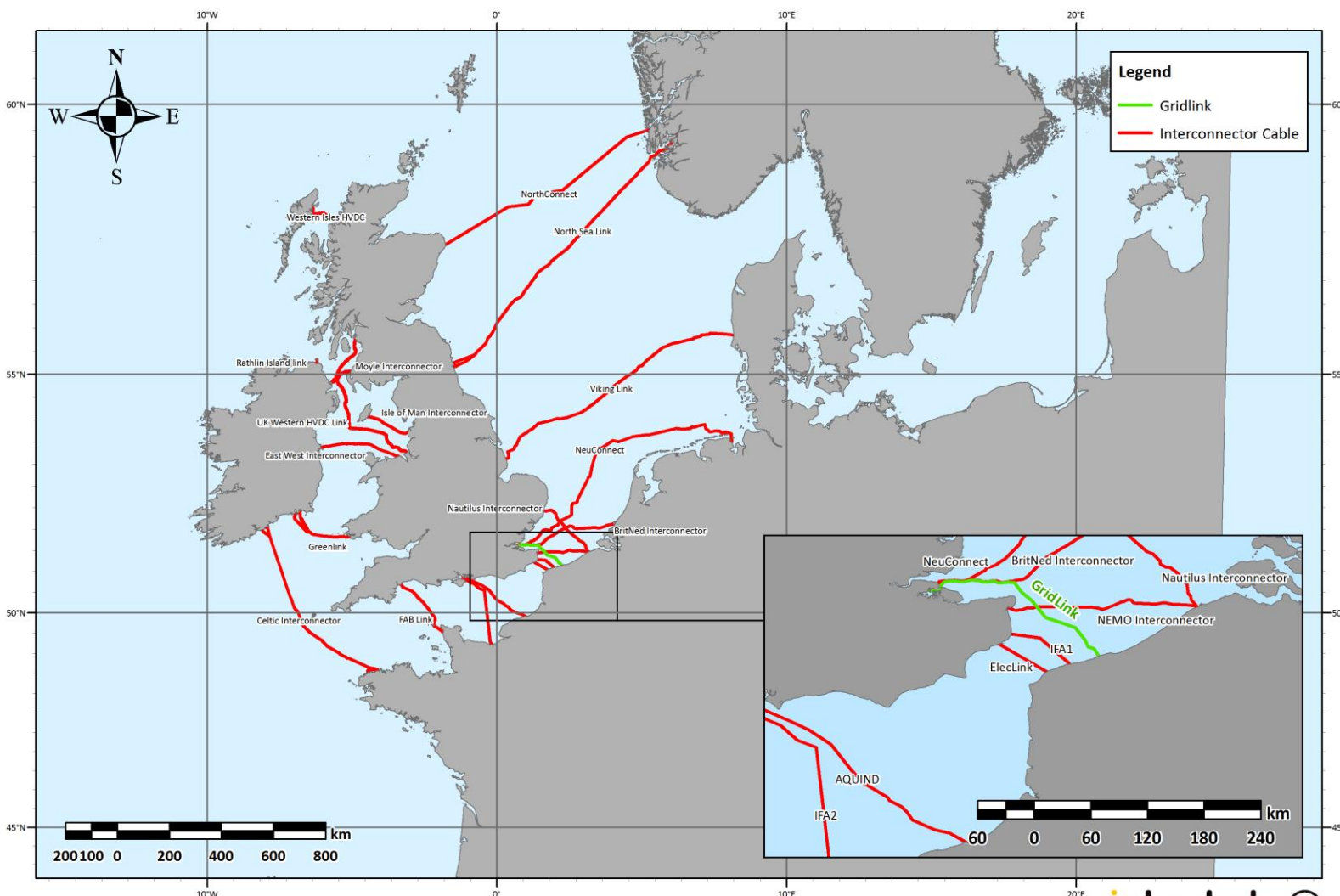


A new electricity transmission infrastructure project between UK and France planned to:

- a) Improve the European grid network*
- b) Enhance security of electricity supply*
- c) Facilitate distribution of renewable energy*
- d) Realise economic benefits to consumers*

- **Project Name:** **GridLink Interconnector Ltd**
- **Capacity:** **1,400 MW**
- **Voltage:** **525 kV HV direct current**
- **Subsea cable:** **137 km (105 km in UK waters)**
- **UK onshore cable:** **1.5 km underground cable**
- **UK converter station:** **4.5 ha industrial land at Uniper MedwayOne site**

UK Planned and Existing Electricity Interconnectors



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intertek

- **20 x UK interconnectors (16 connect to Europe):**
 - 6 x operational
 - 2 x construction
 - 12 x planned
- **6 x interconnectors between UK and France**
- **UK-France interconnectors:**
 1. IFA1 – 2,000 MW, operation (1986)
 2. IFA2 – 1,000 MW, construction
 3. ElecLink – 1,000 MW, construction
 4. **GridLink – 1,400 MW, planned**
 5. FAB – 1,400 MW, planned
 6. AQUIND – 2,000 MW, planned

European Commission and BREXIT

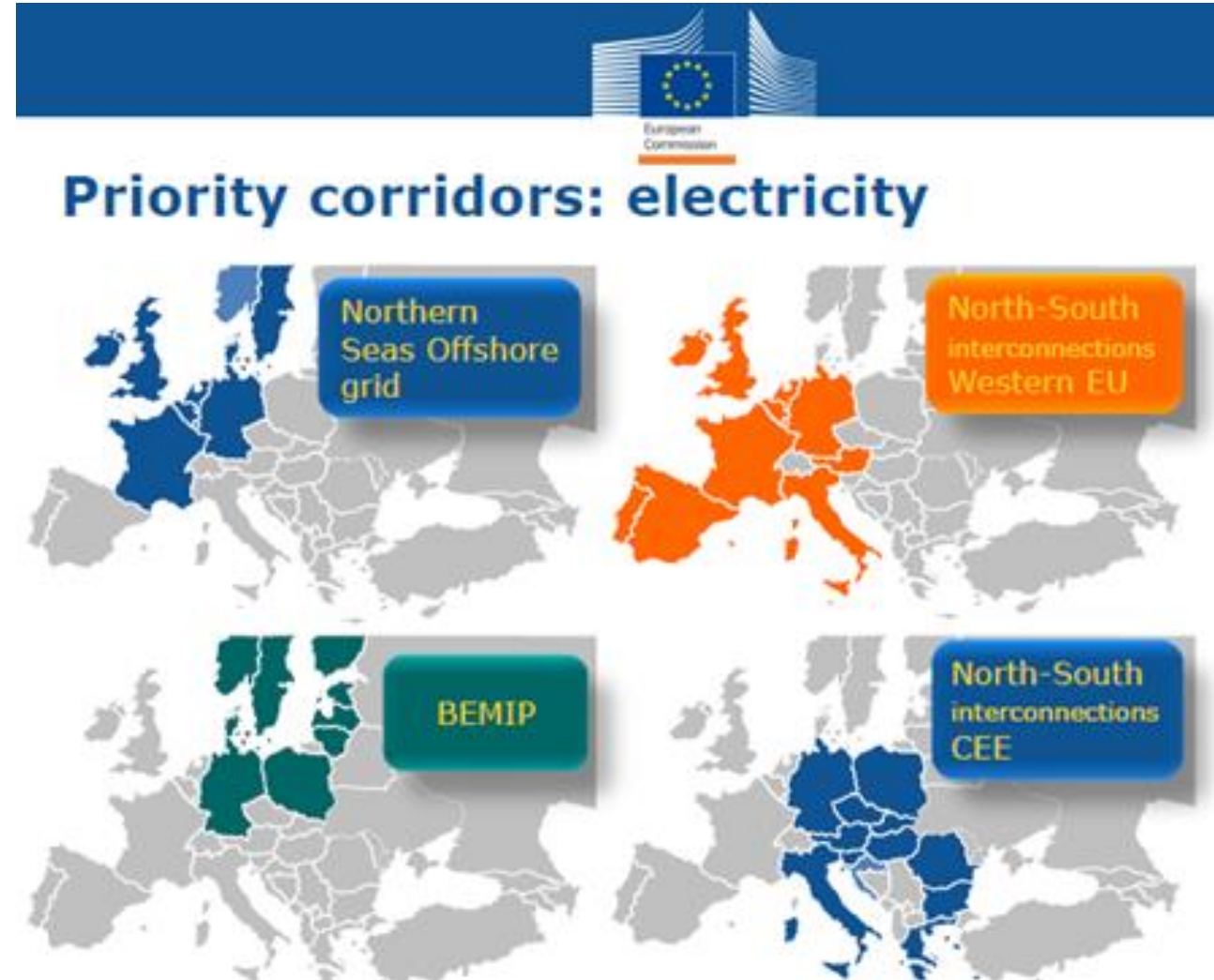


- ✓ *ENTSO-E Ten Year Network Development Plan TYNDP 2016 and 2018*
- ✓ *Project of Common Interest (PCI) status*
- ✓ *€15.2m Connecting Europe Facility (CEF) grant*

GridLink offers significant investment and benefits to France and UK

Fundamental benefits to energy security, environment and economics in UK, France and wider Europe are not changed by BREXIT

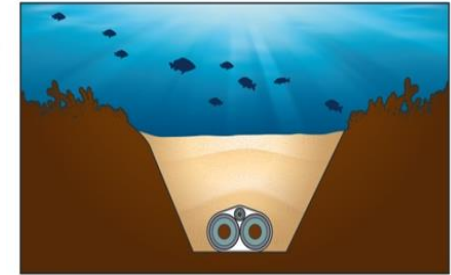
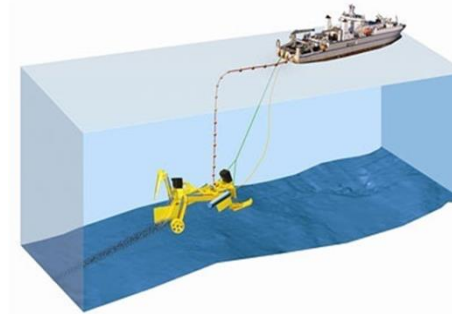
Most likely effect of BREXIT is change to trading system and operation of energy market



GridLink Project Design

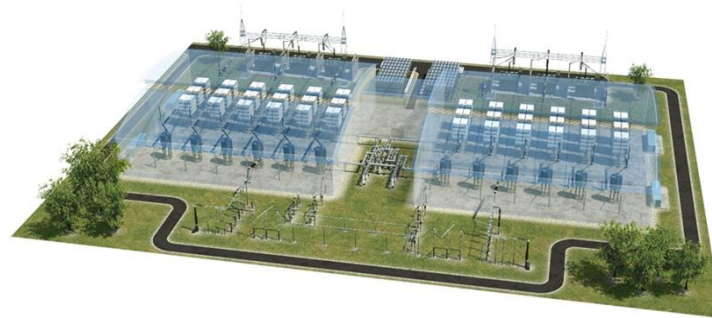
1. Subsea Cables

“Bundled” 2 x subsea HVDC cables laid at 2 m depth in seabed trench



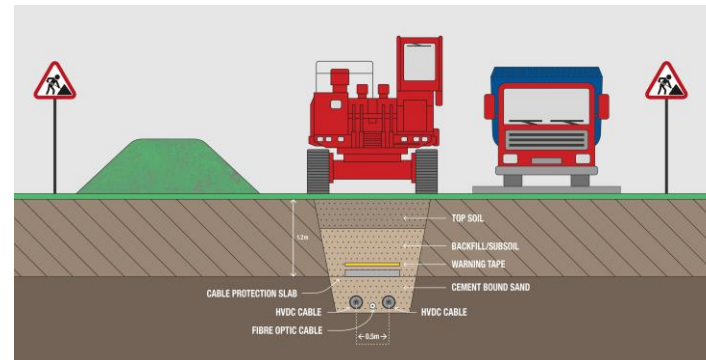
2. Converter Station

Electrical equipment enclosed mainly in industrial buildings



3. Underground Cables

Underground HVDC and HVAC cables laid at 1.5 m depth in trench



Project Geography



- ***Project geography is determined by point of connection to the National Grids in UK and France***
 - ***National Grid Kingsnorth 400 kV sub-station (UK)***
 - ***RTE Warande 400 kV sub-station (France)***
- ***Converter station sites are selected based on technical, environmental and economic criteria as close as possible to connection points***
- ***Cable route is defined after detailed desk-top study and offshore geophysical and geotechnical survey***

Connection to National Grids in UK and France

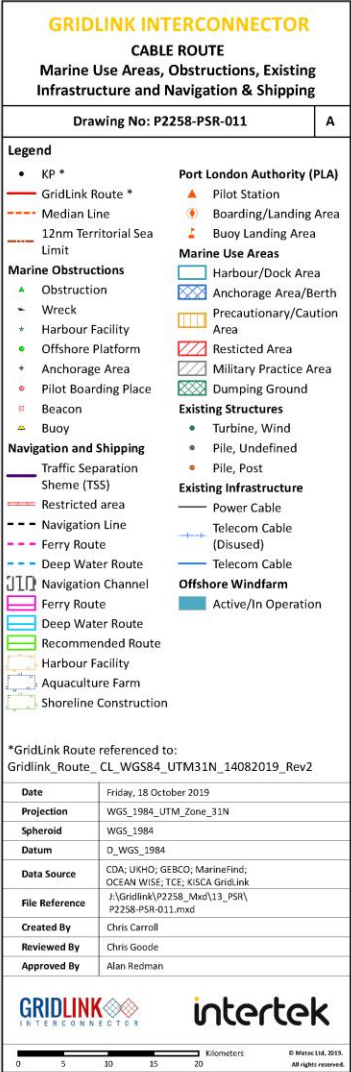
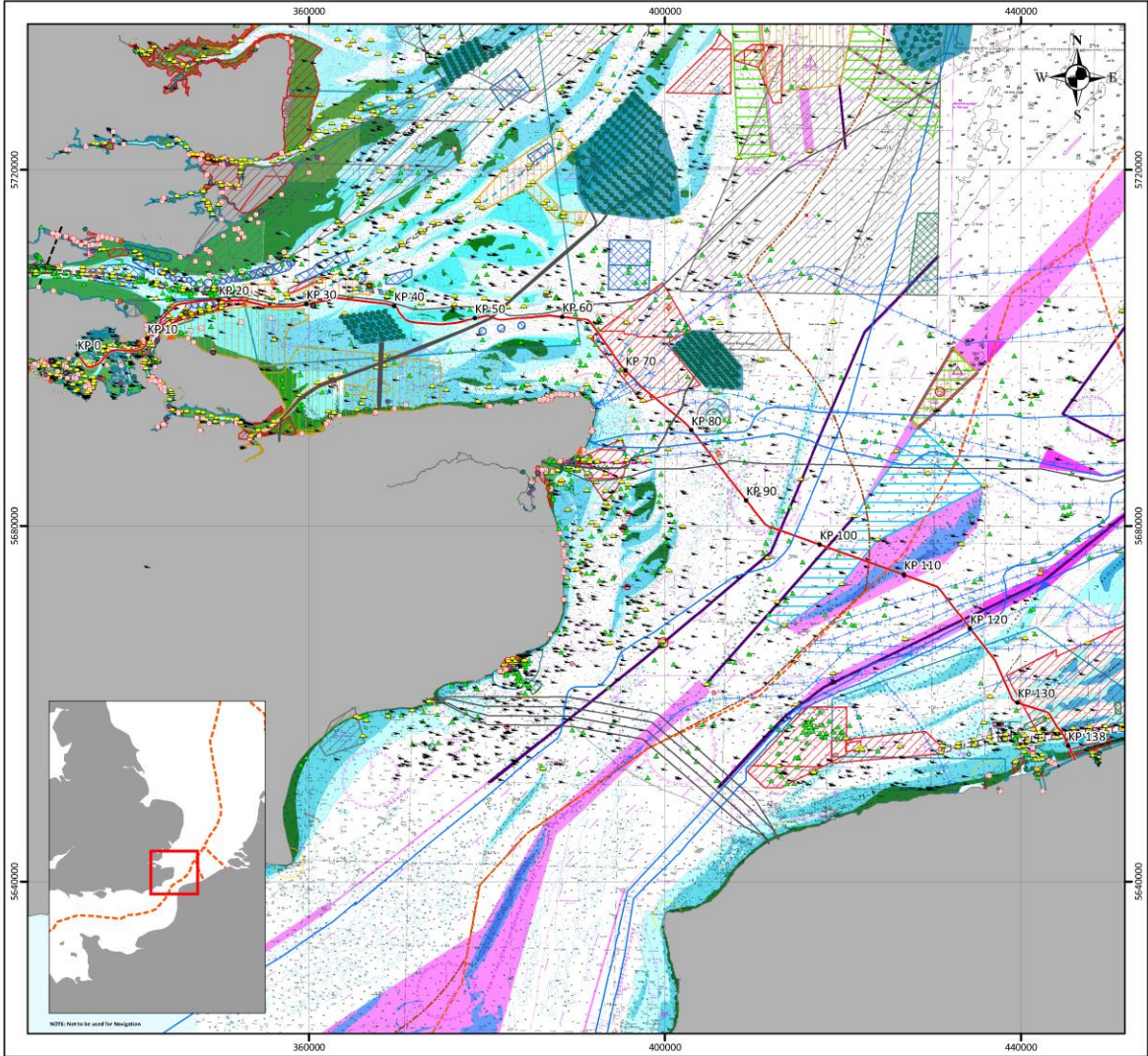


- ***Bilateral Connection Agreement with National Grid signed October 2016***
- ***Grid connection at existing Spare Bay 3 of Kingsnorth 400 kV sub-station***
- ***“Firm” connection from October 2023***



- ***Proposition Technique et Financiere (PTF) with RTE signed May 2017, renewed June 2019***
- ***Grid connection by new underground 400 kV cable and extension to Warande 400 kV sub-station***
- ***“Firm” connection from June 2023***

Cable Route and Converter Station Sites



New Change to Converter Station Site at Kingsnorth

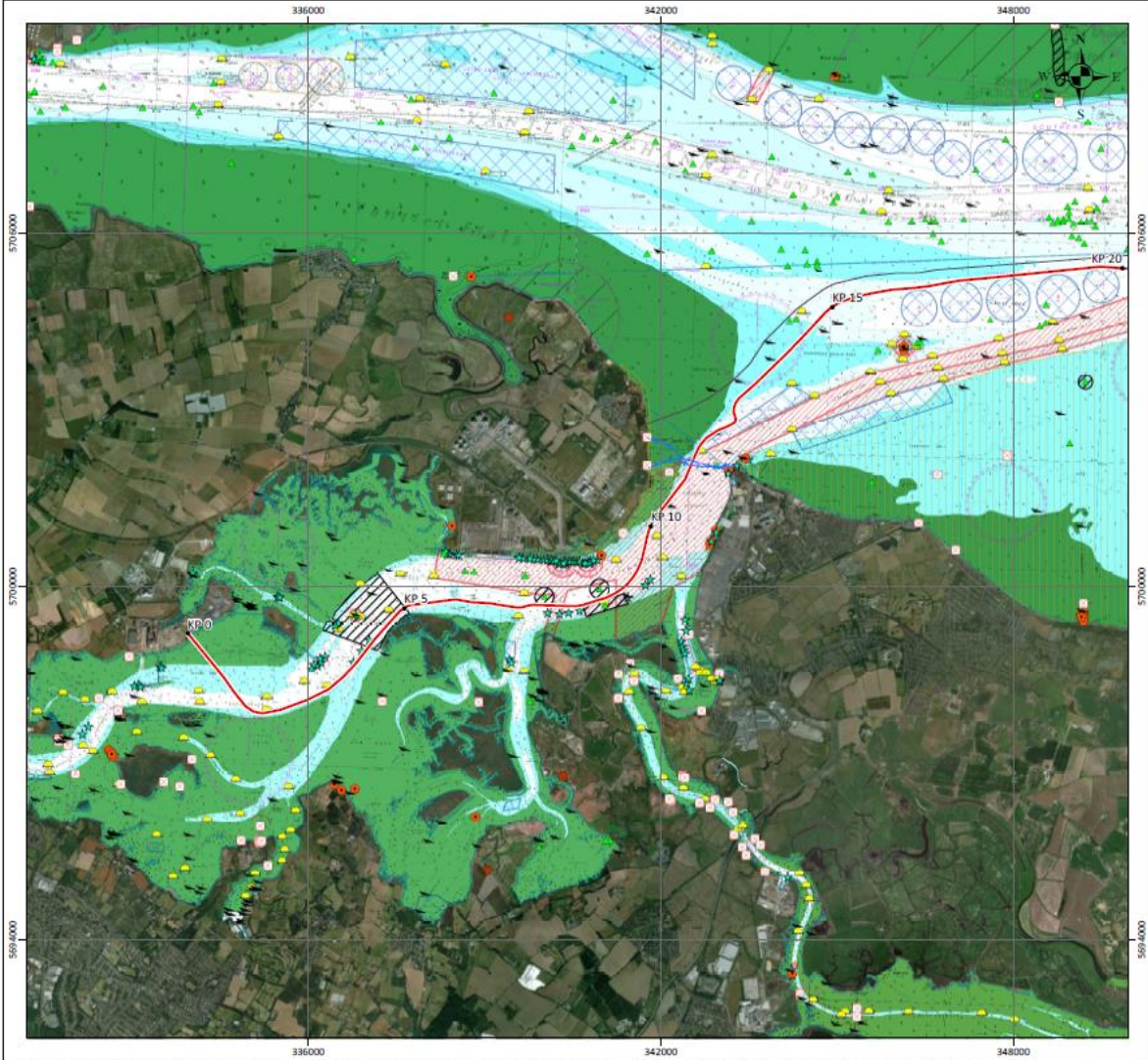


- ***No change to offshore cable length***
- ***No restricted cable installation in Damhead Creek***
- ***No third party land ownership at shore crossing***
- ***Reduced constraints on Horizontal Directional Drilling (HDD) for shore crossing***



- ***1.5 km underground HVAC cable to Kingsnorth 400 kV sub-station (reduced from 3 km)***
- ***No third party land ownership on cable route***
- ***No public utilities on cable route, but existing and new masterplan utilities infrastructure to be considered***

Updated Cable Route in Medway Estuary



GRIDLINK INTERCONNECTOR
Cable Route
Sheet 1 of 10

Drawing No: 2258-PSR-001-01_1 A

Legend

- KP *
- GridLink Route *
- Existing Infrastructure
 - Power Cable
 - Telecom Cable (Disused)
- Marine Use Areas**
 - Precautionary/Caution Area
 - Restricted Area
 - Military Practice Area
 - Harbour/Dock Area
 - Anchorage Area/Berth
- Marine Obstructions**
 - Obstruction
 - Wreck
 - Harbour Facility
 - Pile/Post/Stake
 - Turbine, Wind
 - Beacon
 - Buoy
 - Other Obstruction
 - Obstruction

*GridLink Route referenced to:
GridLink_Route_CL_WGS84_UTM31N_14082019_Rev2

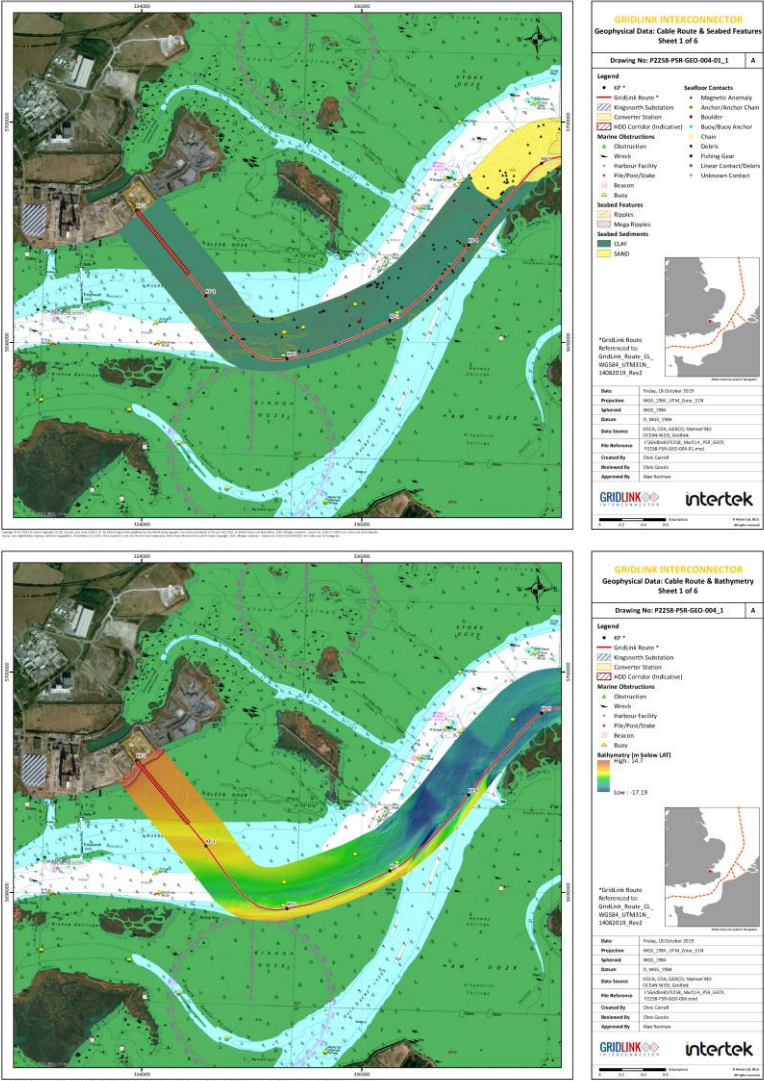
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Spheroid	WGS_1984
Datum	D_WGS_1984
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File Reference	I:\GridLink\2258_MedL3_PSR\2258-PSR-001-01.mxd
Created By	Chris Carroll
Reviewed By	Chris Goode
Approved By	Alan Redman

GRIDLINK
INTERCONNECTOR

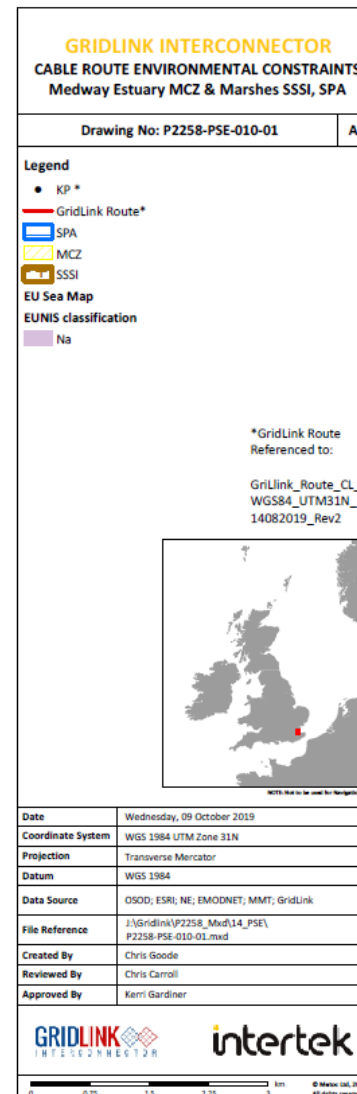
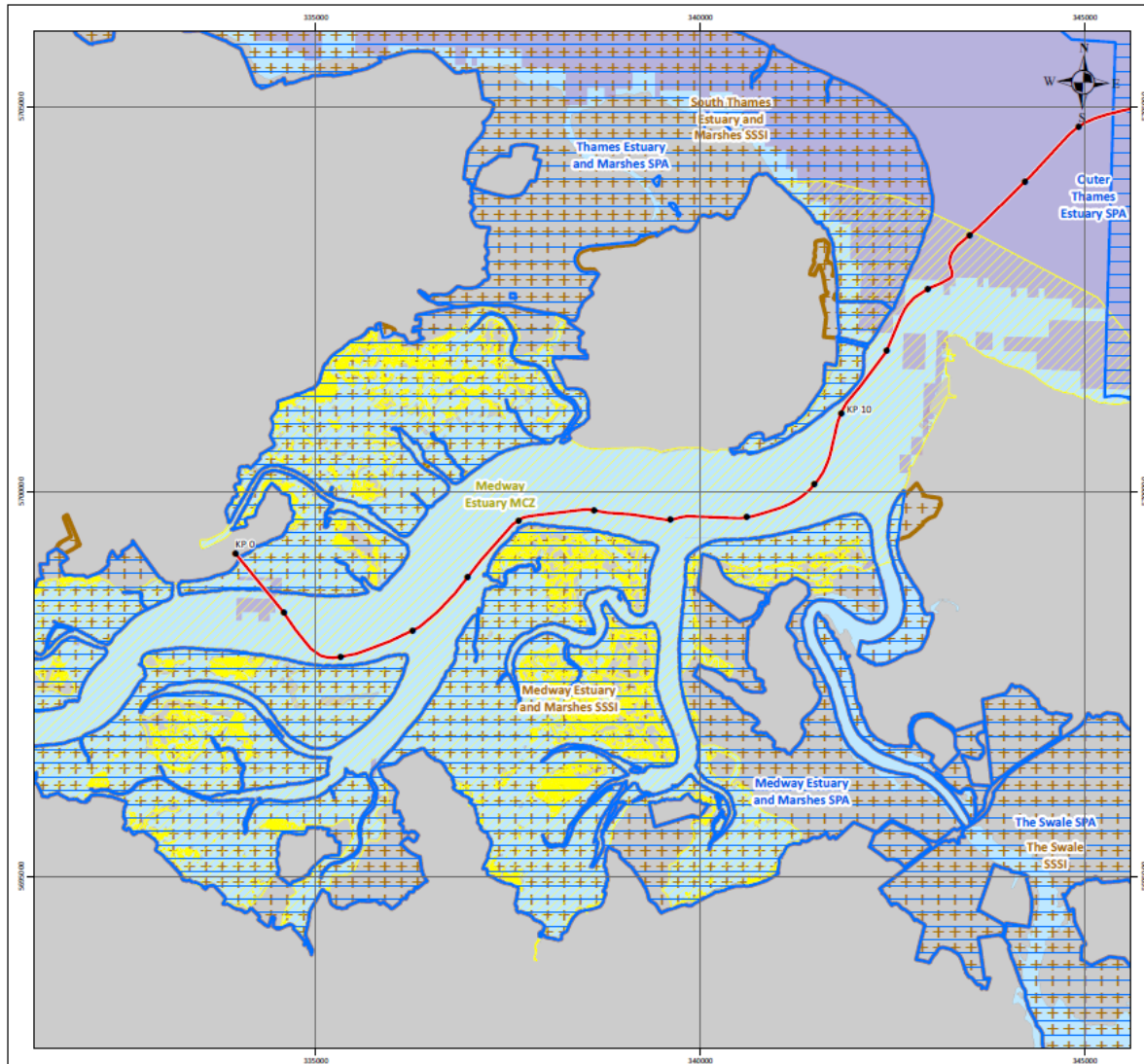
intertek

0 0.5 1 1.5 2 Kilometers

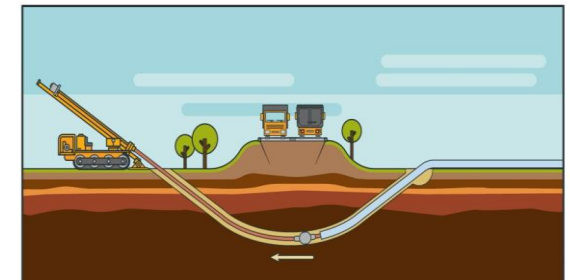
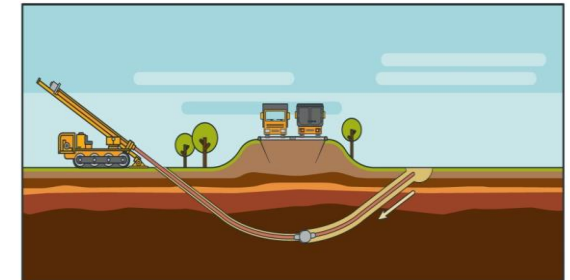
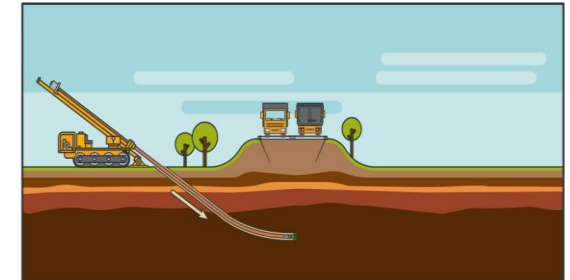
© Marine UK, 2019. All rights reserved.



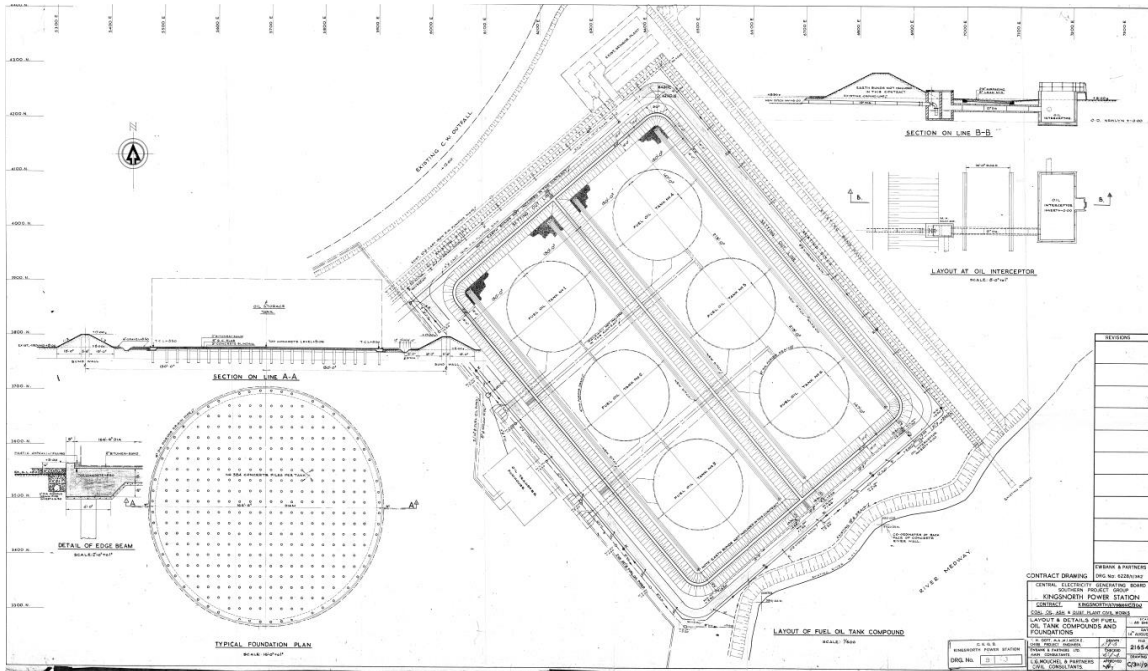
Crossing the Medway Estuary and Marshes SPA / MCZ / SSSI



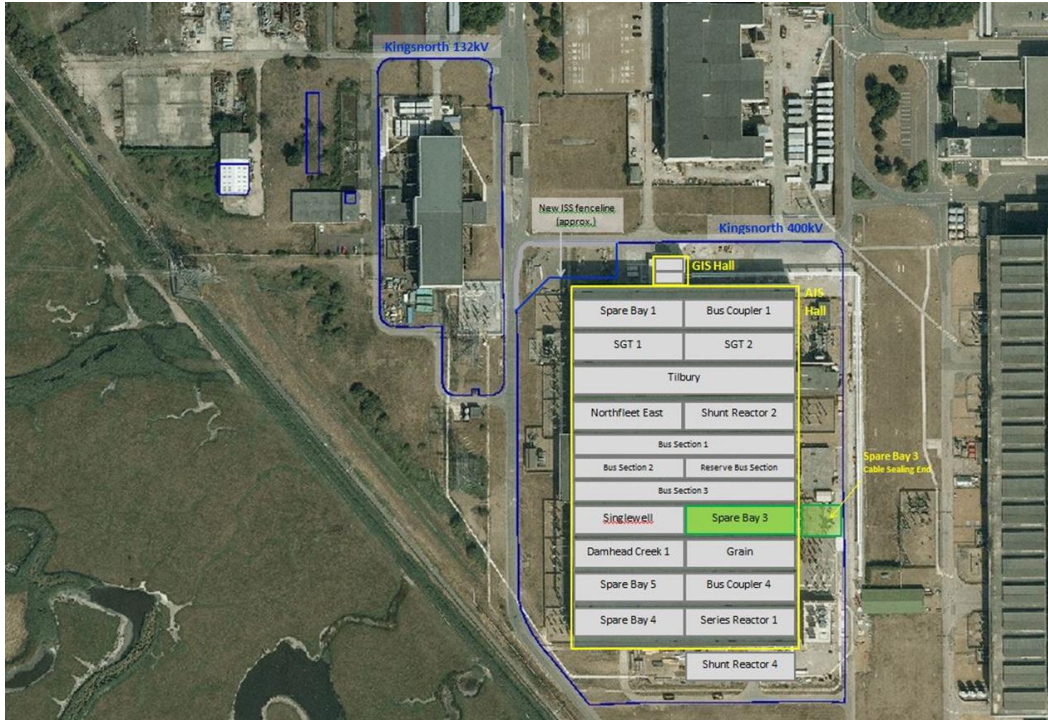
- **Horizontal Directional Drilling (HDD) to install cable below inter-tidal mudflats**



Converter Station Site

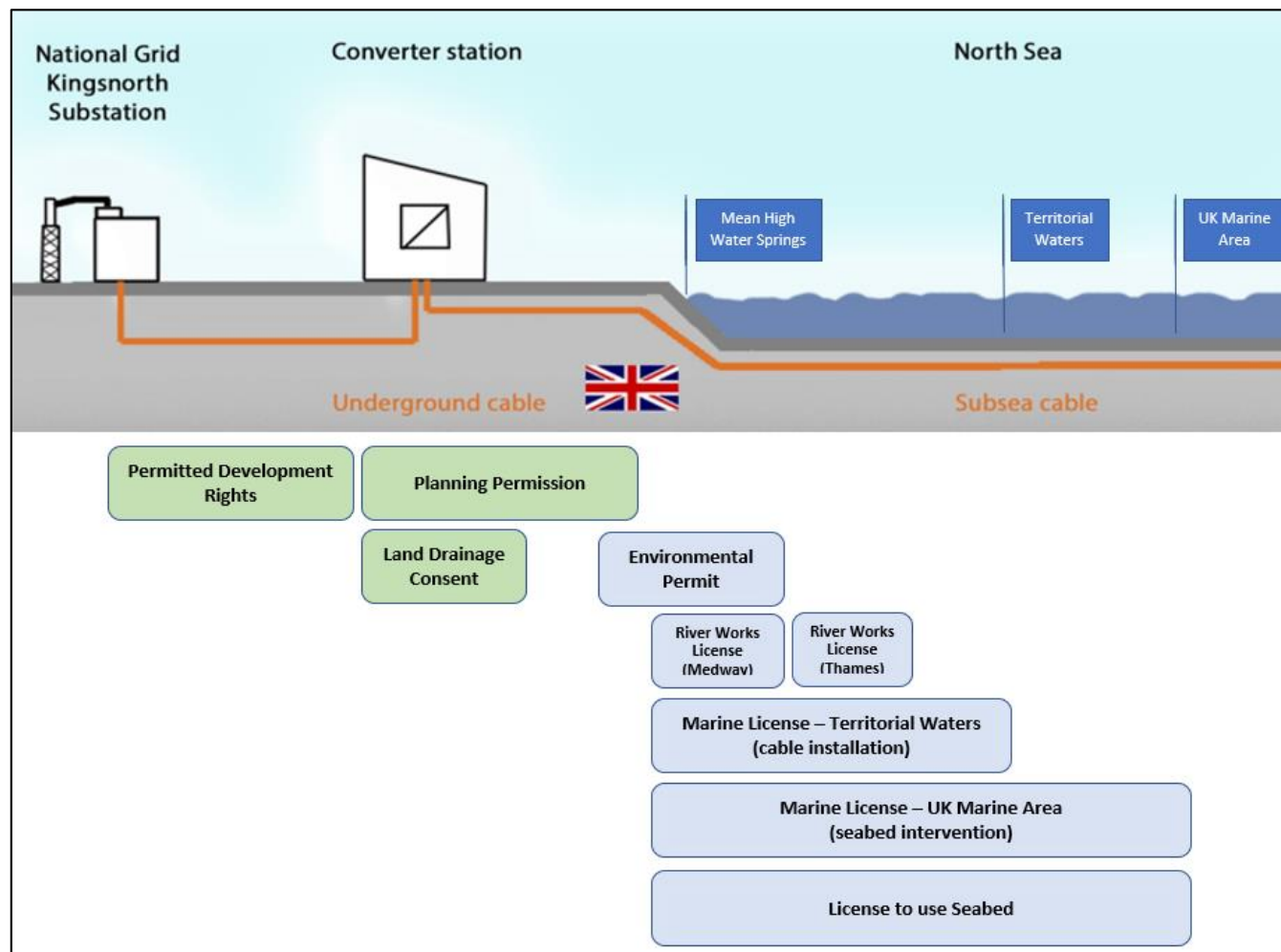


- **4.5 ha of industrial land**
- **Former Heavy Fuel Oil (HFO) tank farm at Kingsnorth coal-fired power station site**
- **6 x HFO tanks (5 x 25,000 m³ + 1 x 50,000 m³)**
- **Tanks, bunds and associated pipework have been removed – tank bases and soil berms remain in place**
- **Remediation of soil contamination in accordance with Uniper strategy for former power station site**



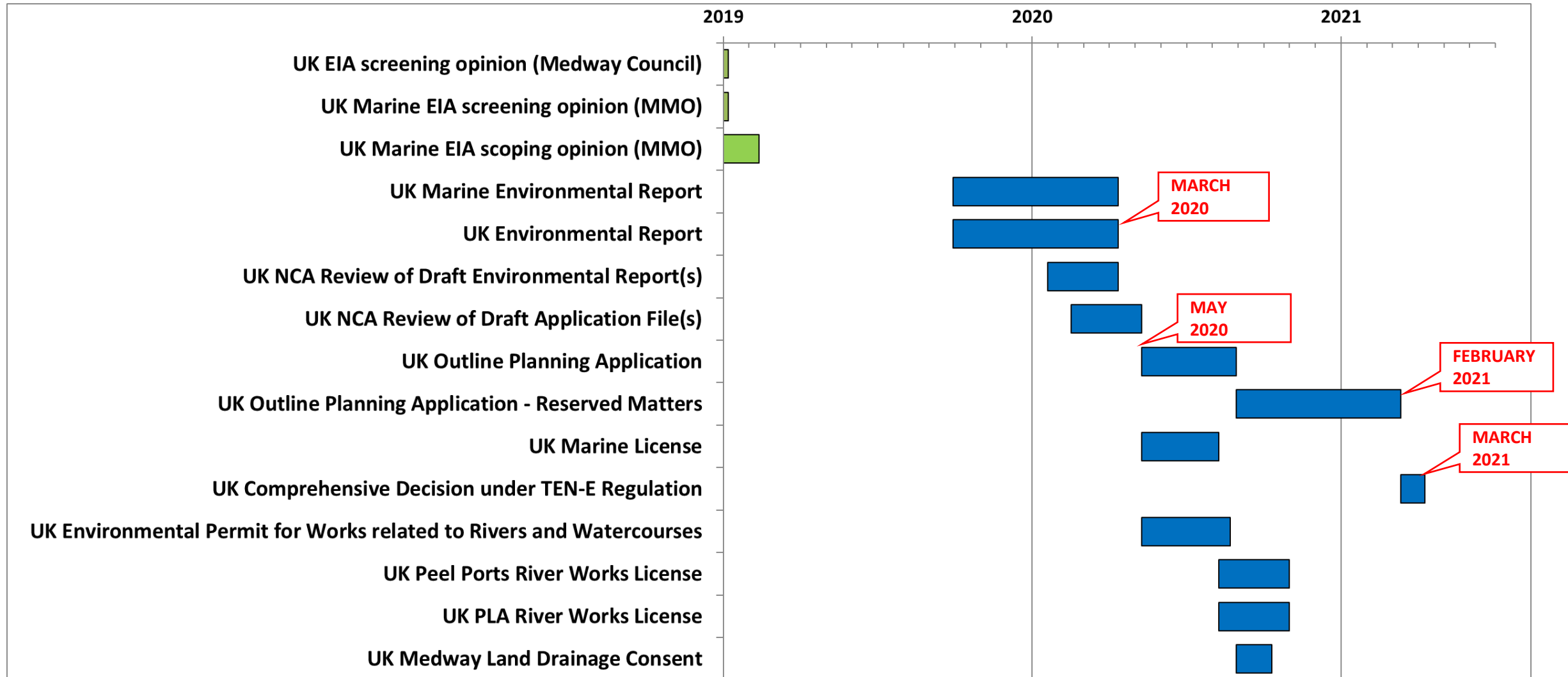
- ***1.5 km underground HVAC cable from converter station to grid connection point***
- ***Grid connection at existing Spare Bay 3 of Kingsnorth 400 kV sub-station***
- ***No new overhead transmission lines***
- ***No extension to Kingsnorth 400 kV sub-station***

UK Development Consents and Permits



Project Infrastructure	Development Consent/ Permit	Applicable Legislation	Competent Authority
Subsea HVDC cable	License to use seabed	Crown Estate Act 1961	Crown Estate
	Marine License	Marine and Coastal Access Act 2009	Marine Management Organisation
	Environmental Permit for works related to rivers and watercourses	Environmental Permitting (England and Wales) Regulations 2010	Environment Agency
	River Works License (Medway Estuary)	Medway Ports Act 1973	Peel Ports
	River Works License (Thames Estuary)	Port of London Act 1968	Port of London Authority
Converter station	Planning Permission	Town and Country Planning Act 1990	Medway Council
	Land Drainage Consent	Land Drainage Act 1991, as amended	Lower Medway Drainage Board
Underground HVAC cable	Permitted Development Rights	The Town and Country Planning (General Permitted Development) (England) Order 2015	Medway Council

Timetable for Planning Application and Other Consents





Elected representatives (February 2019, October-November 2019 and March-April 2020)

- Medway Council Members Briefing
- Hoo St Werburgh Parish Council meeting

EIA consultations (June-December 2019)

- Fishermen's associations
- Environmental interest groups
- Marine users, sailing clubs, marinas, etc
- Offshore third party power cable and telecoms cable owners)
- Any other interested parties

Public information (March-April 2020)

- 3 x info points (Hoo St Werburgh; St Mary's Island; Gillingham/Rainham)
- 2 x public exhibitions (Hoo St Werburgh; St Mary's Island)
- 2 x public meetings (Hoo St Werburgh; St Mary's Island/Gillingham/Rainham)