

GridLink Interconnector
Online Public Meeting

11th September 2020

- 1. GridLink – Introduction to the project***
- 2. AECOM – Overview of the onshore environmental report and planning application***
- 3. Intertek – Overview of the offshore environmental report and marine licence application***

1. GridLink – Introduction to the project

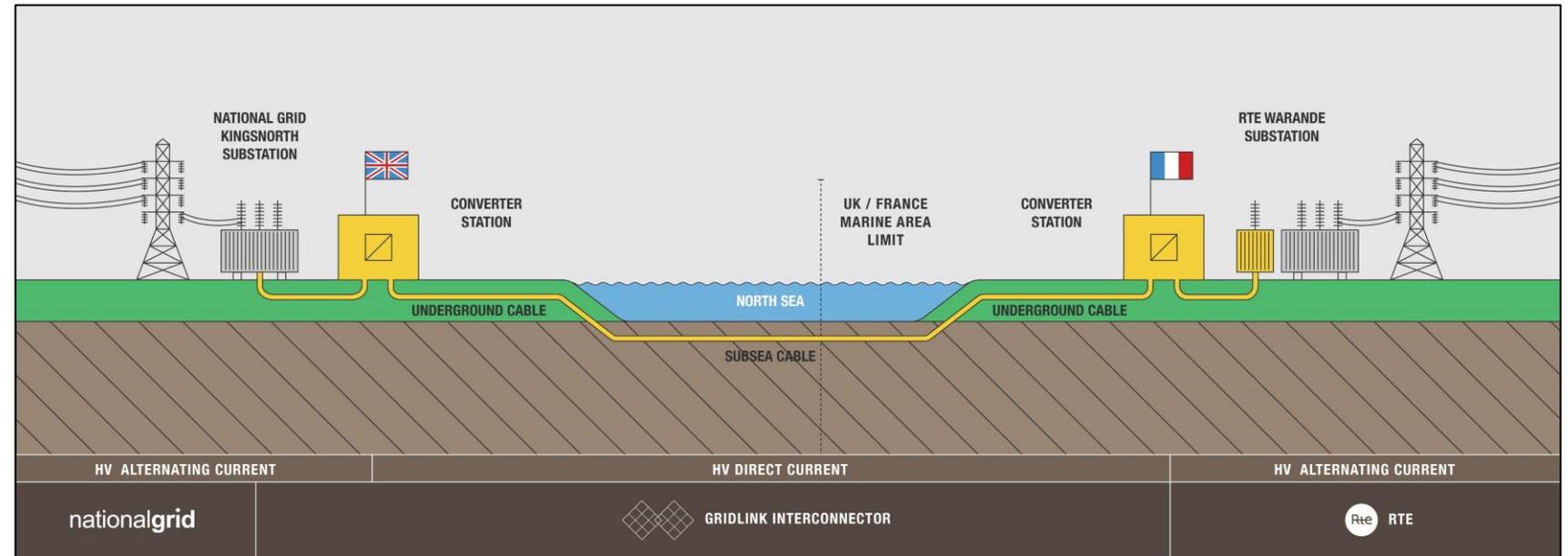
What is the GridLink Interconnector?

GRIDLINK
INTERCONNECTOR

A new 1,400 MW
electricity connection
between UK and France

Benefits:

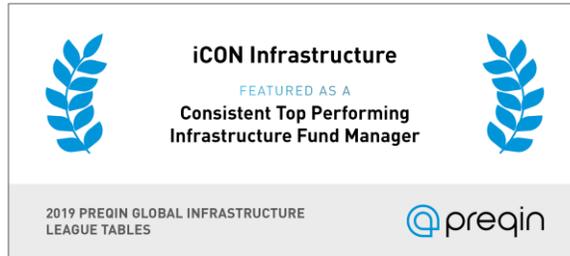
- a) Improves the UK and European grid network
- b) Enhances security of electricity supply
- c) Facilitates distribution of renewable energy
- d) Realises economic benefits to consumers



UK

- 108 km (out of 140 km) submarine cable
- Shore crossing by Horizontal Directional Drilling (HDD)
- Converter station
- 1.5 km underground cable
- Grid connection in Spare Bay 3 at Kingsnorth sub-station

Who is GridLink Interconnector Ltd?



INFRASTRUCTURE INVESTOR
AWARDS 2015

Fundraising of the year
Europe



INFRASTRUCTURE INVESTOR
AWARDS 2015

Fund manager of the year
Europe

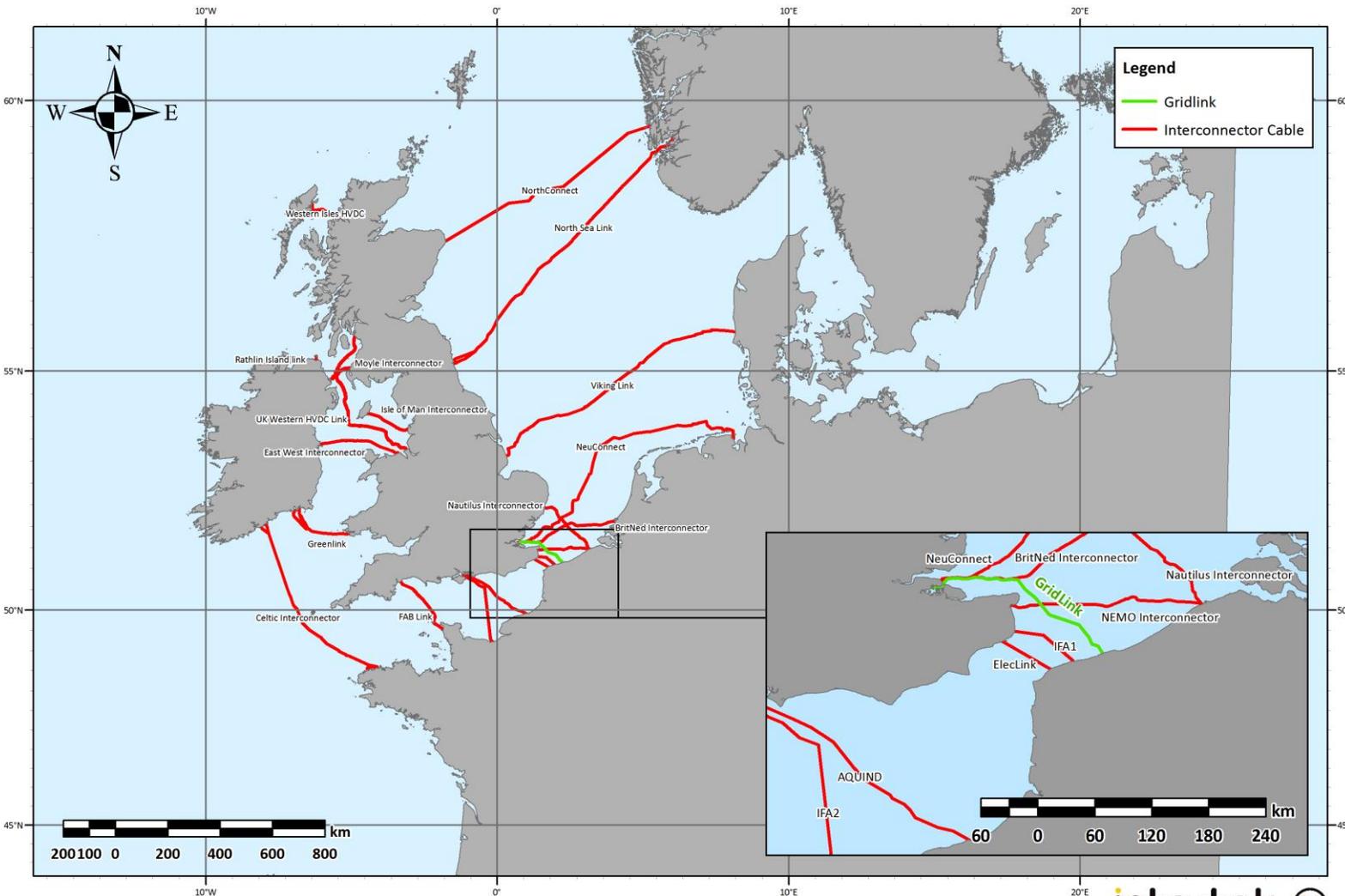


INFRASTRUCTURE INVESTOR
AWARDS 2017

Equity Fundraising
of the year
Europe

- **GridLink Interconnector Ltd is the project company set up to develop, construct and operate the new interconnector**
- **£800-900 million investment**
- **GridLink Interconnector Ltd is 100% owned by iCON Infrastructure **
- **iCON Infrastructure is an independent, specialist investment firm responsible for deploying over €4.3 billion of capital from pension funds, insurance companies and asset managers in infrastructure businesses located in Europe and North America**
- **Long term investor**
- **Headquarters in London**

Are there any other interconnectors?



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intertek 

- **20 x electricity interconnectors:**
 - 6 x operational
 - 3 x construction
 - 11 x planned
- **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
- **GridLink uses state-of-the-art technology that has been proven in other interconnector projects and windfarm export cables**

Where is the GridLink Interconnector to be built?



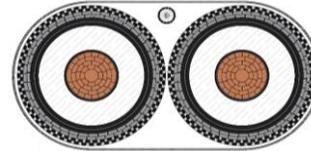
What will the GridLink Interconnector look like?

1. Submarine cable from UK to France

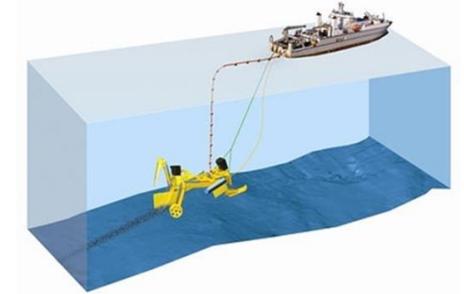
2 x 'bundled' cables buried at 2 m depth in seabed trench



15 cm diameter
Copper conductor
Insulation layers
Steel armouring



'Bundled' cables bound together with fibre optic cable



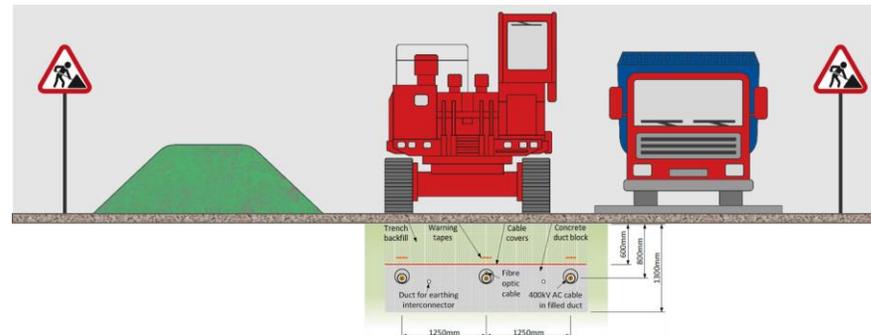
2. Converter station

Electrical equipment enclosed mainly in industrial buildings

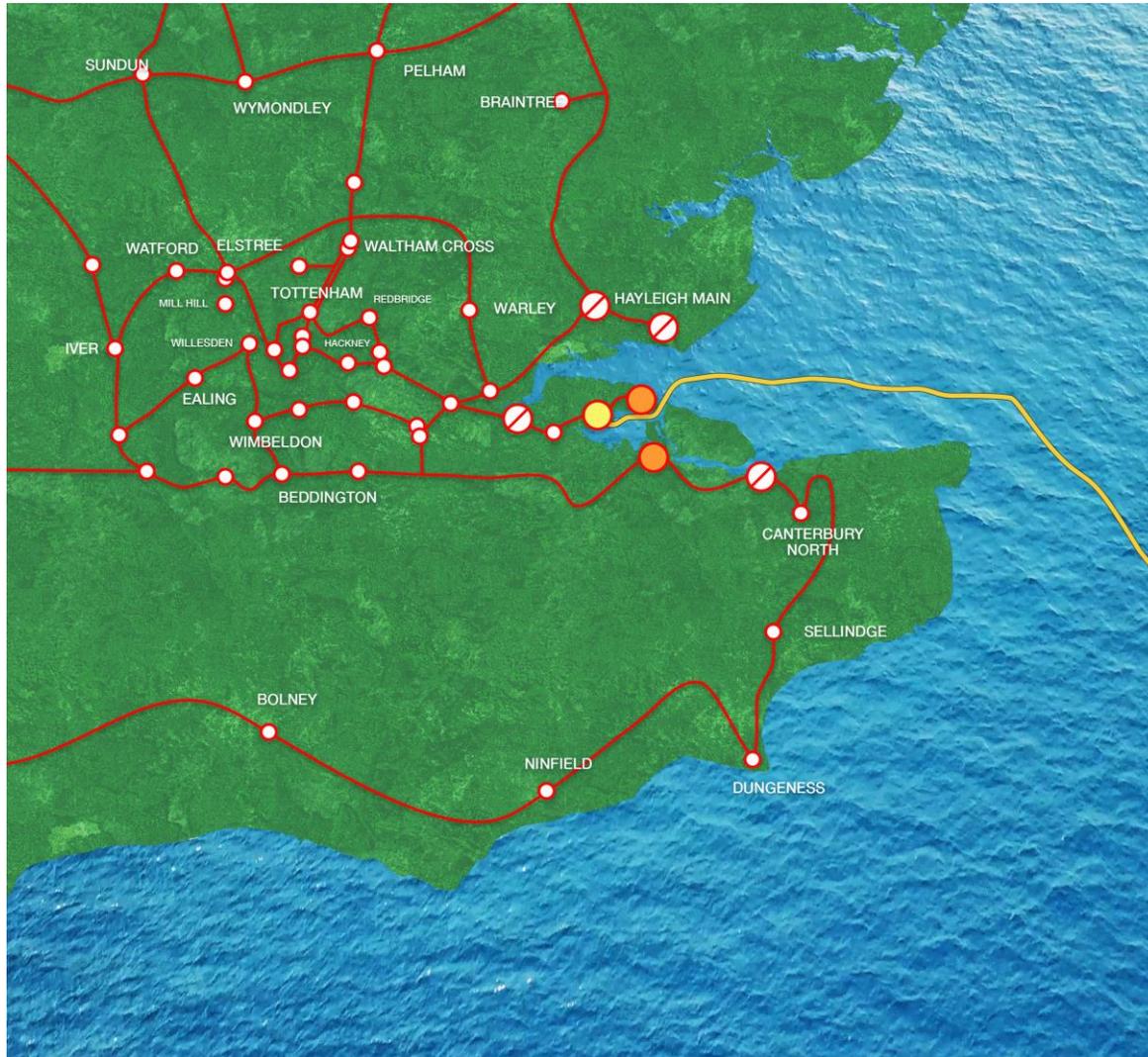


3. Underground cable to Kingsnorth sub-station

3 x underground cables buried at 1 m depth in trench



Why Kingsnorth?



- ***Any interconnector must connect to the UK national grid operated by the National Grid***
- ***In 2016, GridLink carried out a grid connection study with National Grid to identify possible points where a new interconnector could import/export electricity***
 - ***There are no suitable connection points along the south coast of England***
 - ***7 possible locations were identified along the Thames Estuary in Kent and Essex***
 - ***Only 3 locations were not constrained by the existing network: Kingsnorth, Kemsley and Grain***
- ***Kingsnorth was selected as the most appropriate location, taking into account accessibility to the submarine cable, land availability, environmental factors and industrial setting***

Where is the converter station site at Kingsnorth?

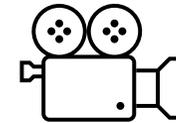


- Converter station site is located within the former E.on Kingsnorth coal-fired power station (now demolished)
- Site is a new plot within the planned development of MedwayOne commercial park by Uniper
- Site has been chosen because:
 - a) Industrial land available for development
 - b) Close to the National Grid Kingsnorth sub-station for grid connection
 - c) Close to the shoreline to connect to the submarine cable
 - d) Compatible previous industrial use and context

What does the site currently look like?



AERIAL VIDEO

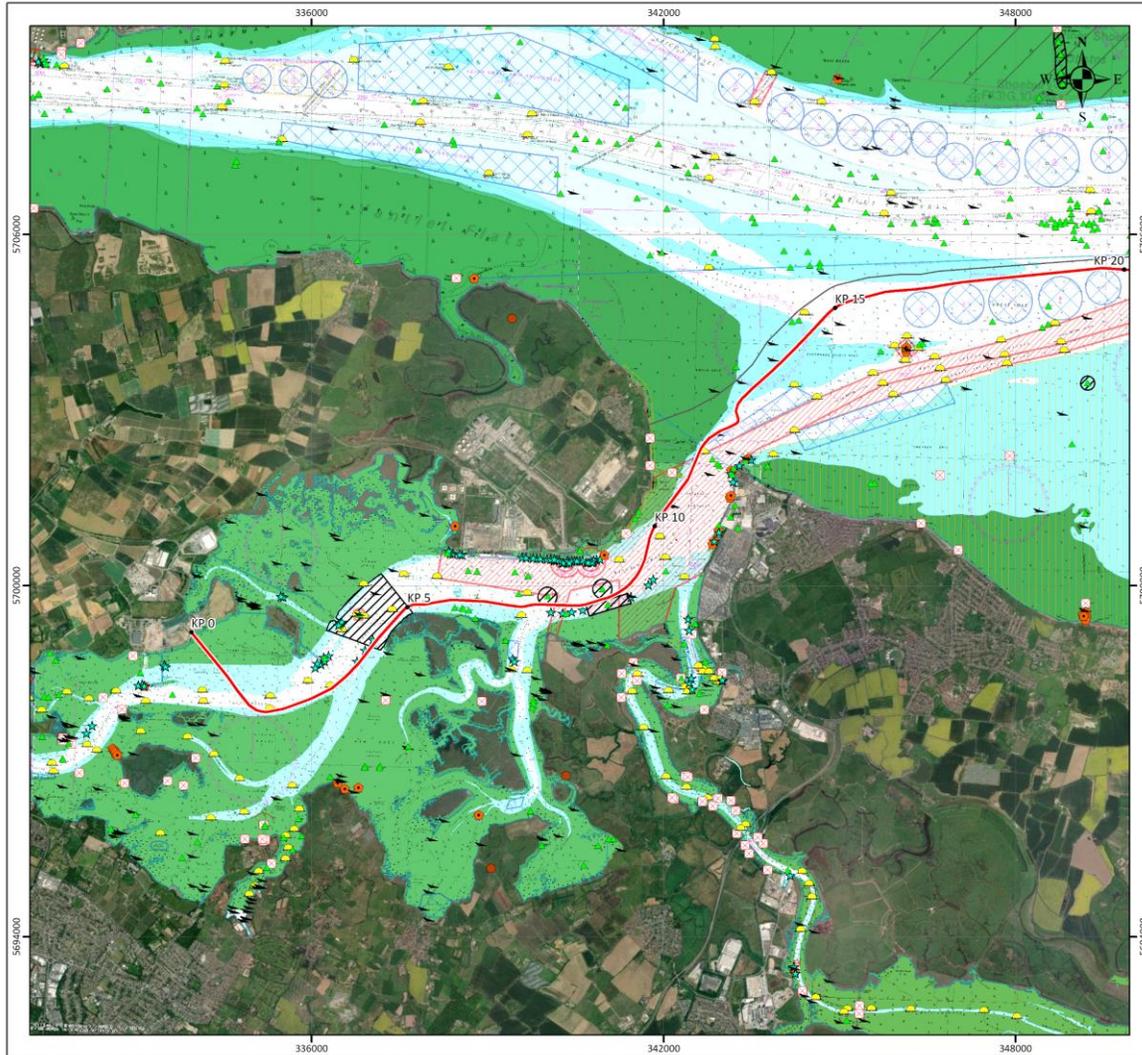


What will be the final design?



- 4.4 ha site area
- Buildings are up to 25 m in height
- Submarine cable shore crossing is underground below the sea defence wall and inter-tidal mudflats by Horizontal Directional Drilling (HDD)
- Cable from the converter station to the National Grid sub-station is underground
- No combustion sources, fuel or chemical storage, or major accident hazards

Where is the cable route in Medway Estuary?



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GRIDLINK INTERCONNECTOR
Cable Route
Sheet 1 of 10

Drawing No: P2258-PSR-001-01_1 | B

Legend

- KP *
- GridLink Route Rev3 *

Exiting Infrastructure

- 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_17022020_Rev3

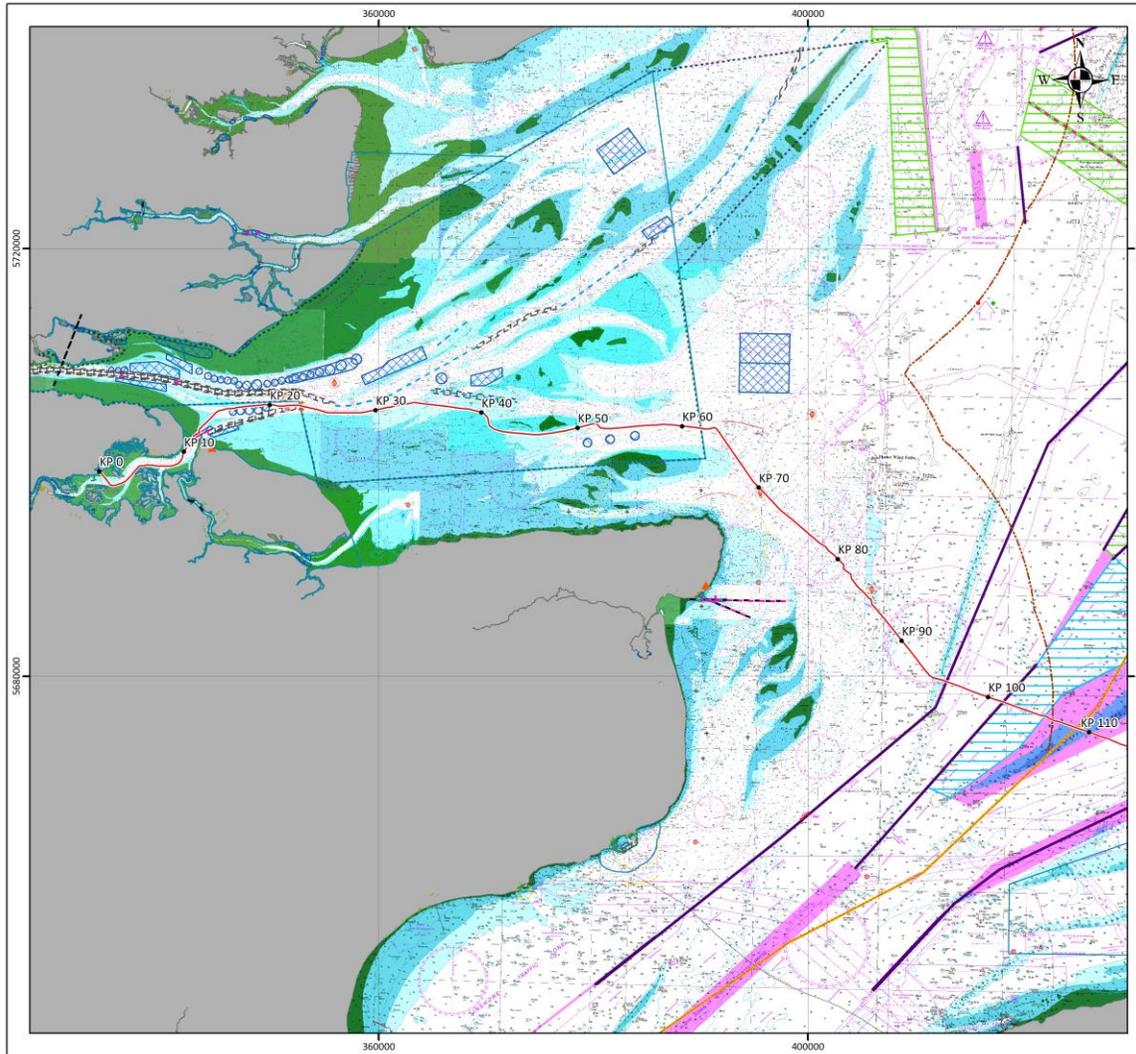
Date	26 June 2020
Projection	WGS_1984_UTM_Zone_31N
Spheroid	WGS_1984
Datum	D_WGS_1984
Data Source	KISCA; UKHO; GEBCO; MarineFind; OCEAN WISE; TCE; Marine Region; GridLink
File Reference	I:\Gridlink\P2258_Mxd\L13_PSR\2258-PSR-001-01.mxd
Created By	Chris Carroll
Reviewed By	Chris Goode
Approved By	Alan Redman

GRIDLINK **intertek**

0 0.5 1 1.5 2 Kilometers
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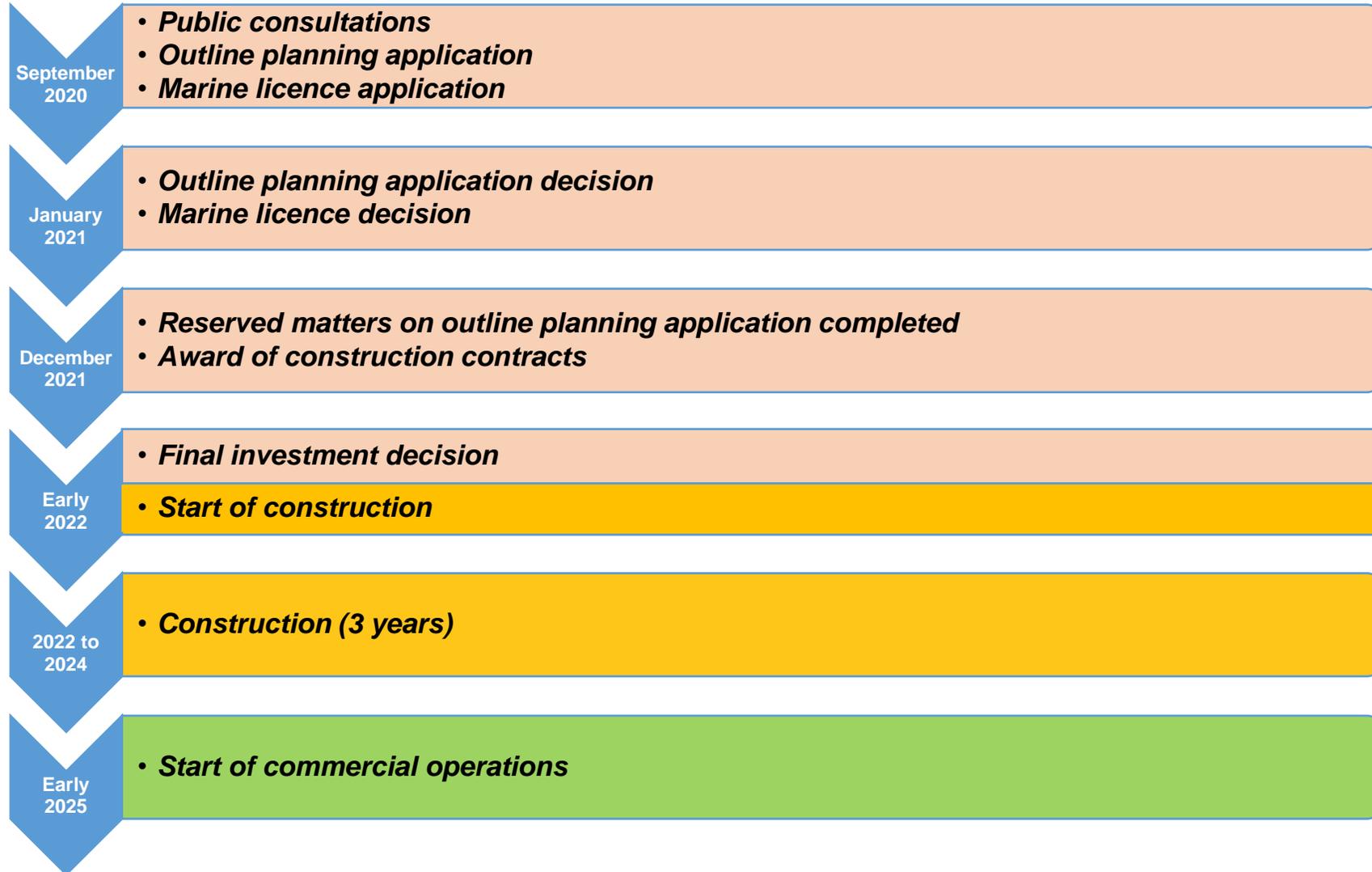
- **Cable route takes into account:**
 - Anchorage, navigation and shipping**
 - Approaches to ports and jetties**
 - Windfarms and other cables**
 - Wrecks and marine archaeology**
 - Seabed obstacles and debris**
 - Fishing grounds**
 - Environmental designated sites**
- **Extensive consultations have been carried out with:**
 - **Peel Ports (Port of Sheerness)**
 - **Port of London Authority (PLA)**
 - **Marine Management Organisation (MMO)**
 - **Natural England**
 - **Fishermen associations**
 - **Third party windfarm and cable owners**
 - **Other marine users**
- **Before cable installation, additional surveys will be carried out to identify any new features or changes along the cable route**

Where is the cable route in Thames Estuary?



- **Cable route takes into account:**
 - Anchorage, navigation and shipping**
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GridLink programme



Next steps

1. Environmental reports:

- a) Environmental report – AECOM
- b) Marine environmental report – Intertek

2. Permit applications:

- a) Outline planning application to Medway Council
- b) Marine licence application to Marine Management Organisation (MMO)

3. Public consultations (via virtual platform):

- Web-site
- Flyers, press releases, advertisements and social media announcements
- Information points (2 weeks)
- Virtual exhibition (2 weeks)
- Live chat session
- **Online public meeting**

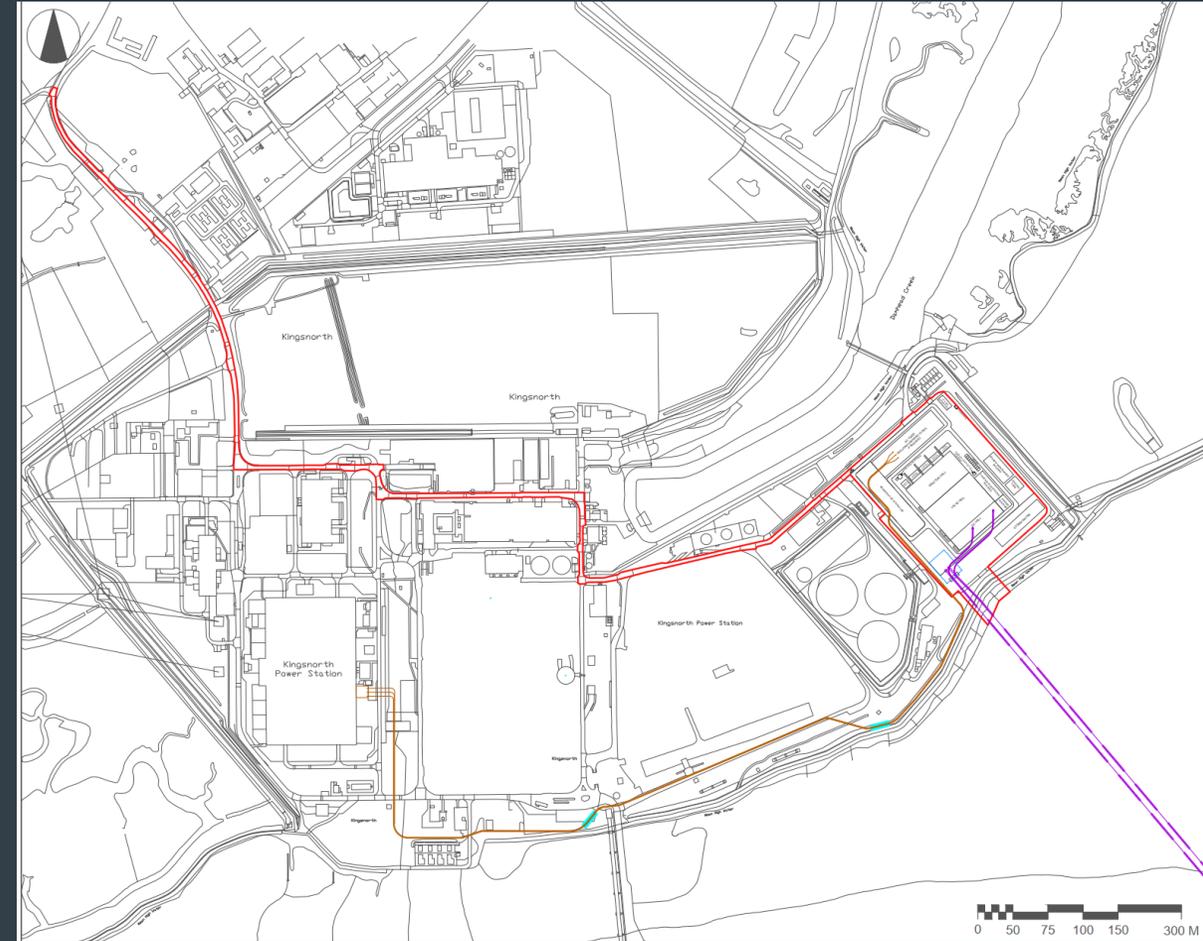


A screenshot of the GridLink Interconnector website. The header includes the GridLink logo, navigation links (HOME, ABOUT US, PROJECT INFORMATION, PUBLIC CONSULTATION, TIMELINE, TENDERS, LATEST NEWS, CONTACT US), and language options (English, Français). The main content area features a map of the UK and France with a red diamond indicating the project location at the Port of Dunkerque. Below the map, there are three diamond-shaped images with text: '2025 COMPLETION' with a power plant image, '1.4GW INTERCONNECTOR' with a power line image, and '153KM CABLE' with a cable image.

2. AECOM – Overview of the onshore environmental report and planning application

Outline Planning Application, Permitted Development Rights and EIA Screening

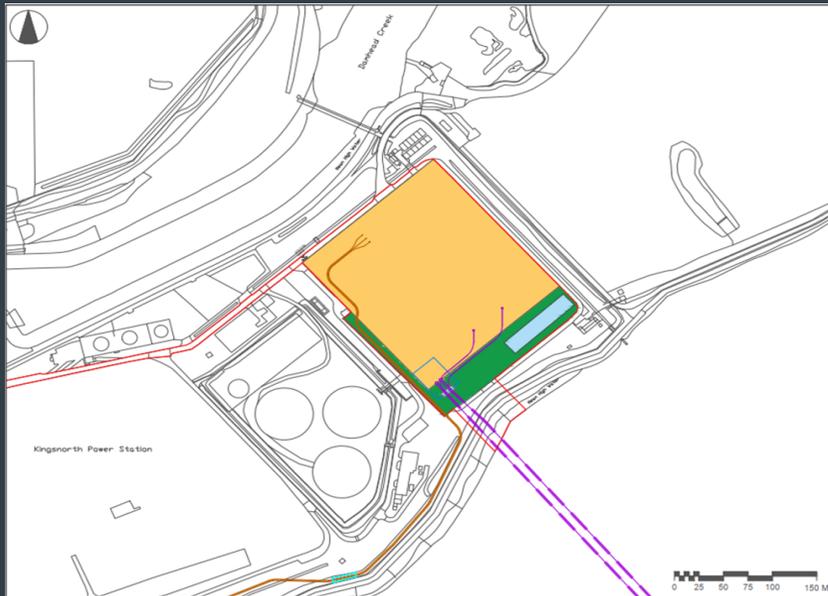
- Town and Country Planning Act 1990
- Town and Country Planning (Environmental Impact Assessment) Regulations 2017 (as amended)
- Town and Country Planning (General Permitted Development) (England) Order 2015



Planning Application Description and Materials

The Proposed Development includes the construction of a converter station, maintenance building, car parking, landscaping, HVDC cables from the converter station to the Mean High-Water Tide Mark and associated infrastructure works.

- Planning Forms
- Planning Design and Access Statement
- Layout Drawings
- Block Diagrams
- Environmental Report
- Statement of Public Involvement



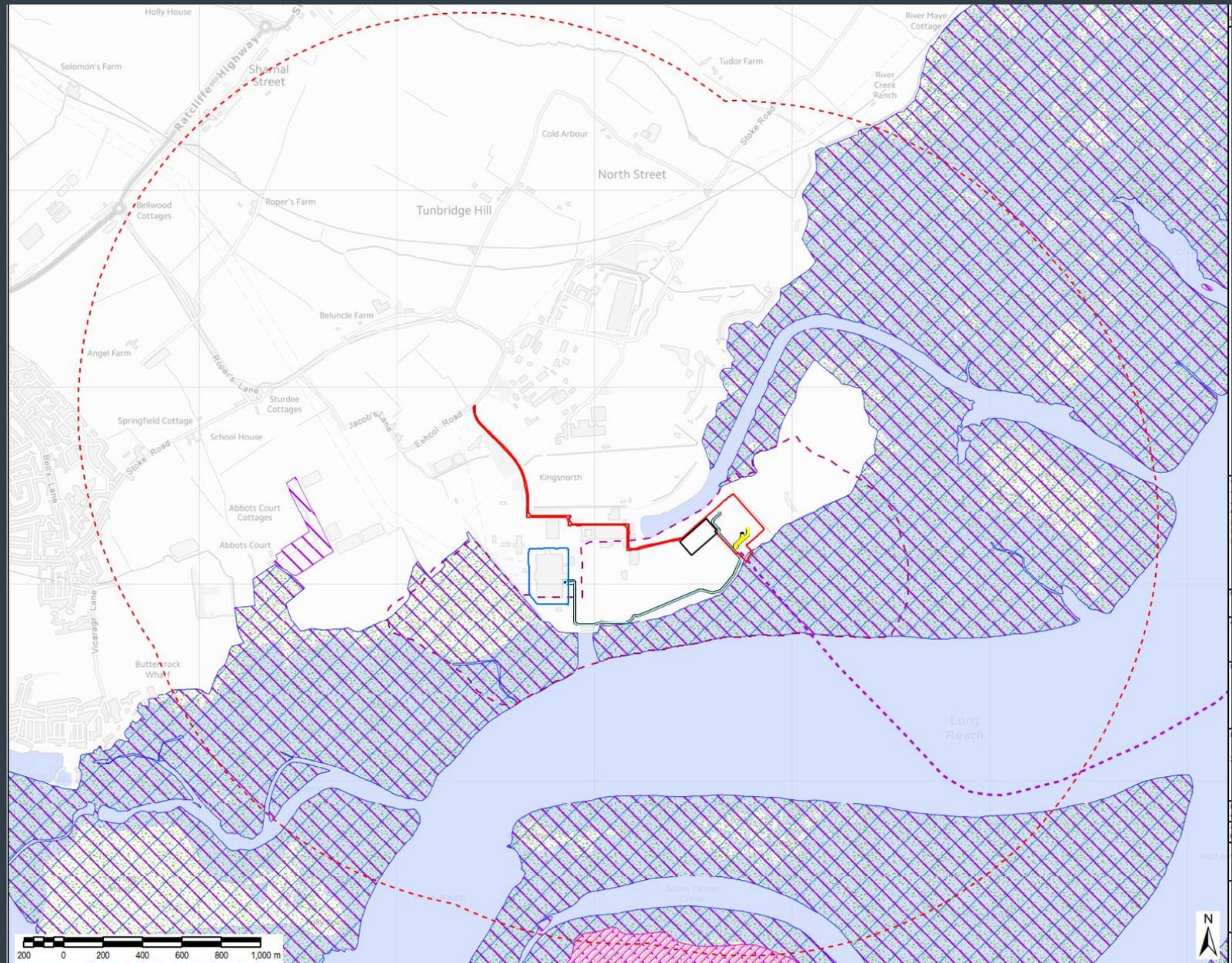
The matters set out below are proposed to be reserved for consideration as part of subsequent reserved matter applications to Medway Council:

- Access – the access to the site for construction and operation.
- Appearance – the detailed design and materials of the Proposed Development.
- Landscaping – the treatment of land (other than buildings) for the purpose of enhancing or protecting the amenities of the Site and surrounding area.
- Layout – the detailed layout of the components of the Proposed Development within the Site.

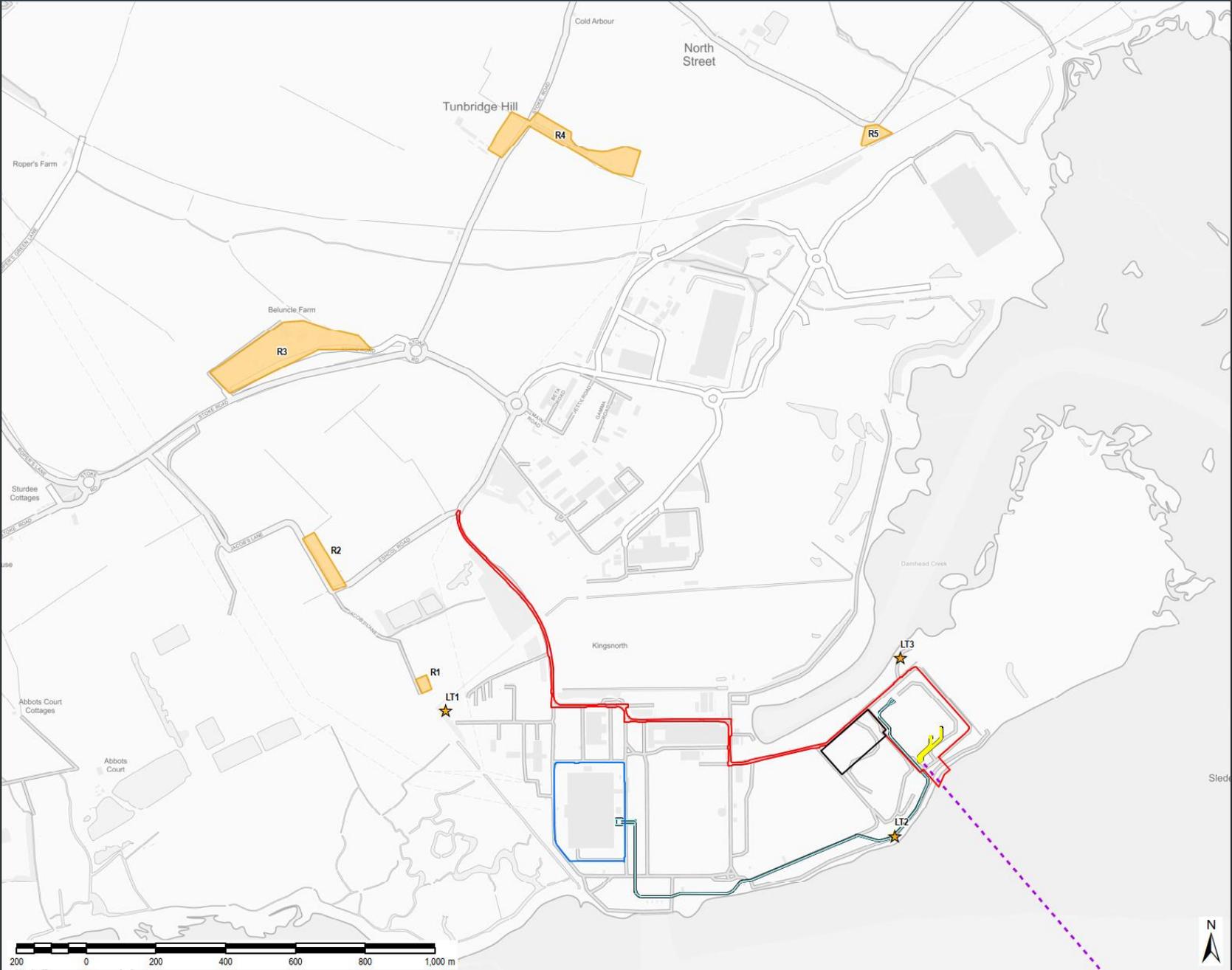
Environmental Surveys and Assessments



Ecological Receptors



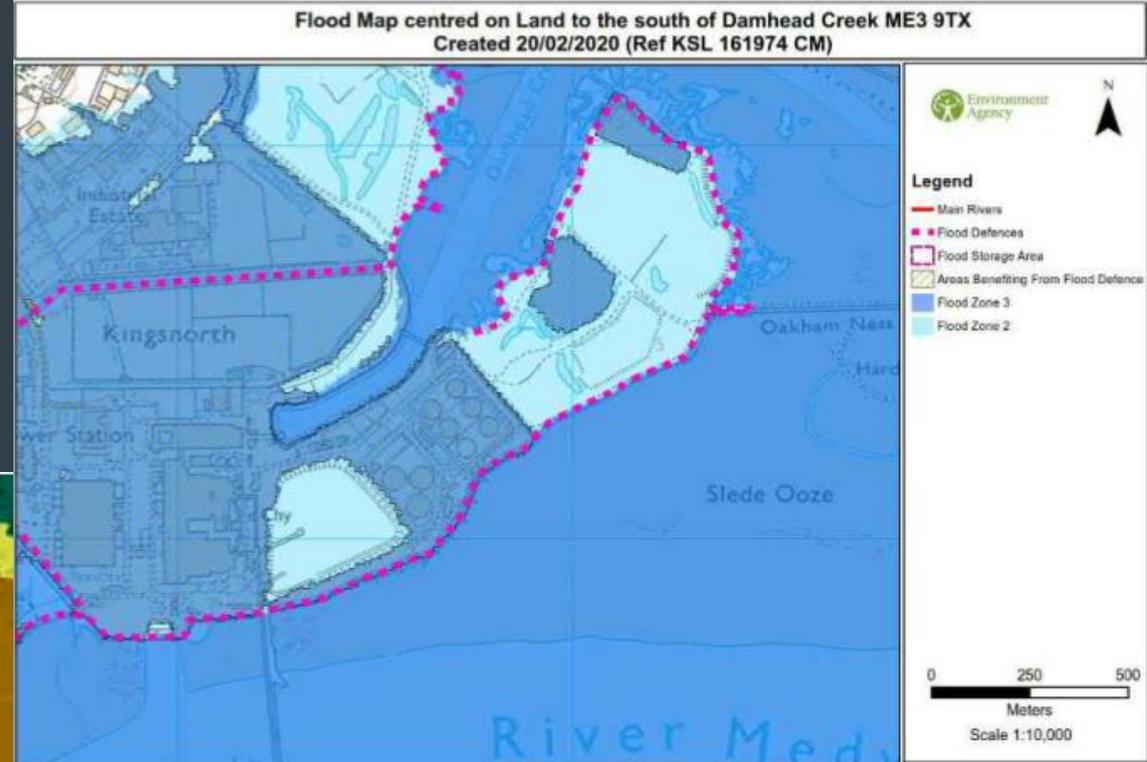
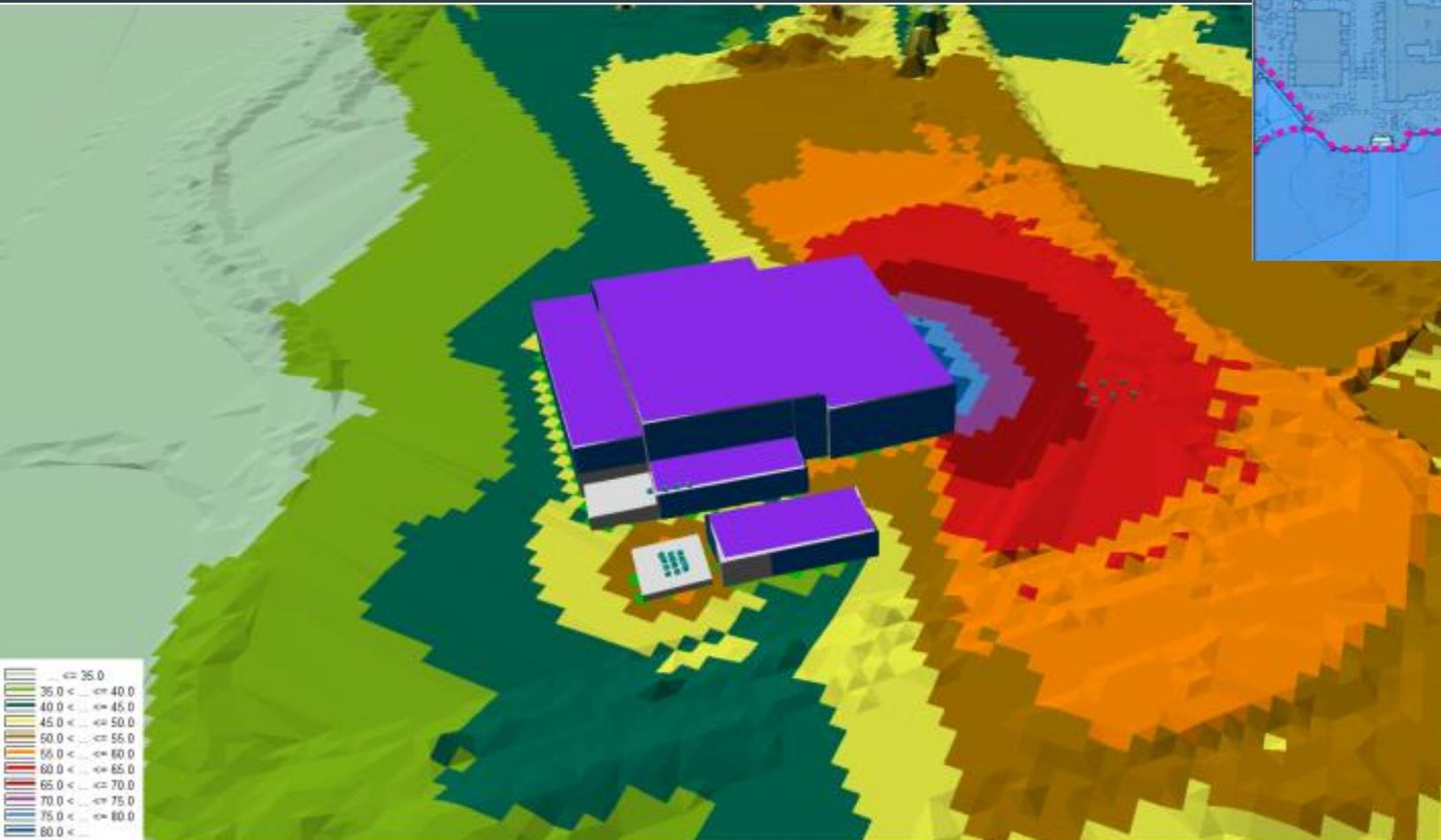
Sensitive Receptors





Environmental Assessments

Noise Contour Plan

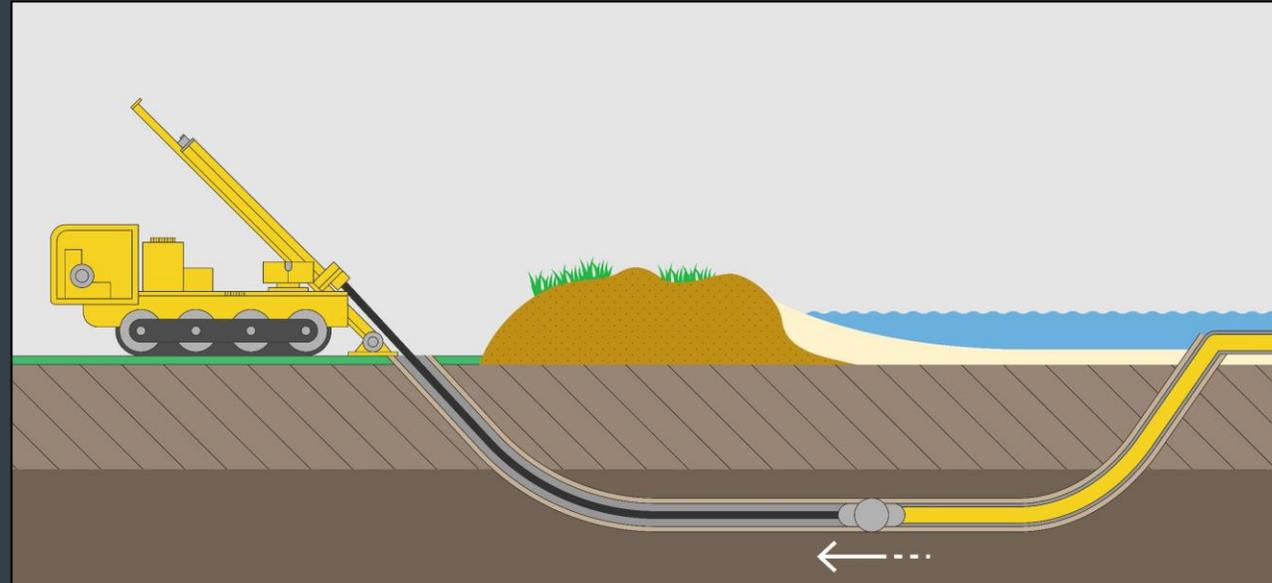


Flood Risk Plan

Key Mitigation Measures

The converter station is located on a 'brownfield' site at the former Kingsnorth coal-fired power station site. Therefore, it is situated in an industrial area where similar Types of development previously existed.

The submarine cable crosses the shoreline at Kingsnorth by horizontal directional drilling underneath the inter-tidal mudflats and sea defences. Therefore, the protected ecological site and the sea defences are not physically disturbed.



All cables will be underground – no new overhead transmission lines are required for the GridLink interconnector project.

High standards of architectural design and landscaping will be applied to the converter station, including colour and finish of buildings compatible with the surrounding environment.

A range of good international industry practices, tailored to the site-specific requirements at Kingsnorth, are incorporated into construction activities, including for noise control, site lighting, traffic management, temporary construction laydown, soil storage, control of hazardous substances and waste management.

Policy Compliant and Environmentally acceptable scheme

The site has been selected following careful consideration of technical, geographical and environmental constraints and opportunities, including previous use of the land, distance from nearest residential receptors, and the use of brownfield land for development.

The local amenity will be protected during both the construction and operation phases of the Proposed Development. The impacts on landscape, noise, heritage assets, transport, air quality and ground conditions have been found to be not significant by the technical reports.

Mitigation during the construction and operation phases of the Proposed Development mean that there will be no significant effects on ecological features or protected species, and nationally and locally designated sites will be protected; this includes the nationally-designated site of Medway Estuary and Marshes (SPA, SSSI and Ramsar site), which is crossed by the underground HVDC cable in its route from the converter station to the Mean High Water Tide Mark.

The Site is within land identified for strategic economic development, and the Proposed Development accords with the strategic priority of the redevelopment of under-used and derelict land. The Proposed Development will contribute to meeting the local strategic objective, and national policy, of securing access to reliable and clean electricity.

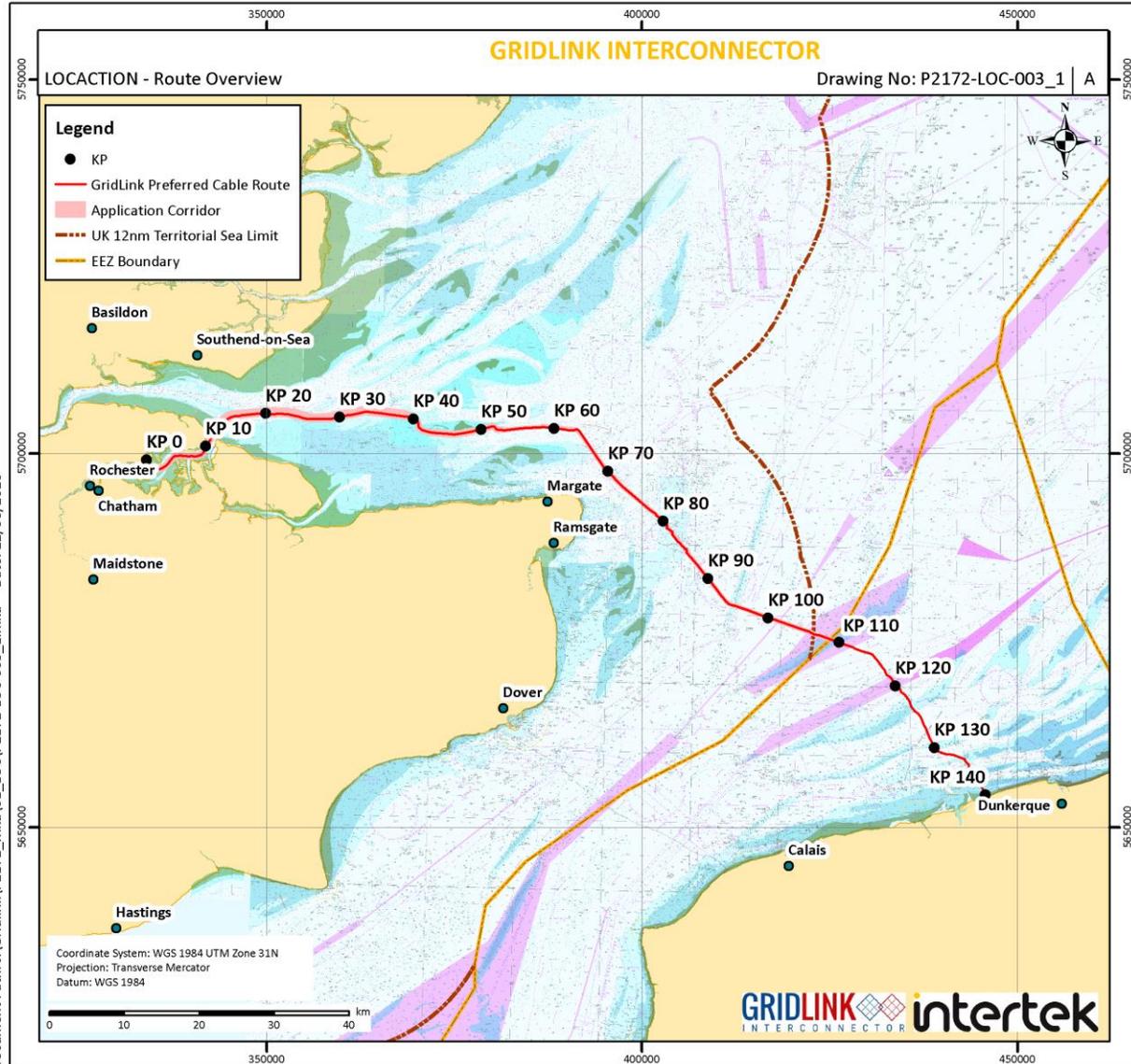
3. Intertek – Overview of the offshore environmental report and marine licence application

MARINE CONSENTS



Licence, Regulation, Regulator	Supporting Documentation									
	Method Statement	Environmental Assessment	Navigation Risk Assessment	Water Framework Directive Assessment	Marine Archaeology Technical Report	Habitats Regulations Assessment	MCZ Assessment	Underwater Noise Modelling	Marine Mammal Mitigation Plan	
Marine Licence Marine & Coastal Access Act 2009 Marine Management Organisation										
Wildlife Licence The Conservation of Offshore Marine Habitats and Species Regulations 2017 & The Conservation of Habitats and Species Regulations 2017 Marine Management Organisation										

OFFSHORE ROUTE



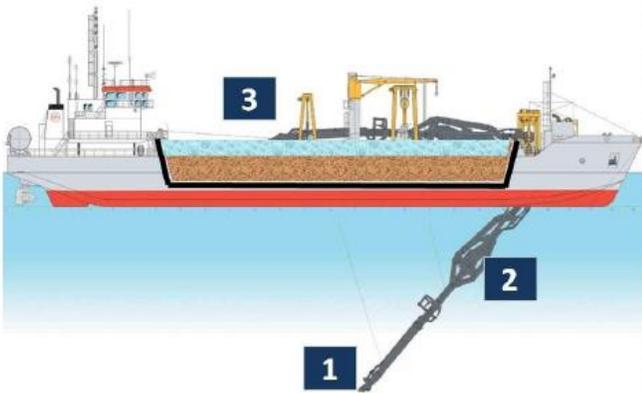
Cable Route

- 30m wide corridor approved by Crown Estate
- Preferred Cable Route designed to avoid or reduce environmental effects whilst accommodating other factors

Application Corridor

- Encompasses all areas where work will be undertaken in UK waters
- Extends from mean high-water springs (MHWS) to the UK/France EEZ boundary
- Approximately 108km long and nominally 500m wide
- Wider between kilometre point (KP) 0 and KP55 to allow for anchoring

CABLE INSTALLATION



ENVIRONMENTAL ASSESSMENT – SUPPORTING STUDIES



Herring and Sandeel Spawning Habitat Assessment



Marine Archaeology Assessment



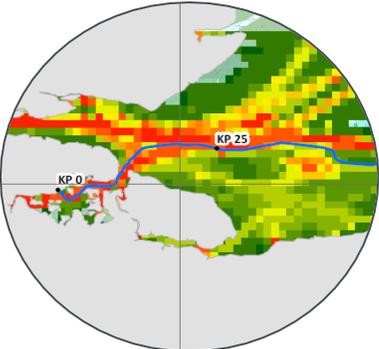
Commercial Fisheries Assessment



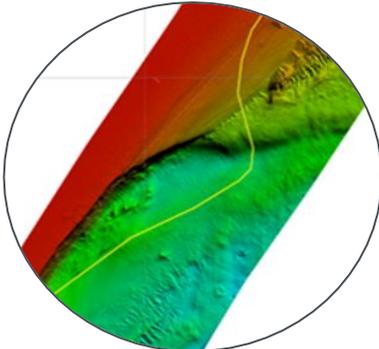
Underwater Noise Modelling



Water Framework Directive Assessment



Navigation Risk Assessment



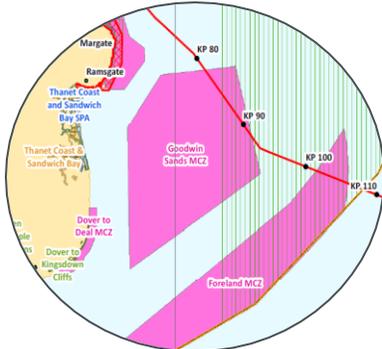
Geophysical and Geotechnical Survey



Environmental Baseline Survey



Habitats Regulations Assessment



Marine Conservation Zone Assessment

ENVIRONMENTAL ASSESSMENT – PRESSURES ASSESSED



Topic Receptors

- Physical Environment
 - Wind, waves, tides, currents, temperature, salinity, bathymetry, sediments, coastal and marine processes, water quality, sediment quality
- Protected Areas
 - SACs, SPAs, Ramsar sites, MCZs, SSSI, Kent and Essex Inshore Fisheries and Conservation Authority Byelaw Areas
- Benthic Ecology
- Fish and Shellfish
- Marine Birds
- Marine Mammals and Marine Reptiles
- Navigation Risk Assessment
- Commercial Fisheries
- Marine Archaeology

Pressures Assessed

- Penetration, abrasion and disturbance of the seabed
- Changes in suspended solids (water clarity)
- Water flow changes
- Physical change (to another seabed type)
- Siltation rate changes (including smothering)
- Release of contamination from sediments
- Underwater sound changes
- Electromagnetic changes
- Temporary displacement of vessels & disruption to right of passage
- Snagging
- Reduction in water depth impeding safe navigation
- Temporary or permanent habitat disturbance affecting fish stocks
- Direct or indirect damage to archaeological assets
- Cumulative effects
- Transboundary effects

ENVIRONMENTAL ASSESSMENT – POTENTIAL EFFECTS



Effects from cable installation will be temporary with natural short-term recovery. Operational effects will be negligible.

Assessment concluded **Potentially Significant Effects for which mitigation measures are recommended**

- Localised permanent change to protected habitat due to deposit of external cable protection
- Brief but significant underwater sound changes associated with UXO detonation
- Localised permanent change in water depths (at select locations)

Assessment concluded **No Significant Effects**

- No effect on intertidal mudflats and protected bird species in Medway Estuary
- Brief and temporary increase in suspended solids in the water column that is within natural range of variability
- Localised, temporary disturbance of the seabed and associated habitats and species
- Temporary disruption to fishing, marine based recreation and shipping
- Snagging hazards will not cause a significant effect to commercial fisheries
- No significant effects to marine archaeology

MITIGATION MEASURES



44 project specific mitigation measures have been proposed to reduce significance of effects on:



Sensitive habitats



Overwintering birds



Marine mammals



Commercial fisheries

Developed through close consultation with stakeholders, guided by industry best practice and informed by lessons learnt from other developments in the region.

Key Mitigation

1. Two cables bundled together in one trench to minimise footprint
2. Horizontal directional drill under sensitive protected intertidal mudflats
3. Strict limitations on installation techniques to minimise effects on the seabed and in the water column
4. Communication protocols and fisheries liaison to minimise disruption to marine users
5. Monitoring of suspended sediments during installation for sensitive shellfish beds
6. Pre-installation and post-installation seabed condition surveys to minimise effects on commercial fisheries

Thank you for participating in the online public meeting

Further information is available at:

www.gridlinkinterconnector.com