

# VikingLink

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## Viking Link Project Overview

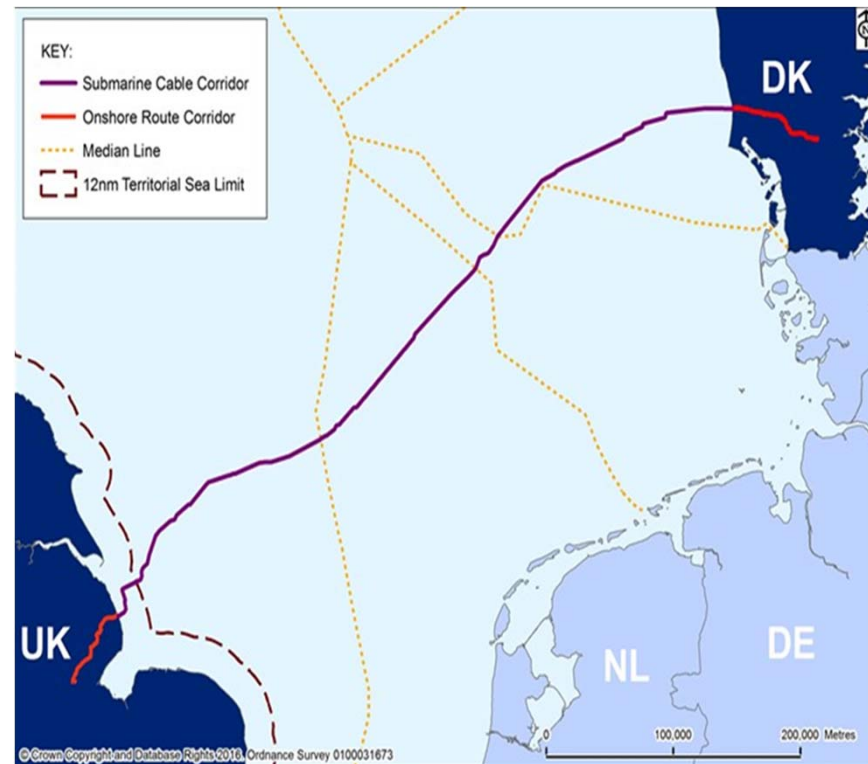
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May 2019

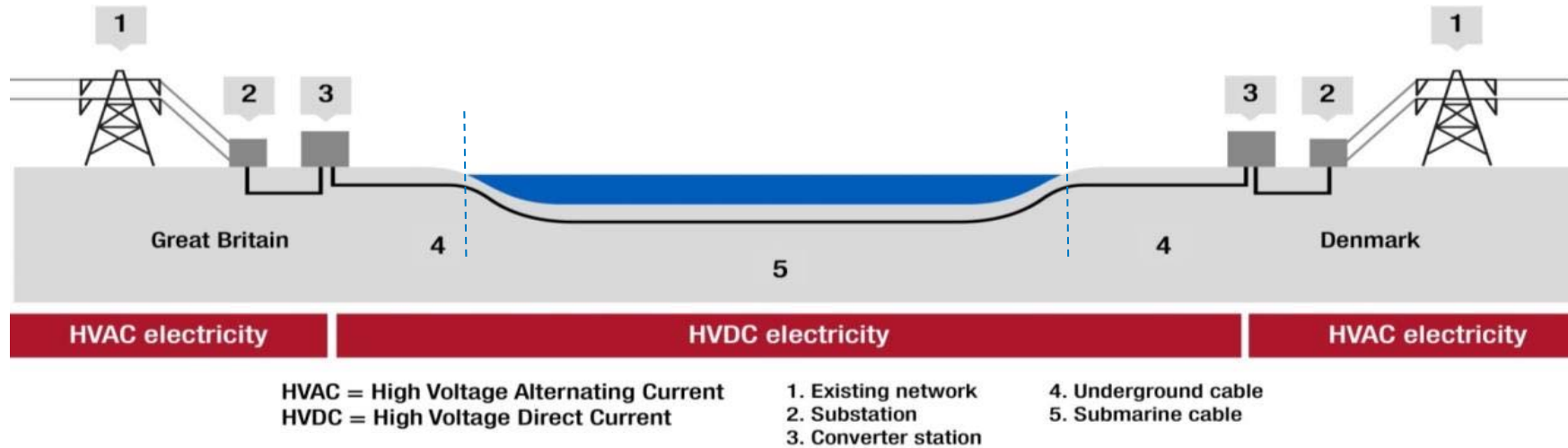


## Key facts:

- 50/50 UJV between NG and Energinet
- 768km HVDC Interconnector between UK and Denmark
- 1.4GW - 525kV
- FID Sept 18
- Commissioning 2023
- Longest subsea interconnector in Europe
- Crosses through UK, Dutch, German & Danish Waters

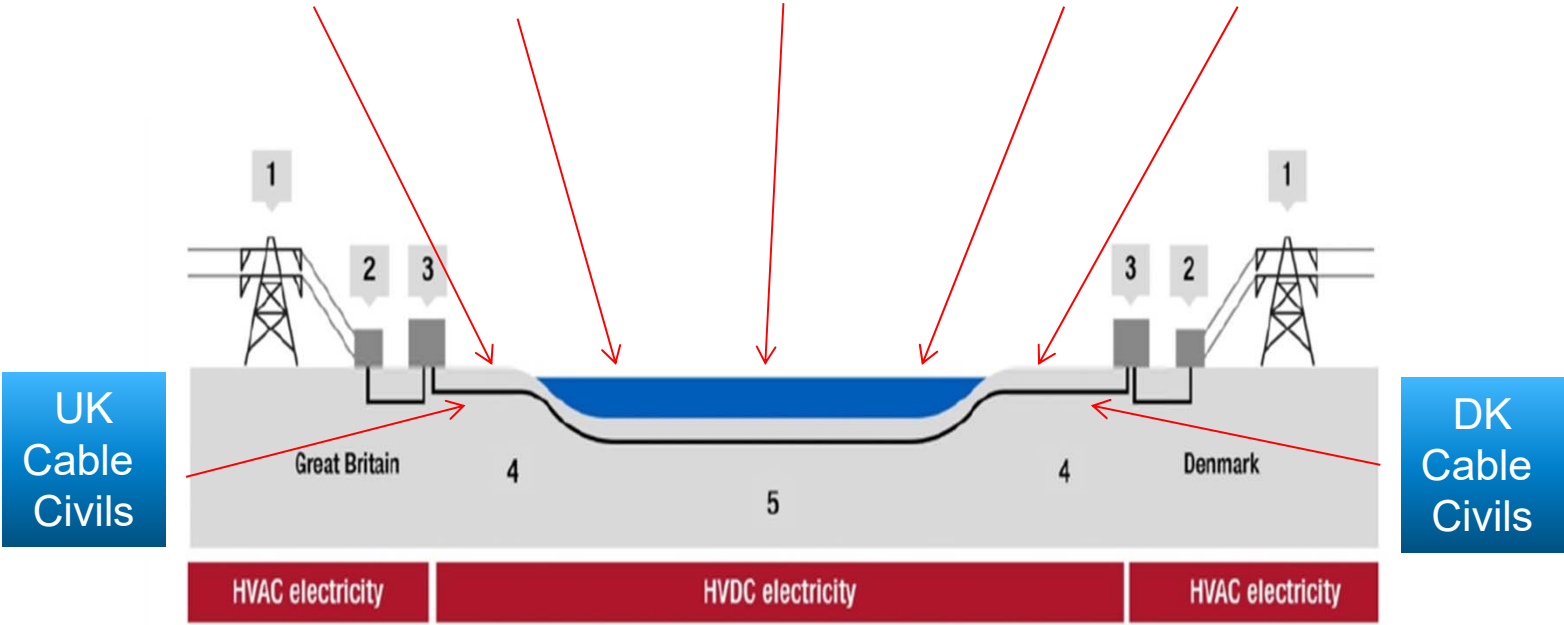
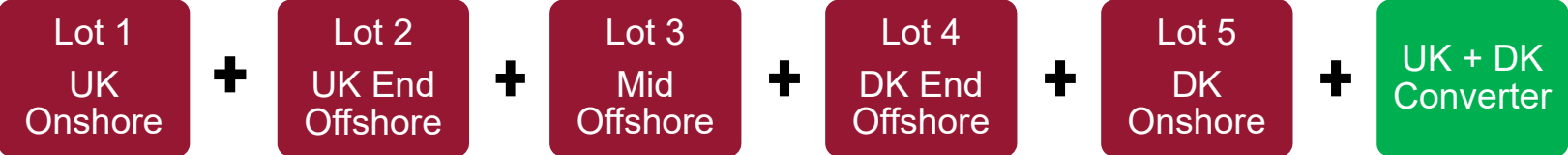


## Viking Link (End to End)



<b>Capacity</b>	1400MW @ 525kV (DC)	<b>DK Onshore Route</b>	76 km (Blaabjerg - Revsing)
<b>Converter technology</b>	Voltage Source Converter (VSC) Bipole Configuration	<b>Submarine Cable</b>	625km
<b>Cable technology</b>	Mass Impregnated (MI)	<b>UK Onshore Route</b>	67km (Boygrift to Bicker Fen)

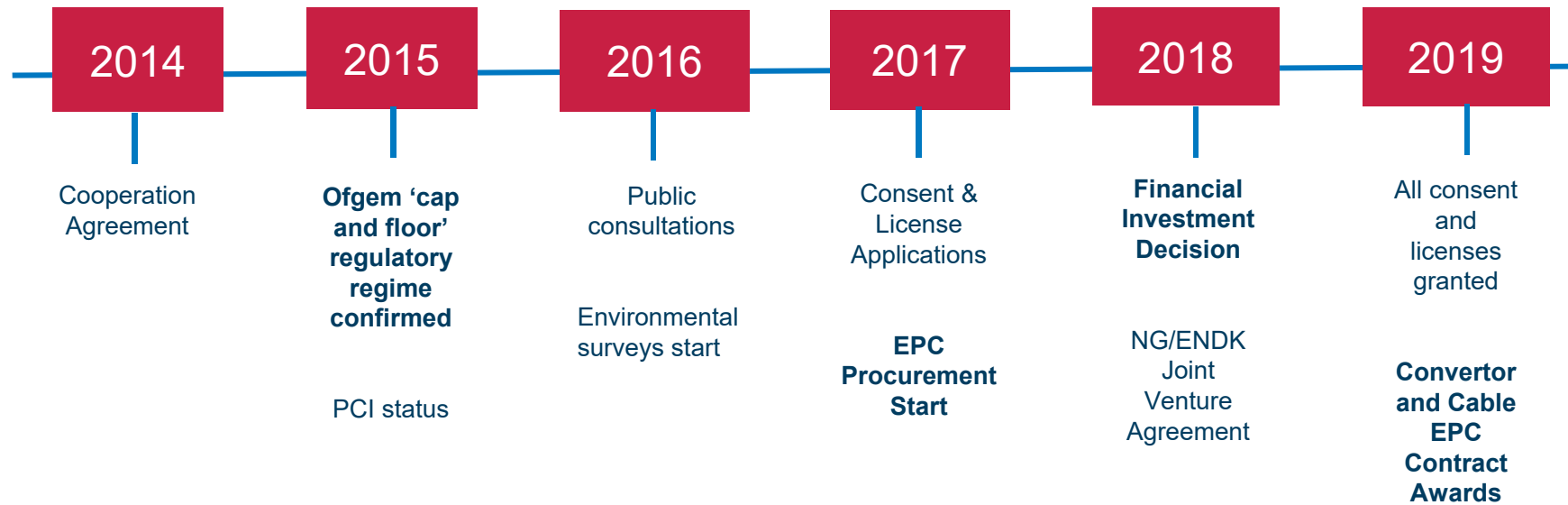
## Contracting Strategy



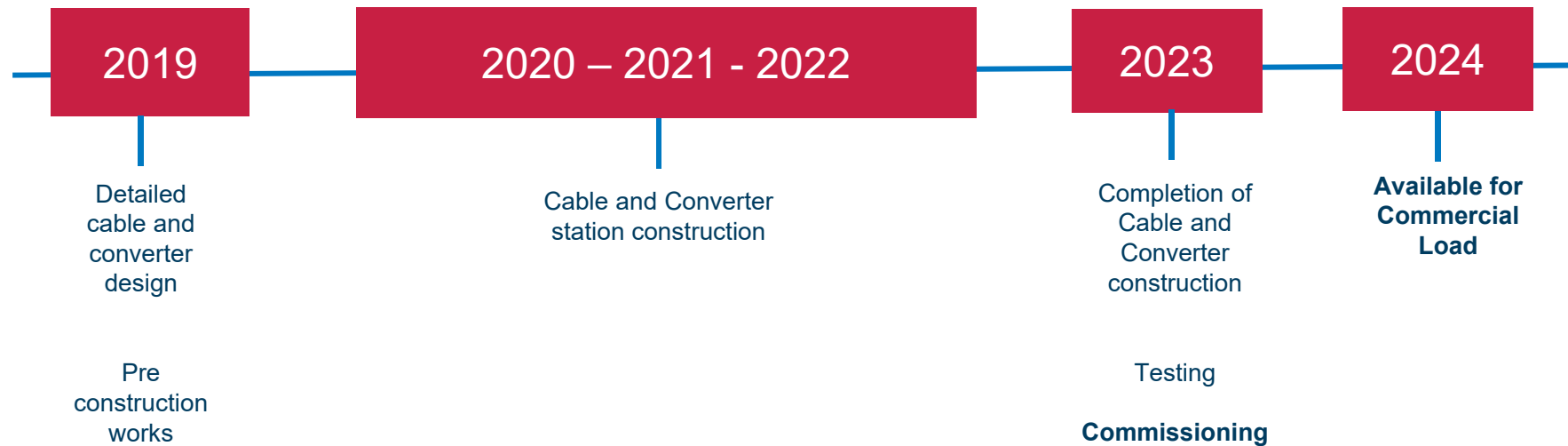
HVAC = High Voltage Alternating Current  
HVDC = High Voltage Direct Current

1. Existing network  
2. Substation  
3. Converter station  
4. Underground cable  
5. Submarine cable

## Project timeline – Development Phase



## Project timeline – Construction phase



## Stakeholder Management - Consenting



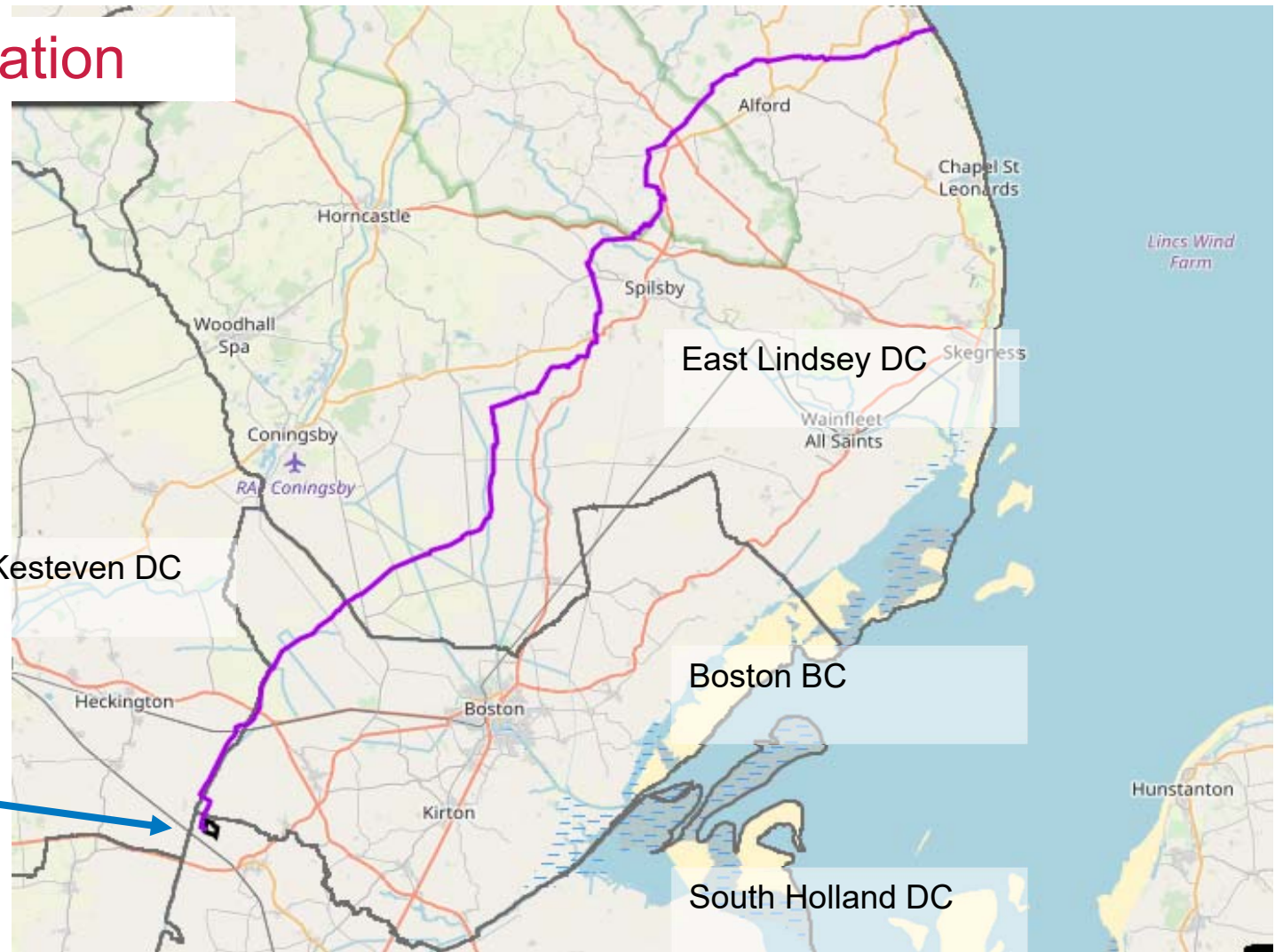
## Project Location

UK Onshore route shown in purple (67km).

Local Planning Authorities (LPAs) boundaries shown in grey

North Kesteven DC

Converter Station 





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## Consents Position

UK Onshore: 4 LPAs affected

One of the longest multi-authority Town & Country Planning Act submissions

3 LPAs granted planning permission (South Holland DC, Boston BC and North Kesteven DC) between September and October 2018

NGVL appealed the final LPA refusal (East Lindsey DC), PINS decided to allow the appeal and grant planning permission on the 12<sup>th</sup> December 2018

## Other Territories

UK Offshore: Marine Licence Secured from MMO

Netherlands: Offshore Consent secured

Germany: Permits Received

Denmark: Onshore and Offshore Consents Secured

## TEN –E Regulation

Viking Link is a Project of Common Interest (PCI) and benefits from streamlined consideration in all affected countries. Comprehensive Decision in the UK was received in February 2019.

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## Stakeholder Management

- To achieve consenting and Land Owner sign ups significant amount of effort by the whole team
- Land & Consenting experts provide the majority of stakeholder facing activities
- Supported by Engineering
- Need to be aware and sensitive to local issues.
- Vast Majority of Land Owners signed up voluntarily
- COP progressing for parcels of land where no owner identified.



## Cable Routing

- Cable routing & installation decisions can impact on local stakeholders
- Route modified and HDD used to reduce concerns regarding exacerbating flooding
- Flooding in Wainfleet



<https://www.telegraph.co.uk/news/2019/06/17/burrowing-badgers-blamed-catastrophic-flooding-forced-hundreds/>