

Welcome to the public consultation on Sea Link

Sea Link is a proposed high voltage direct current (HVDC) electricity link between Suffolk and Kent. It will help tackle climate change by adding capacity to Britain's electricity transmission network to accommodate more low carbon and renewable energy.

We're sharing information about Sea Link with the people and organisations it could affect. We'd like feedback that will help us to shape the proposal.

Please view the exhibition boards and speak with the team. You can provide feedback by completing a feedback form here today, posting one later to **FREEPOST SEA LINK** or by going online at nationalgrid.com/Sealink

To tackle climate change the Government has set an ambition for the UK to be net zero by 2050.

The energy industry plays a key role in making this happen – from providing more sources of renewable energy, to ensuring the wires are in place to transport energy to where it is needed.

Along with other projects around the UK, Sea Link is part of this transition to a net zero future.

It will be a vital reinforcement of the electricity transmission system in Suffolk and Kent: places where large amounts of renewable and low carbon energy are scheduled to connect in the coming decade.

The project is primarily made up of undersea and underground cables with a converter station building at each end.



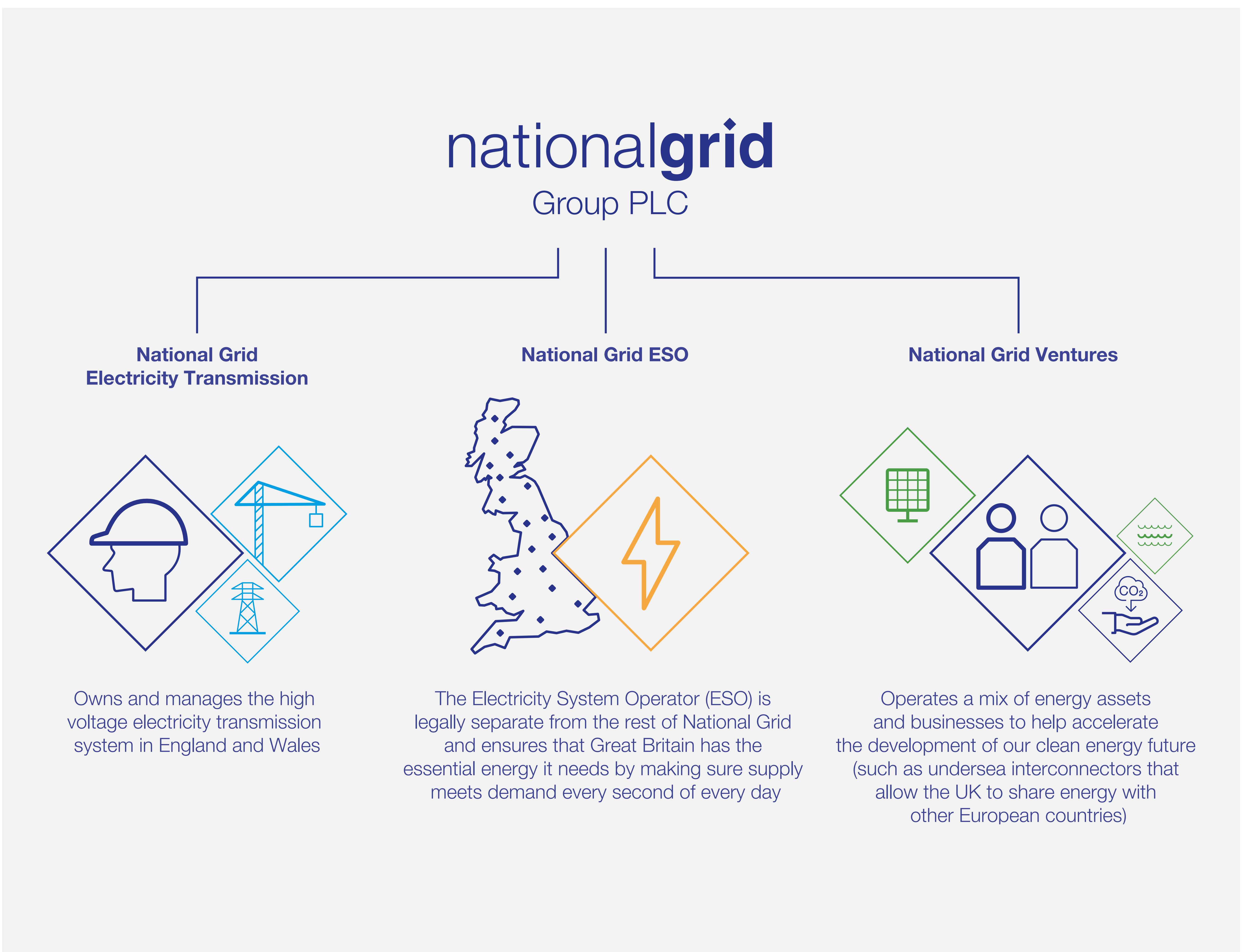
About National Grid



National Grid is working to build a cleaner, fairer and more affordable energy system that serves everyone, powering the future of our homes, transport and industry.

National Grid sits at the heart of Britain’s energy system, connecting millions of people and businesses to the energy they use every day. We bring energy to life – in the heat, light and power we bring to our customers’ homes and businesses; in the way that we support our communities and help them to grow; and in the way we show up in the world.

National Grid Electricity Transmission (NGET) owns, builds and maintains the electricity transmission network in England and Wales. It is **NGET** that is developing plans for **Sea Link**.

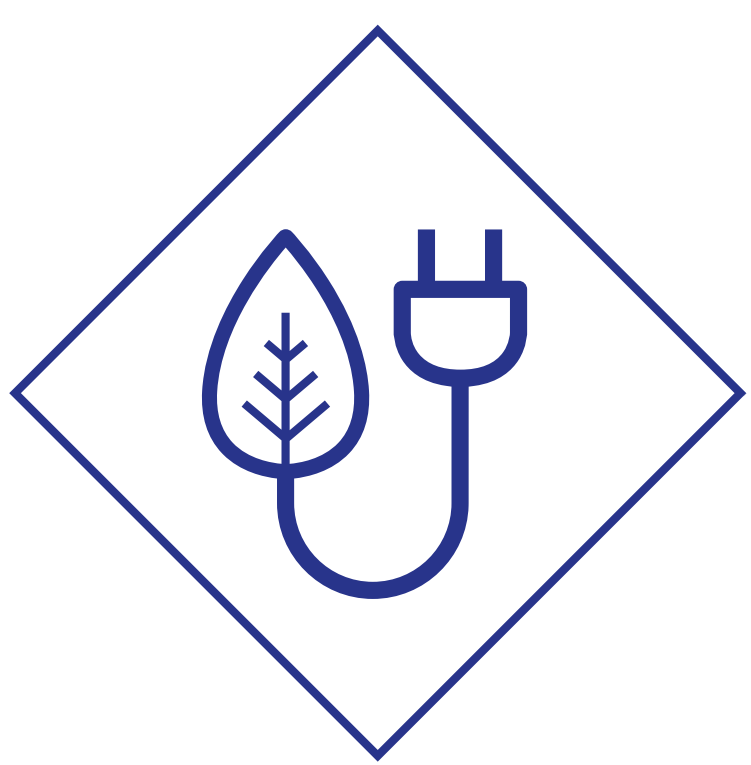


Moving to net zero



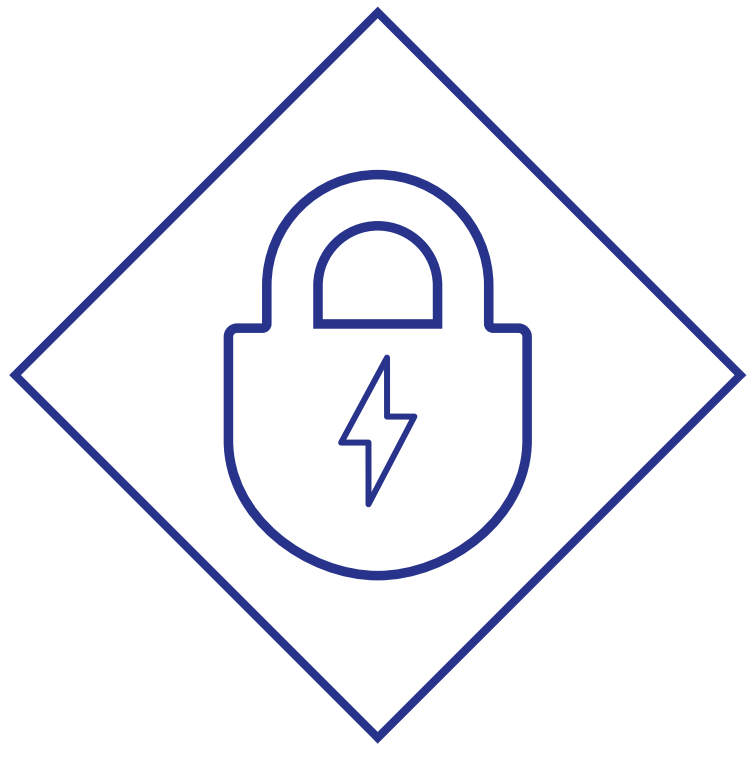
The decisions we take now, to make our energy system cleaner, directly impact the future of our planet.

National Grid has a critical role to play in the acceleration towards a cleaner future. Our businesses lie at the heart of the energy system, connecting millions of people to the energy they use.



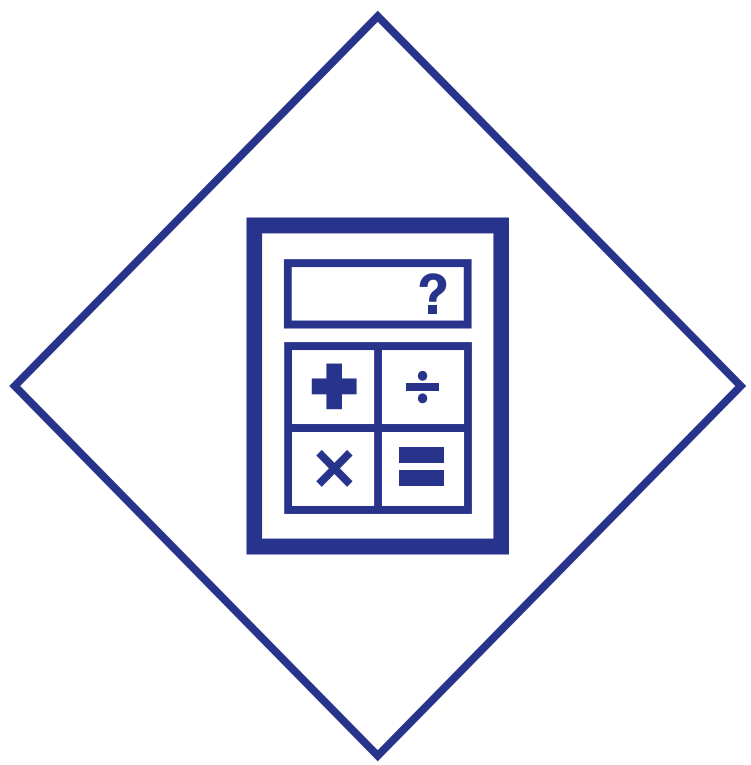
Cleaner energy

The UK has set a world-leading target to tackle the defining challenge of this generation: climate change. The UK is aiming to be powered by clean electricity by 2035 and achieve net zero by 2050.



Energy security

The Government's British Energy Security Strategy aims to connect up to 50 gigawatts (GW) of homegrown offshore wind by 2030 – enough to power every home in the UK.



Costs to consumers

Ofgem works with government, industry and consumer groups to deliver a net-zero economy, at the lowest cost to consumers.



Why we need to build Sea Link



As we seek to phase out fossil fuels and become a society powered by clean electricity, the national electricity transmission system (transmission system) needs to be transformed while continuing to operate securely.

New sources of renewable and low carbon energy, like offshore wind, nuclear power and interconnectors, need to connect to the transmission system so that energy can be moved around the country.

These new sources are often in places where the transmission system

either doesn't exist or doesn't have the capacity to carry energy that's forecasted to connect to it. Where this is the case, it needs to be upgraded and reinforced so that it continues to operate securely and reliably, transporting energy from where it's generated to where it's needed.

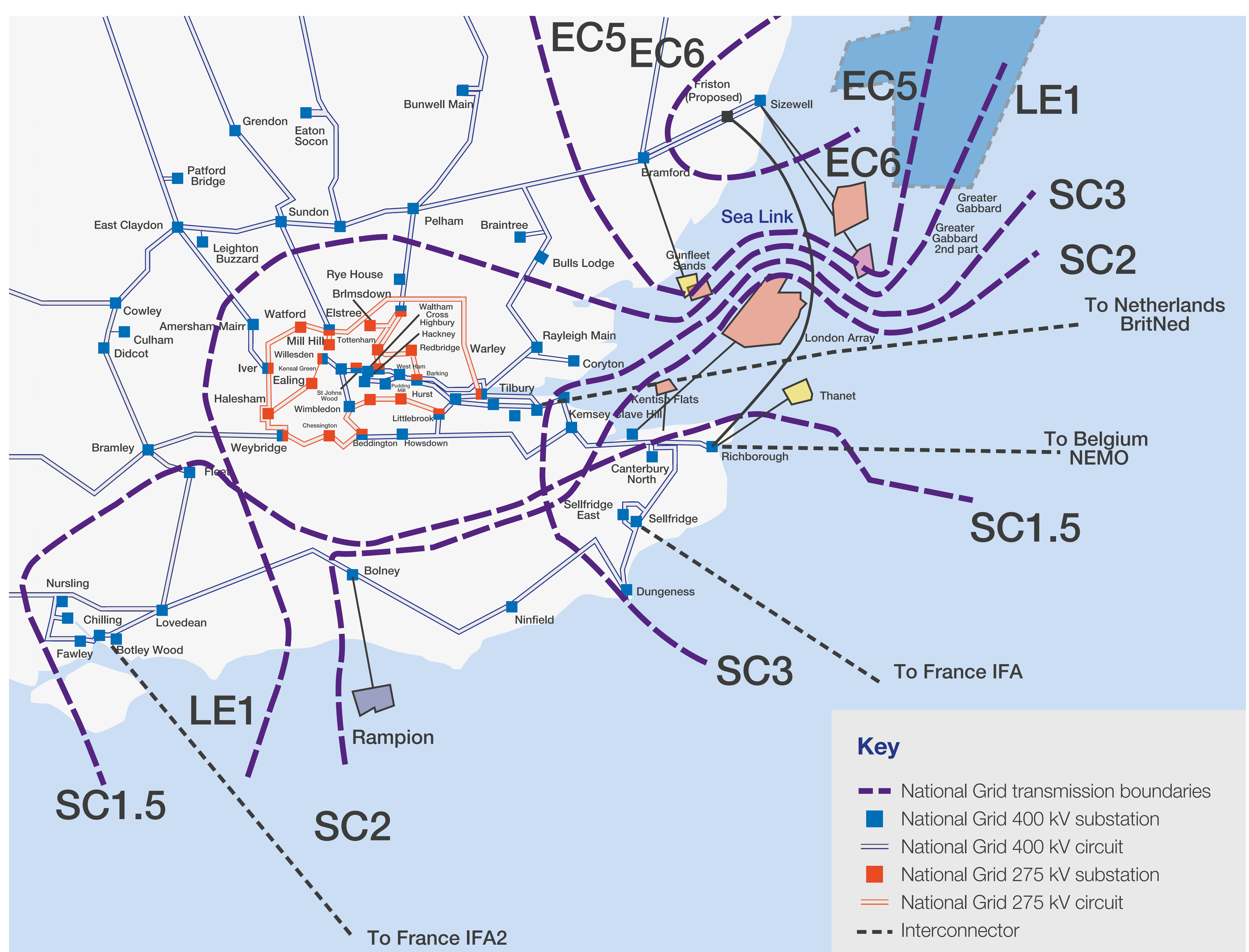
In the South and East

A significant amount of new renewable and low carbon generation is scheduled to connect to the transmission system via Britain's eastern and southern coastlines, including in Suffolk and Kent.

The transmission system is split into different parts, these are divided by system boundaries which cross circuits that carry power between different sections of the network.

Sea Link reinforces several boundaries that have been identified as needing support. These are:

- EC5 and EC6 in East Anglia
- LE1 which encircles London and the south east coast
- SC1, SC1.5, SC2 and SC3 on the south coast.





About Sea Link

Sea Link’s purpose is to reinforce the electricity network in Suffolk and Kent to help us achieve net zero and tackle climate change.

The proposal is for a 2 GW HVDC link made up of approximately 130 km subsea cable, 10 km underground cable and two converter stations – one at each end – where direct current (DC) electricity is converted to alternating current (AC) electricity. It also includes AC connections to the electricity network at each end.

Sea Link is proposing to connect at the planned Friston substation in East Suffolk, and to the existing network at Richborough in East Kent.

The Sea Link proposal comprises:

Suffolk

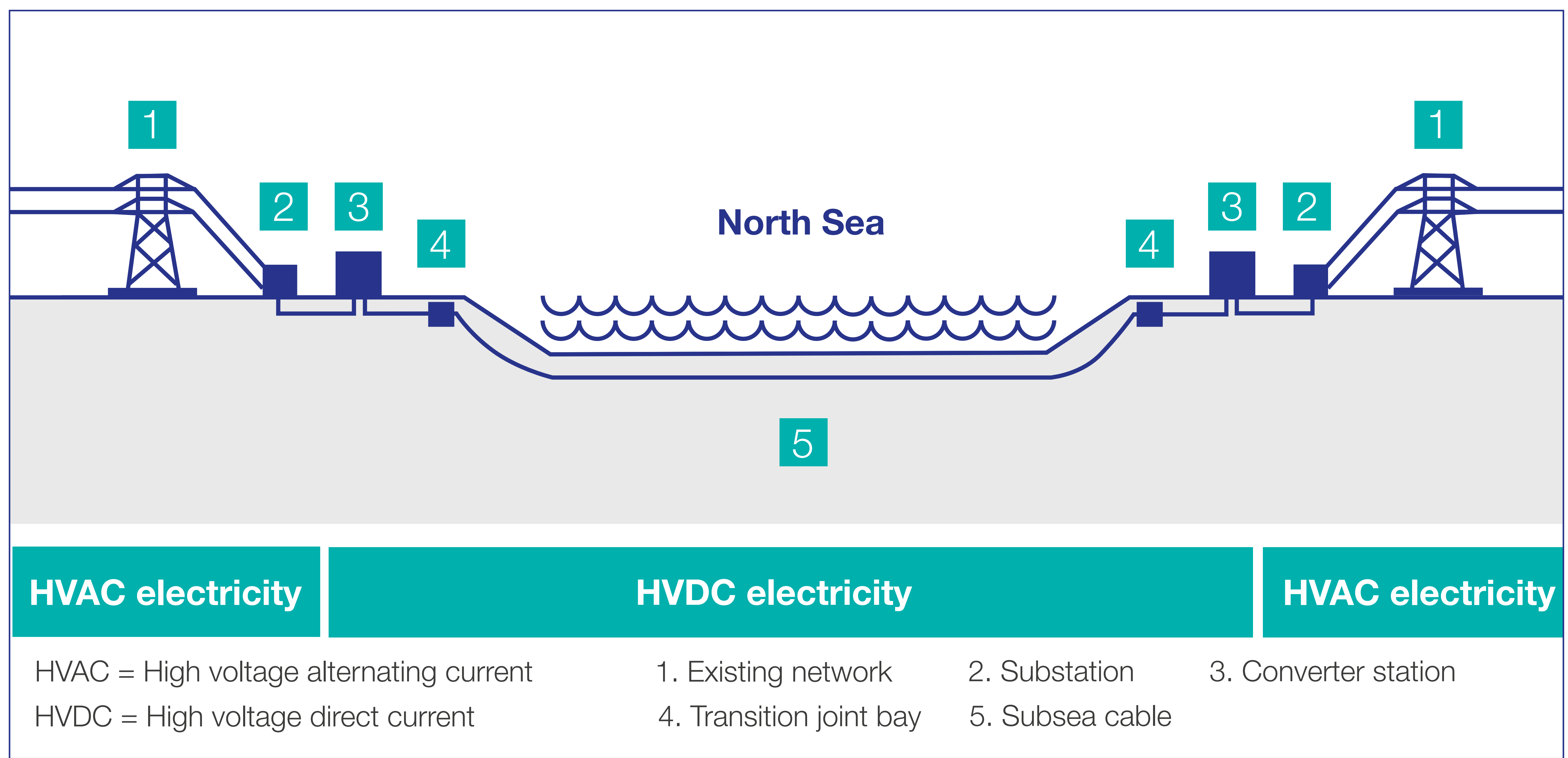
- extension of the proposed Friston substation
- AC underground cable between the proposed substation and a HVDC converter station
- a HVDC converter station
- an underground HVDC cable between the converter station and landfall location.

Kent

- upgrading the Richborough to Canterbury overhead line, to cater for the increased power flows
- AC connections between the Richborough to Canterbury overhead line
- a HVDC converter station
- an underground HVDC cable between the converter station and landfall location.

Marine

Approximately 130 km of subsea HVDC cable between Suffolk and Kent.



Exploring opportunities for coordination



Background

In response to stakeholder feedback, NGET's Sea Link project and NGV's EuroLink and Nautilus projects are exploring potential opportunities to coordinate. Separate non-statutory public consultations are being held for each of the EuroLink and Sea Link projects from October to December 2022. NGV is currently exploring a possible alternative location for Nautilus. Until this is confirmed to be viable, Nautilus will be included as part of our coordination work.

We understand that plans for energy infrastructure have caused concern in local communities. We hope that by sharing our proposals at the same time people feel better informed about how different parts of the infrastructure could fit together and can share their views on each of the projects accordingly. Whether people attend a digital or in-person event, we strongly encourage communities to share their views.

What could coordination look like?

Coordination could range from co-location of infrastructure from different projects on the same site, to coordinating construction activities to reduce potential impacts on local communities and the environment. This is explored further under the subheadings below.

Exploring opportunities for co-location:

NGET and NGV are working collaboratively to explore opportunities to co-locate onshore infrastructure for the Sea Link, EuroLink and Nautilus projects, including:

- shared location for up to three converter stations
- shared underground cable route corridors
- and shared landfall.

We welcome feedback from local communities whether co-location is a preferred option. Further engineering studies and assessments are required to understand if co-location of landfalls and underground cables is possible.

Coordination during construction

We will explore opportunities to coordinate construction activity between NGET and NGV projects, as well as with other developers in the local area. We aim to minimise the impact of our work on the environment and local communities. Coordination could include, for example, one party undertaking all of the construction works, re-using materials, sharing site compounds and how we invest in communities.

Offshore infrastructure coordination

NGV and NGET are exploring the potential for offshore coordination as part of the Offshore Transmission Network Review (OTNR) "Early Opportunities" workstream, with a view to identifying a future Pathfinder Project.*

* Joint statement from North Falls, Five Estuaries and National Grid: Commitment to exploring coordinated network designs in East Anglia - GOV.UK (www.gov.uk)

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Proposed Friston substation

The substation at Friston proposed by ScottishPower Renewables (SPR) would be owned and operated by National Grid.

It was designed to connect SPR's projects to the electricity network.

We are proposing to extend it to accommodate Sea Link by:

- extending the substation to accommodate a connection to Sea Link
- providing new electrical switch equipment such as circuit breakers. Typically, the space required for this equipment could require an extension of up to 50 m.

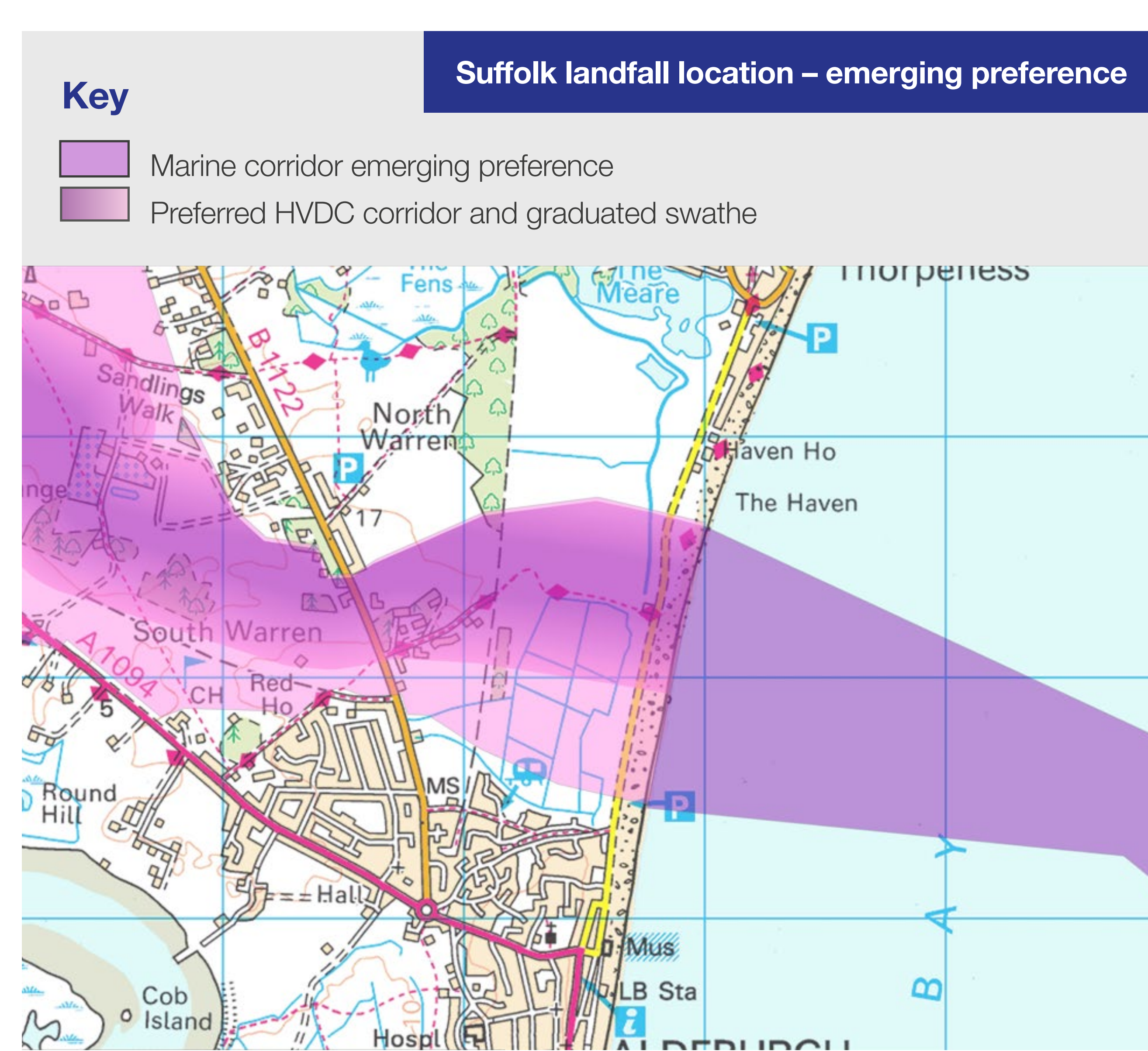


Our marine proposals

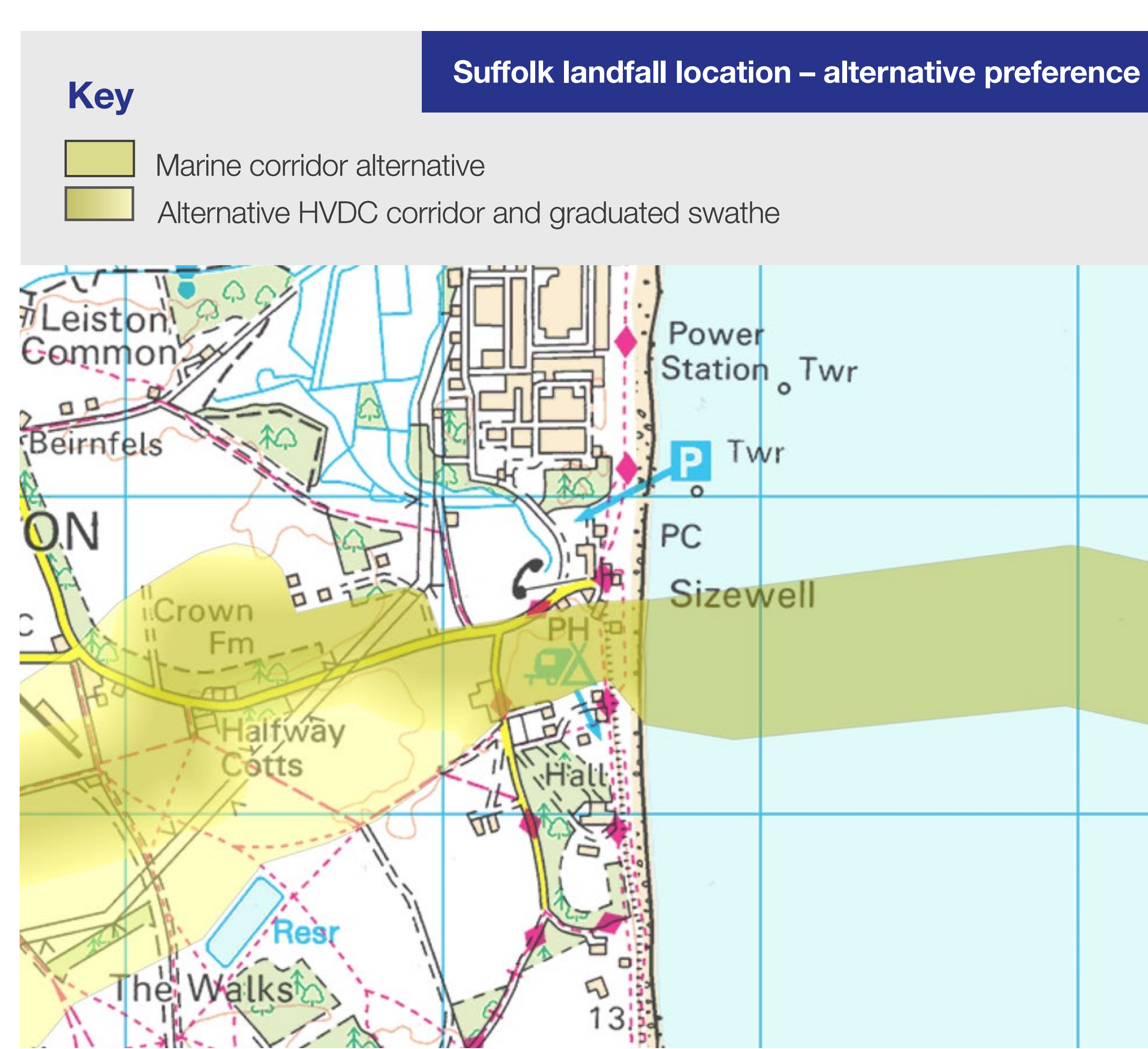
We are proposing:

- a marine route corridor of approximately 130 km
- emerging preferences for landfall locations in Kent and Suffolk. The landfall location is where the cable corridor transitions from being under the sea to being onshore and underground
- an alternative landfall option in Suffolk.

Suffolk

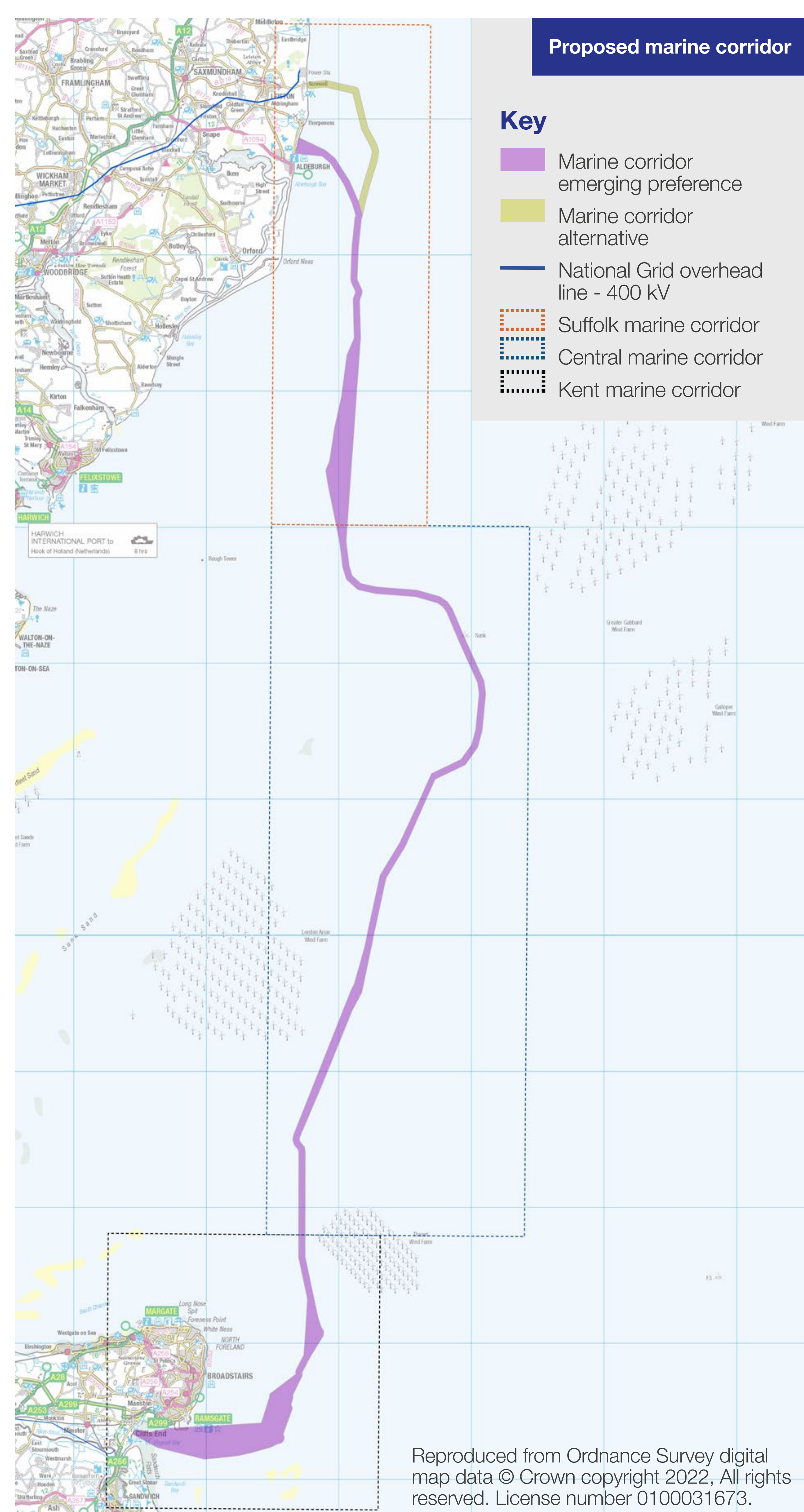


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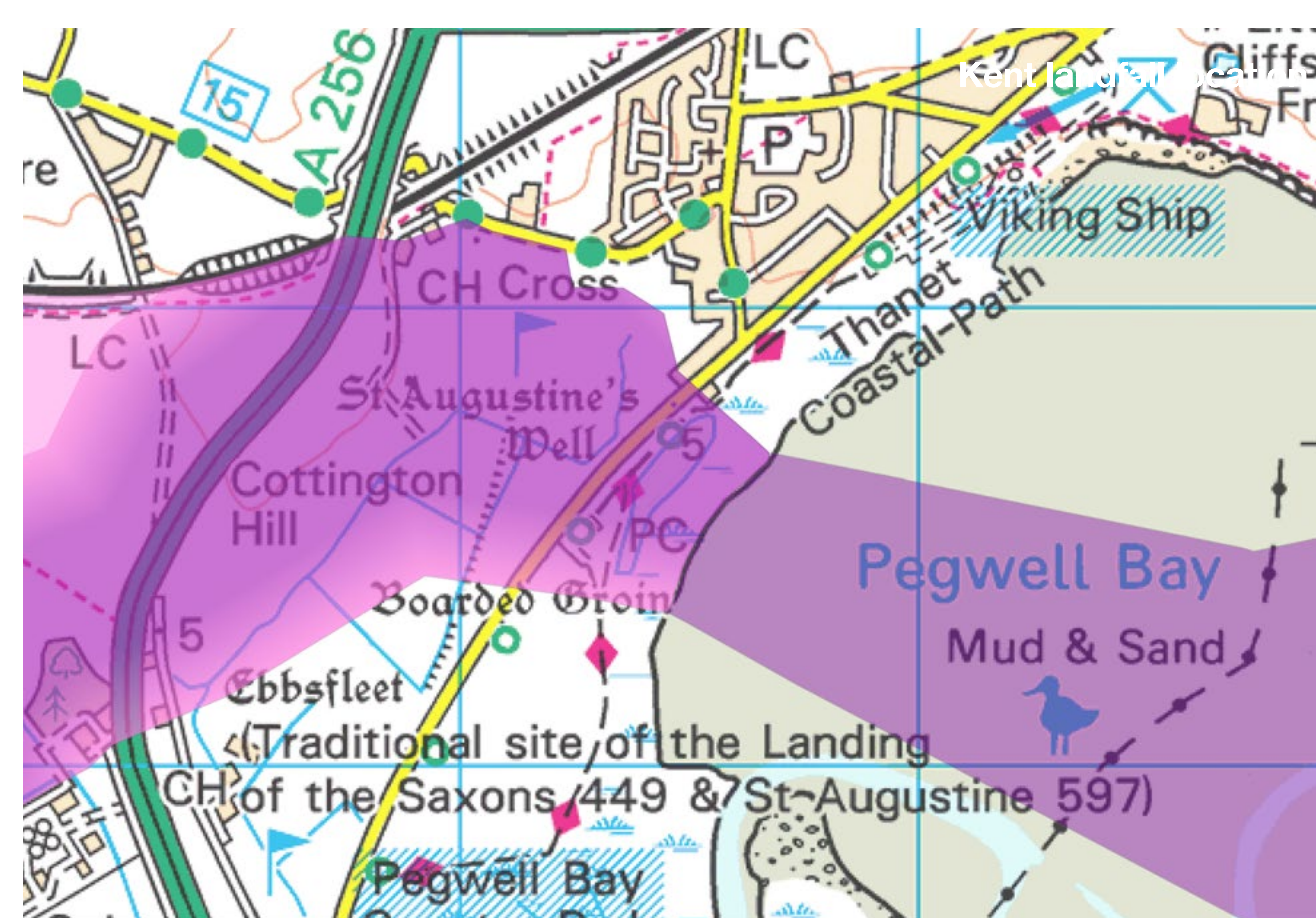
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Overview of marine route corridor



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Kent



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Please see larger maps available at the public exhibition and on the website for the following:

- marine route
- emerging preference landfall locations
- alternative landfall location for Suffolk.

Our proposals in Suffolk – emerging preference



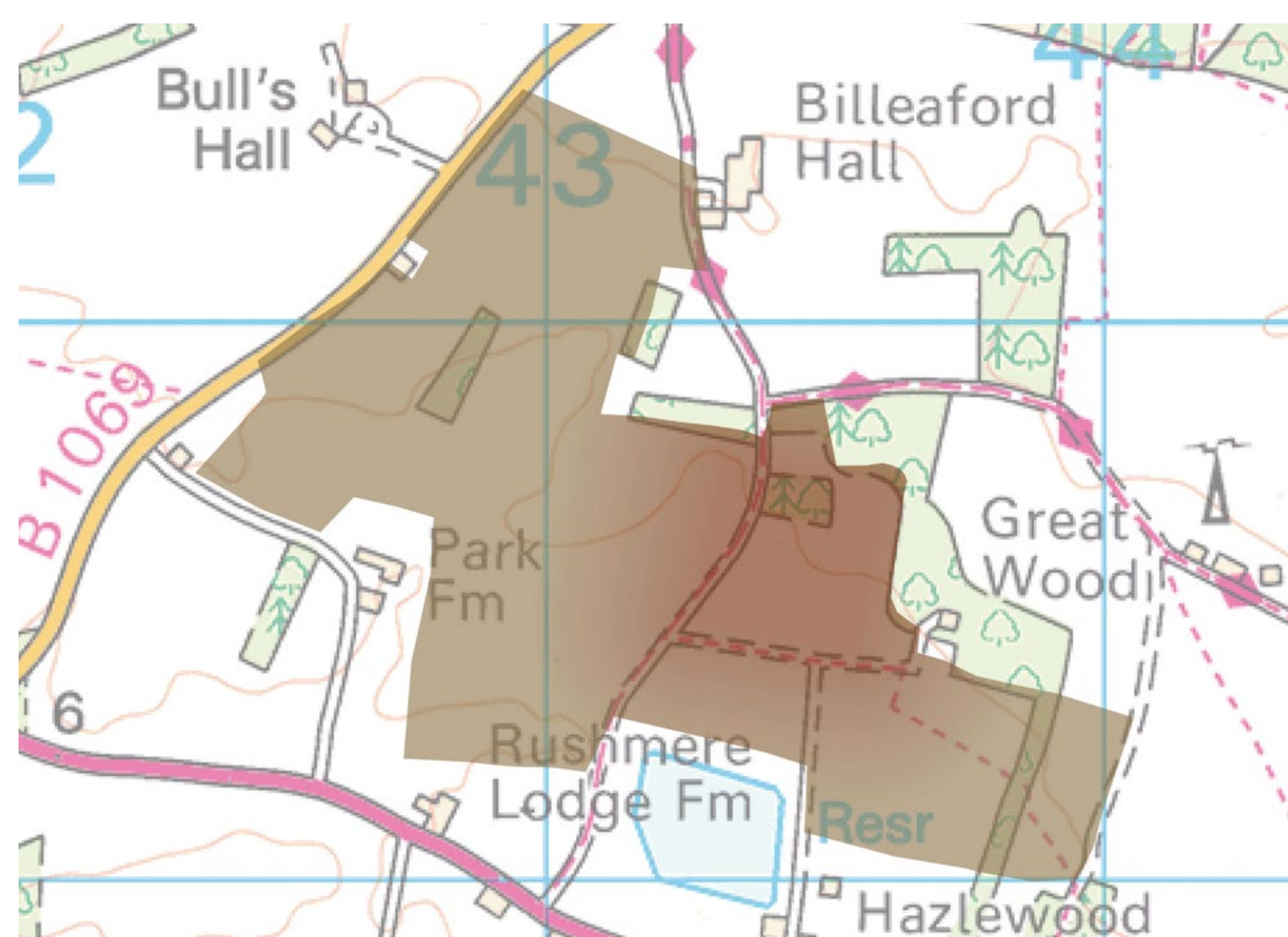
We have two emerging preferences that share the same landfall location:

- landfall between Aldeburgh and Thorpeness
- two converter station locations are being explored
- there are two slightly different underground HVDC cable corridors between the landfall and the proposed converter sites
- underground HVAC cable corridors between the converter station and the proposed Friston substation
- an extension to the proposed Friston substation (see proposed Friston substation board).

Please see larger maps available at the public exhibition and on the website of the following.

Converter station site 1

Site 1 is located to the north of the A1094 and east of the B1069 adjacent to Great Wood.



Converter station site 3

Site 3 is located to the south of the B1119 and north of the B1121 adjacent to Bloomfield's Covert.



Suffolk site 1 emerging preference

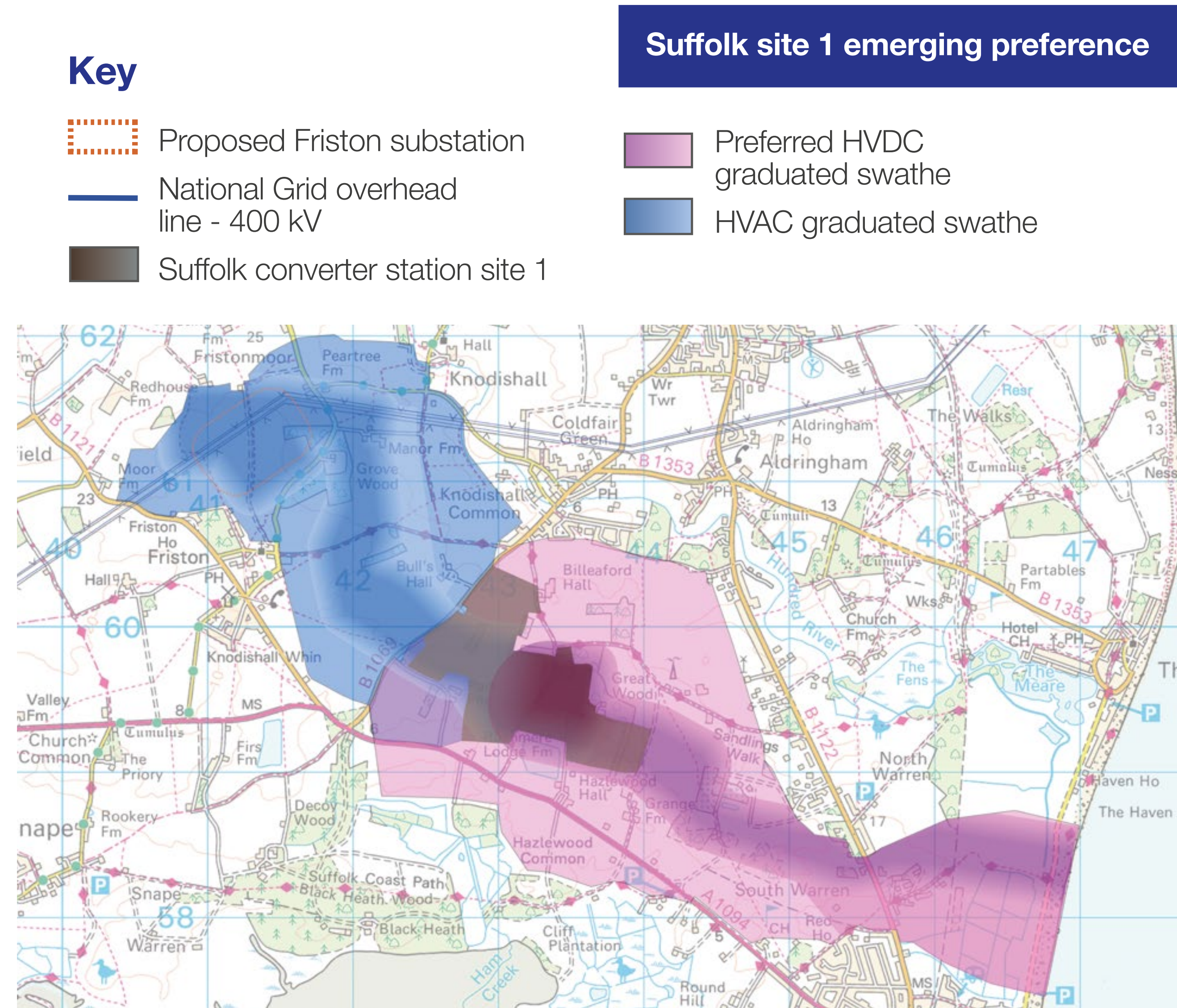
From a landfall location between Aldeburgh and Thorpeness, we would install approximately 3.7 km of underground HVDC cables running west (north of the A1094) to the Converter Station Site 1.

We would install approximately 3.3 km of HVAC underground cables from the converter station to the northwest in order to connect into the proposed Friston 400 kV substation.

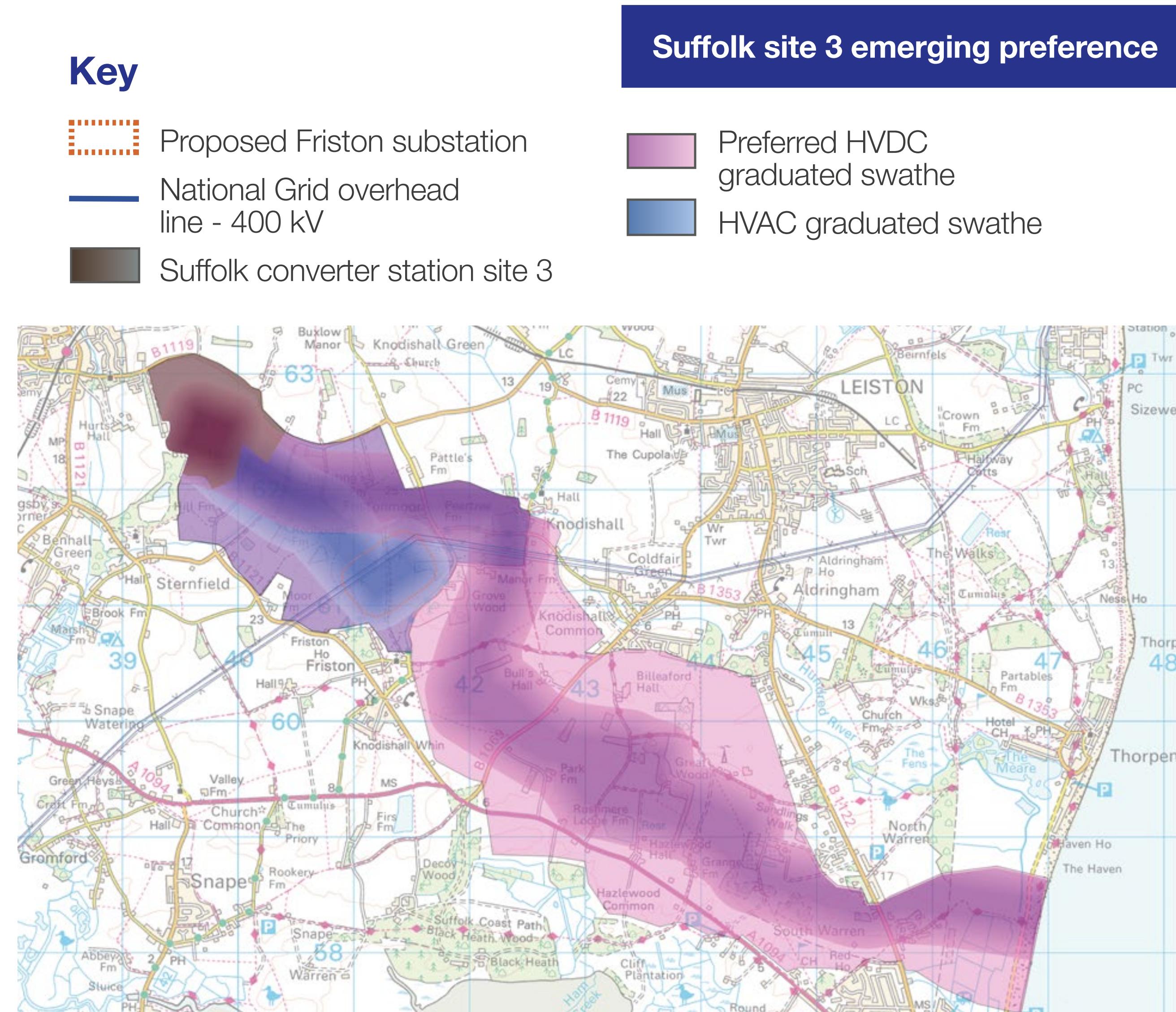
Suffolk site 3 emerging preference

From a landfall location between Aldeburgh and Thorpeness, we would install approximately 9.7 km of underground cables running northwest (north of the A1094 and B1121) to the Converter Station Site 3.

We would install approximately 1.8 km of HVAC underground cables from the converter station to the southeast in order to connect into the proposed Friston 400 kV substation.



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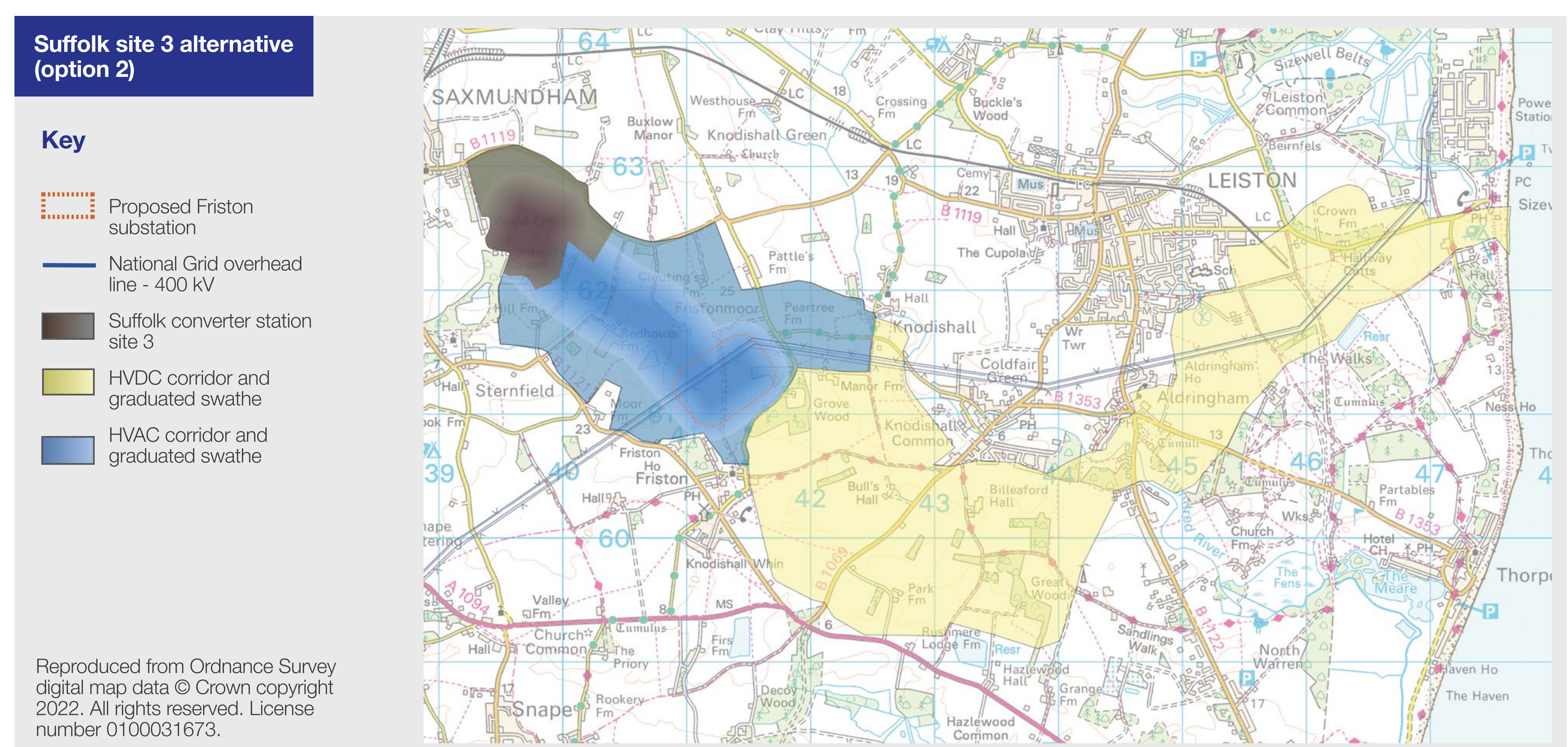
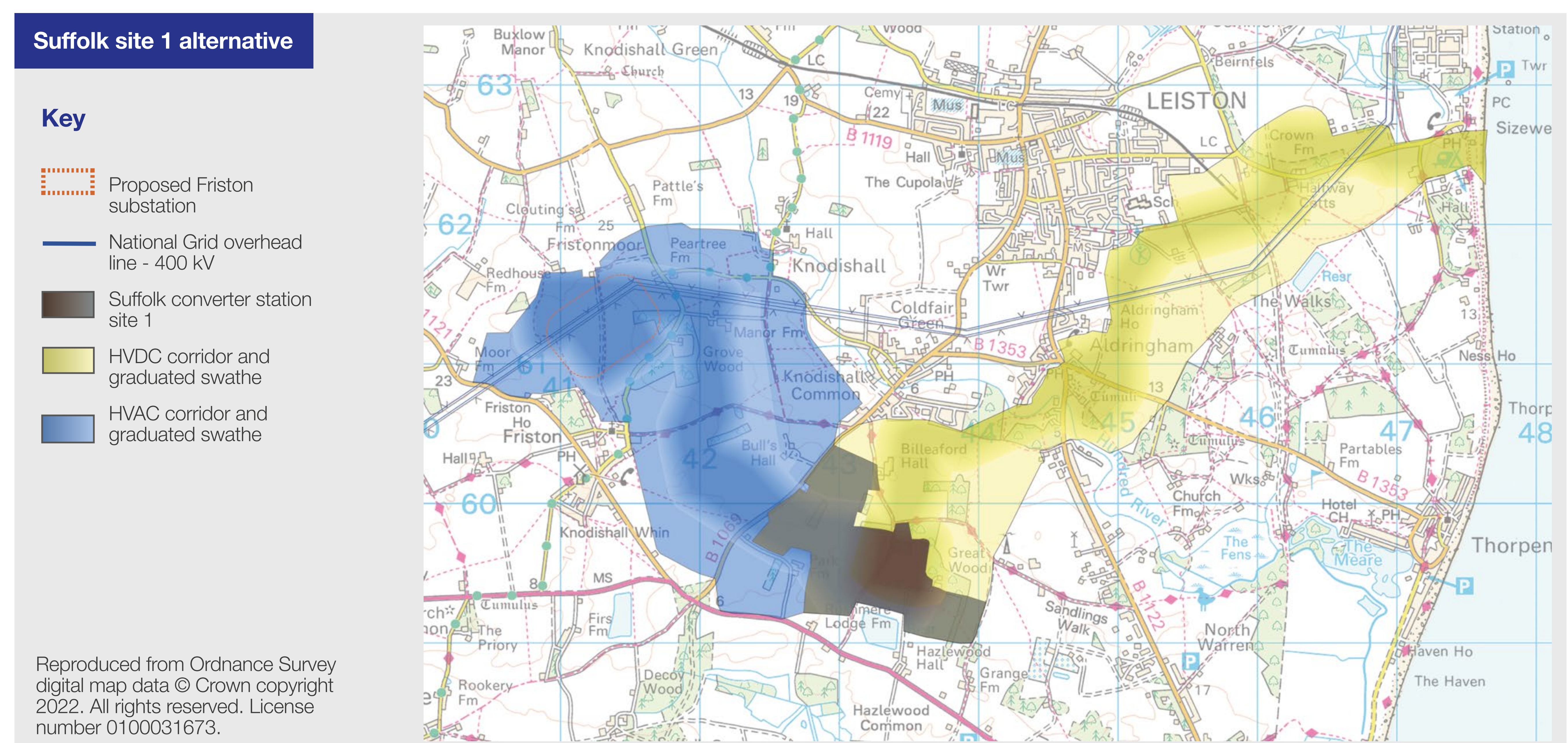


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Our proposals in Suffolk – alternatives

We have three alternative options with a shared landfall location:

- landfall south of Sizewell power station
- two converter station locations are being explored
- there are three different underground HVDC cable corridors between the landfall and the proposed converter sites
- underground HVAC cable corridors between the converter station and the proposed Friston substation
- an extension to the proposed Friston substation (see proposed Friston substation board).



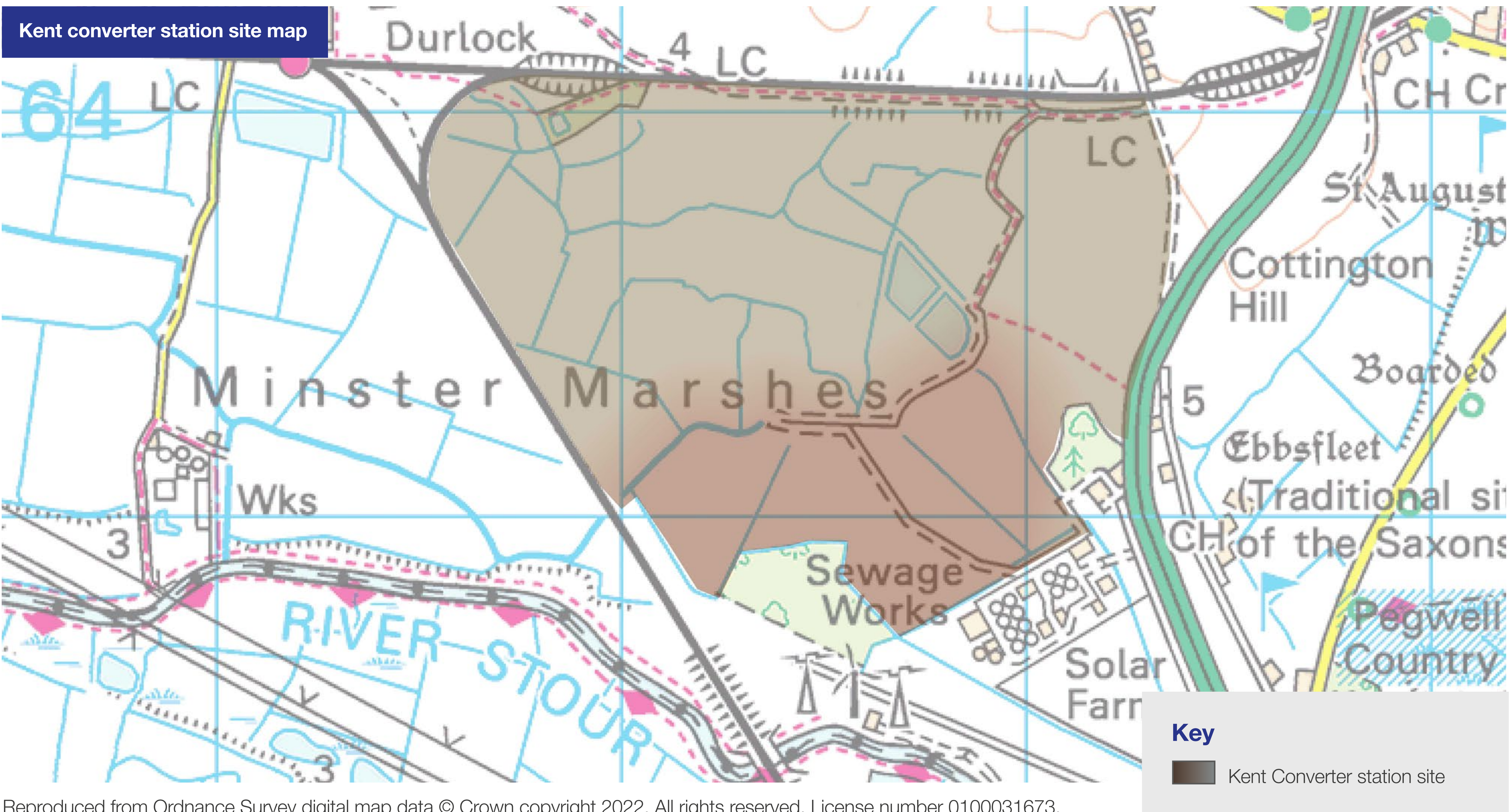
Our proposals in Kent

We are proposing:

- a landfall at Pegwell Bay
- a new converter station location
- an underground HVDC cable corridor to a new converter site
- a HVAC connection (either overhead line or underground cable) between the proposed converter station location and the existing Richborough to Canterbury overhead line.

Kent converter station site

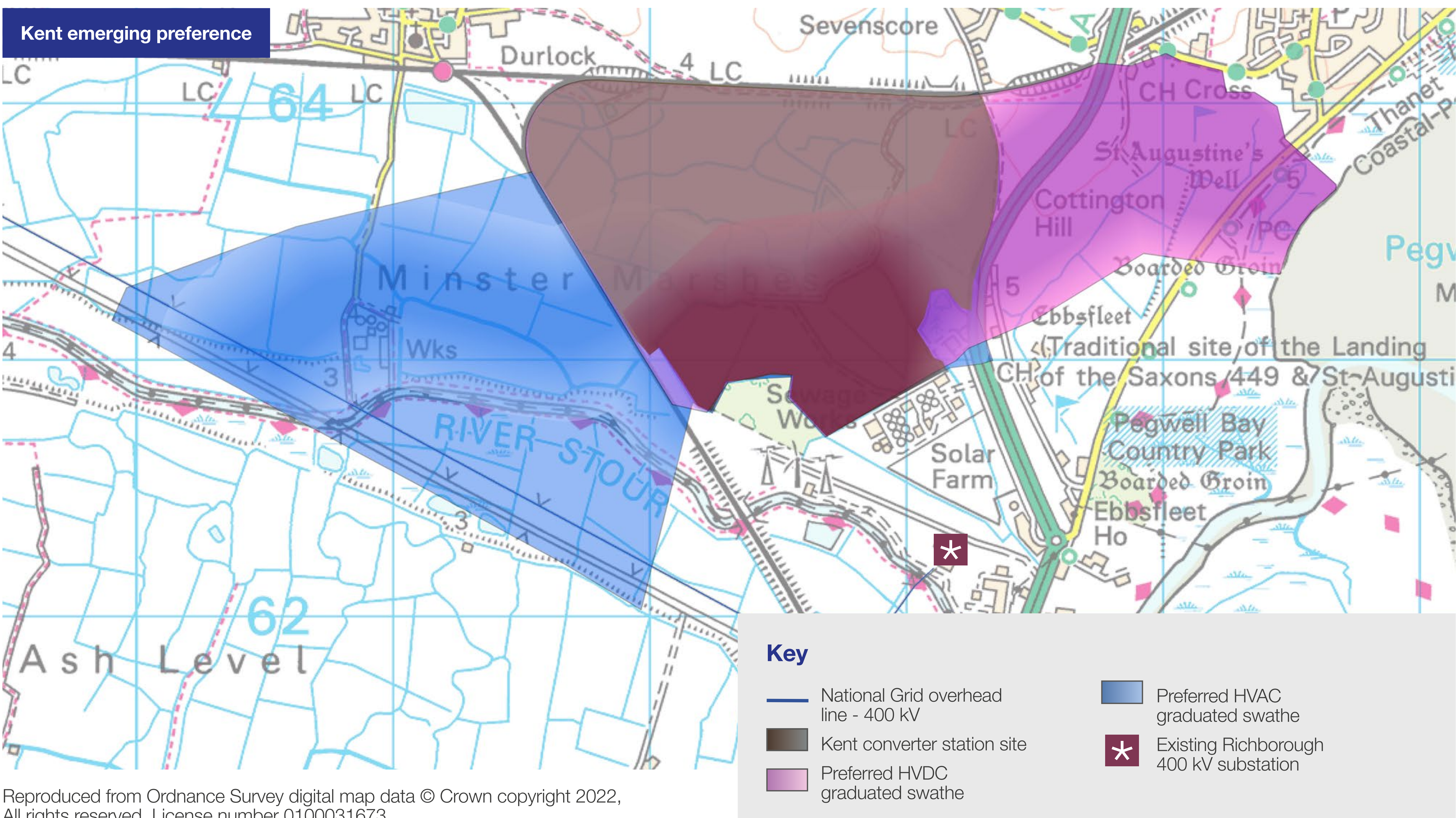
The 'options' area is located to the west of the A256 and north of Richborough Energy Park and the River Stour.



Emerging preference – Kent converter station site

From a landfall location at Pegwell Bay, we would install approximately 2.1 km of underground HVDC cables to connect into a new converter station.

A HVAC connection (either overhead line or underground cable) approximately 1.8 km in length, would be installed between the converter station and a point on the existing Richborough to Canterbury 400 kV overhead line.



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Feedback and next steps

We are inviting you to provide feedback on our proposals. The feedback we receive will be carefully considered as we develop our plans.

The deadline for consultation responses is 18 December 2022.

How do I find out more about the proposals?

view all project information on our website nationalgrid.com/sealink

read our project background document, and Corridor and Preliminary Routeing and Siting Study~Report

visit your nearest deposit point, where you can find printed copies of project documents. These points are listed in the project background document, available at our events and our website

attend one of our online webinars

request paper copies of information by calling or emailing us.

Complete a feedback form

You can complete a feedback form on our website. Alternatively, paper copies of our feedback forms will be available to pick up from our public information events and at deposit points.

You can also download and print a copy of the feedback form from our website, or get in touch with our team and we will post one to you.

Visit our website:



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