

The Great Grid Upgrade

Sea Link

Project update document

July 2024

nationalgrid



Welcome to this update from National Grid on Sea Link, our plan to reinforce the electricity transmission network between Suffolk and Kent.

Since the close of our statutory consultation in December 2023, we have been reviewing all feedback received and have carried out further technical and environmental assessments. As a result of this work, we have made some changes to our plans that we want to share with you before we submit our application for development consent early next year. The changes we are proposing do not substantially alter the project as a whole.

In this update you can read about the background to our proposals, including why they are needed, and the story so far. You can also read about the changes that we are proposing to make. These include:

- in Suffolk, the proposed changes include an alteration to the cable route north of Aldeburgh, confirmation of the proposed access route to the converter station and changes to this access route and the associated bridge over the River Fromus. We are also proposing various changes to construction and maintenance access routes, compounds, and temporary overhead line diversions, and have identified additional land for environmental mitigation and enhancement. The strategy for coordination with other projects has also evolved
- offshore, the proposed changes include refinements to the cable route, additional marine areas for construction vessel manoeuvring, and changes to the approach for backfilling marine trenches
- in Kent, the proposed changes include an increase of the overall maximum height of the converter station, confirmation of the type of pylon we intend to use for the connection to the existing overhead line, and identifying a further construction and maintenance access route off Sandwich Road via the former hoverport. We are also proposing various other changes to construction and maintenance access routes, compounds, and temporary overhead line diversions, and have identified additional land for environmental mitigation and enhancement.

We have also made a range of smaller changes to our proposals, including various alterations, reductions and increases to the size of the land we would need to build and operate Sea Link. We are also providing further detail on our construction methodology, including changes to planned working hours.

If you have comments that you have not shared with us previously, whether related to the proposed changes or the project more generally, you can find out how you can submit this feedback at the end of this document.

Contents

1. About the project	4
2. The story so far	6
3. Your feedback	8
4. Our proposals	12
Our plans in Suffolk	14
Our marine plans	22
Our plans in Kent	24
5. Find out more	29
6. Any further feedback	31



1. About the project

About Sea Link

National Grid Electricity Transmission (NGET) is proposing to reinforce the transmission network between Suffolk and Kent via a new, primarily offshore, high voltage direct current (HVDC) link.

Sea Link has been designed to increase the capacity of the electricity transmission network, so it can carry more low carbon and renewable energy from where it is generated, to homes and businesses across the country. To do this, we would need to install a 2 gigawatt (GW) HVDC cable between Suffolk and Kent, approximately 138 kilometres (km) long and predominantly offshore.

To bring the power from the subsea cables into and out of the electricity network in both Suffolk and Kent, we would need to build new onshore infrastructure including converter stations, substations and new underground and overhead electricity lines, as well as upgrading existing overhead electricity lines.

Power will be able to flow along the Sea Link cables in either direction, depending on where renewable energy is being generated at that time and where in the country power is needed.

About National Grid

National Grid sits at the heart of Britain's energy system, connecting millions of people and businesses to the energy they use every day.

Within the National Grid Group, there are legally separate entities, each with their individual roles and statutory responsibilities. Each of the different entities within the National Grid Group is working to build a cleaner, fairer and more affordable energy system that serves everybody – powering the future of our homes, transport and industry.

NGET owns, builds and maintains the network in England and Wales, and is the part of the National Grid Group that is developing plans for Sea Link.

Read more about who we are and the work we do at nationalgrid.com.

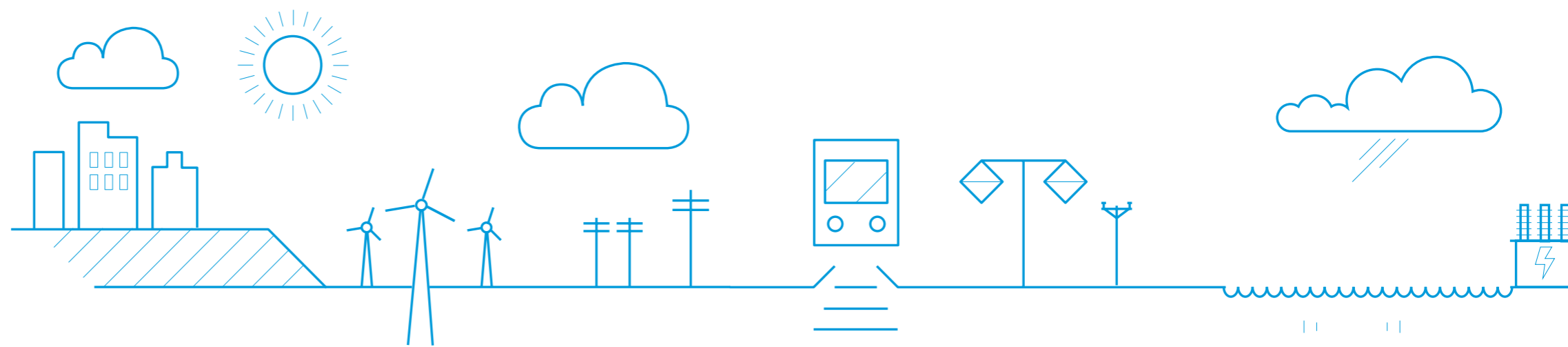
The need for Sea Link

Sea Link is needed because the existing electricity transmission network does not have enough capacity to securely transport all the new energy we expect to connect to the network over the next ten years and beyond.





The way we generate electricity in the UK is changing rapidly, and we are transitioning to more secure, cheaper, and cleaner forms of energy such as new offshore windfarms. This is a result of the UK Government's commitment to net zero (achieving a balance between the greenhouse gases put into the atmosphere and those taken out) by 2050.

The energy industry is key to this transition - from developing renewable energy generation, to upgrading the existing electricity transmission network, enabling other sectors to decarbonise, and enabling communities across the country to benefit from clean energy.

As part of this, the electricity transmission network is undergoing its largest overhaul in generations. We need more than five times the amount of transmission infrastructure built in the last 30 years in the UK to be delivered in the next seven years. National Grid has a key part to play in this work, which is known as The Great Grid Upgrade. Sea Link is one of the projects being delivered to make sure the network is ready for the anticipated increase in supply and demand of electricity.



The network in and between East Anglia and the south-east of England needs reinforcing for four main reasons:

- 1.  the existing transmission network was not designed to transport electricity from where we increasingly now generate it (largely offshore)
- 2.  the growth in offshore wind, interconnectors and nuclear power means that more electricity will be generated in the years ahead than the current network is able to reliably transport
- 3.  as a country, electricity demand is forecast to at least double by 2050, increasing the amount of energy we need to transport to homes and businesses
- 4.  upgrading the existing network as it is today (such as through replacing cables to carry more power) will not be enough to meet the increasing need for electricity whilst operating to required standards.

Sea Link is just one of several electricity network reinforcements that are needed to ensure the electricity transmission network is fit for the future.

More information

If you would like more information about the background of the project, including why it is needed and how the proposals have developed, visit nationalgrid.com/sealink. Our document library is a full archive of our materials to date, and there are other useful resources such as our FAQs and interactive map to explore.

If you are unable to access the website for any reason, get in touch with the team using the contact information at the end of this document.



2. The story so far

Non-statutory consultation

Between 24 October and 18 December 2022, we held an initial non-statutory consultation to introduce our proposals for Sea Link. This was an opportunity for you to provide feedback on our early proposals, for us to explain why the reinforcement is needed, and to set out the options we have considered.

As part of the consultation, we wrote to over 17,000 homes and businesses across Suffolk and Kent, held six public exhibitions, nine stakeholder briefings, six webinars, and produced a number of technical and consultation materials that we made available at 20 deposit points. We received a total of **731** feedback responses to our non-statutory consultation, including responses from various local and national stakeholder organisations, such as:

- county and district councils (including Suffolk County Council, East Suffolk District Council, Kent County Council, Dover District Council, and Thanet District Council)
- key advisory and specialist bodies (including the Environment Agency, the RSPB, the Joint Nature Conservation Committee, the National Trust, and Suffolk and Kent Wildlife Trusts)
- parish and town councils (including Friston Parish Council, Benhall and Sternfield Parish Council, Aldeburgh Town Council, and others in both Suffolk and Kent)
- action groups (including Substation Action Save East Suffolk and Save Our Sandlings)
- third party developers (including EDF and CEMEX marine).

Amongst other matters, feedback from this consultation indicated that **coordination of multiple projects** was a priority. Many respondents expressed the view that several major energy projects proposed in East Suffolk should be, where possible, coordinated, reducing the overall impact to the area. You provided valuable feedback about the **design** of Sea Link, including by sharing views about implementing shorter cable routes and using existing infrastructure. You also asked about **alternatives to Sea Link**, such as connecting into the network at a different location or positioning converter station infrastructure offshore.

More information on the feedback submitted to our non-statutory consultation, along with National Grid's response to it, can be found in our [Non-statutory consultation report](#),¹ which is available in the document library on our website. Alongside feedback from local communities, we considered the results of environmental and engineering assessment work, surveys, and ongoing engagement with stakeholders as we refined our proposals for the statutory consultation.

1. <https://www.nationalgrid.com/electricity-transmission/document/150966/download>

Statutory consultation

Between 24 October and 18 December 2023, we held a statutory consultation on our refined proposals for Sea Link.

As part of this consultation, we presented our Preliminary environmental information report, which looks at the likely significant effects of our proposed activities on the local environment and how we intend to mitigate any adverse impacts.

We also provided further information on how we had developed our proposals, including detailed plans.

All of the information presented at our statutory consultation can be found in the document library on our [website](#). The rest of this chapter provides an overview of some of the key themes seen in statutory consultation feedback.



Organisations that responded to our statutory consultation included:

- county and district councils (including Suffolk County Council, East Suffolk District Council, Kent County Council, Dover District Council, and Thanet District Council)
- key advisory and specialist bodies (including the Environment Agency, Natural England, Historic England, and the Maritime and Marine Management Organisation)
- parish and town councils (including Aldeburgh Town Council, Benhall and Sternfield Parish Council, Friston Parish Council, Kelsale cum Carlton Parish Council, Minster Parish Council and Saxmundham Town Council)
- action groups (including Save Minster Marshes and Suffolk Energy Action Solutions)
- third party developers (including ScottishPower Renewables).

3. Your feedback

Since the close of our statutory consultation, we have been reviewing all feedback received from stakeholders and the local community. Some of the themes from this feedback, along with National Grid's response, are summarised below:

Need for Sea Link

Many responses questioned the need to reinforce the electricity transmission network between Suffolk and Kent.

Sea Link is needed because the existing transmission network infrastructure in East Anglia and the south-east was built in the 1960s and was not designed to accommodate the large volumes of generation capacity that is planned to connect here. The growth in offshore wind, new interconnectors (which allow electricity to be shared between countries), and nuclear power stations, means that by the end of the decade the existing network will not have the capacity to reliably transport all the energy to where it is needed around the electricity network.

Sea Link would reinforce the network in both East Anglia and the south-east, addressing - in a single solution - the constraints of each region. Connecting in the Sizewell area (at the proposed Friston substation), Sea Link would allow more power to flow out of East Anglia from the generators connecting into the network in the region. When renewable generation (e.g. wind) is low, power can flow into the region. By connecting into the Kent coast (close to Richborough), Sea Link would increase the amount of power that can be transported to and from the south-east, helping to meet domestic demand as well as imports and exports to Europe via interconnectors.

While the majority of Sea Link would be located offshore, onshore elements would be required in Suffolk and Kent to connect into the electricity network. No transmission network can ever be completely offshore, as power needs to be moved around the country.



Coordination

Coordination amongst the several energy projects planned for Suffolk in the years ahead continued to be a theme of statutory consultation feedback.

Coordination is a key consideration for Sea Link. It has featured in our plans since our very first public consultation, and as part of this update we are providing information on how our approach to coordination has evolved (see page 20).

More widely, a lot of work has taken place in recent years to consider the potential for further coordinated offshore infrastructure, such as the Government's [Offshore transmission network review](#)² and the Electricity System Operator's [Holistic network design](#).³

Sea Link is identified in the ESO's Network Options Assessment as an 'essential' project in order to deliver on offshore wind generation targets, so it is right that we continue to develop our proposals in tandem with these other processes.

Alternatives

Consideration of alternatives was another key theme raised in consultation feedback. Some responses made suggestions, such as keeping more infrastructure offshore, connecting into different parts of the country, or routeing and siting the Sea Link infrastructure differently.

Although Sea Link is primarily an offshore project, it is a transmission reinforcement that connects parts of the network onshore. Remaining offshore without connecting onshore would not deliver the reinforcement to the onshore network that Sea Link is required to provide.

Some respondents proposed connecting Sea Link into the network in different parts of the country. These included at Bradwell in Essex or on the Isle of Grain in Kent. While there is more detail on these suggested locations later in this section, it is worth noting that Sea Link is needed to connect two specific parts of the onshore transmission network. This means that connecting anywhere other than the Sizewell area in Suffolk and in Kent (east of Kemsley substation) would not allow power to flow between these two parts of the network, and further reinforcements would be needed in these areas.

We continually review and reconsider our emerging design, including our routeing and siting choices, as we develop our proposals and have regard to feedback. The rest of this section considers some of the alternatives that were raised in consultation feedback, and sets out the reasons these are not our preferred options for Sea Link. More information on discounted options can be found in previous consultation materials, such as the [Strategic options report](#)⁴ published as part of our statutory consultation in 2023.

2. <https://www.gov.uk/government/groups/offshore-transmission-network-review>
3. <https://www.nationalgrideso.com/future-energy/beyond-2030/holistic-network-design-offshore-wind>
4. <https://www.nationalgrid.com/electricity-transmission/document/150961/download>

Alternatives at the Suffolk end of the route

In Suffolk, the Strategic options report details how Sea Link needs to connect to the network in the Sizewell area, as more electricity is due to connect in the years ahead here than the existing network can transport. Sea Link would create extra capacity to connect this power with the rest of the country, whilst alternative locations in the east of England would not provide additional capacity where it is needed.

Our non-statutory consultation in 2022 included an alternative landfall in the Sizewell area, but due to existing onshore and offshore constraints, this option was removed from our proposals at the statutory consultation phase.

Given the interest in whether Bradwell-on-Sea might be a suitable alternative for Sea Link, it is worth recognising that this location does not reinforce the network where it is needed (in the Sizewell area). A significant amount of existing and planned generation is located in the Sizewell area, which is not the case in the Bradwell area. Building Sea Link to Bradwell would not help resolve the future capacity limitations of the transmission network in Suffolk, meaning that it is not a viable alternative to our current proposals.



Alternatives at the Kent end of the route

In Kent, the Strategic options report sets out how we considered connections to the Sellindge, Richborough and Canterbury areas. These areas were considered because the constraint on the existing electricity transmission network is between Kemsley and Lovedean, meaning that any reinforcement must connect between these two locations. A connection in the Isle of Grain or Kingsnorth would therefore not reinforce the network in the right place.

In terms of the alternative connection points in Kent, a connection close to Richborough offers environmental and socio-economic benefits over connecting into the Canterbury area. As well as this, a northern Kent landfall is significantly constrained, as set out in the [Corridor and preliminary routing and siting study](#)⁶. At Richborough, there are also opportunities to locate the converter station and substation close to the existing network and similar infrastructure.

Reducing impacts

Many responses reiterated the need to reduce the impacts of Sea Link on the environment. This has been a key part of the process as we have developed our proposals.

At our statutory consultation, we published a [Preliminary environmental information report](#)⁵ (PEIR). The report sets out the likely significant environmental effects of the project on the environment, along with how these impacts can be avoided, reduced or offset. The scope of the report was agreed in consultation with local authorities, and we will produce a more detailed Environmental statement as part of our application for development consent.

The changes we are communicating in this document include several areas where we are reducing the extent of our draft order limits, and therefore the land that would be impacted by our proposals. We have also identified additional areas that have been added to our draft order limits specifically so that we can deliver more environmental mitigations and enhancements, including further biodiversity net gain (improving the natural environment). We propose to deliver at least 10% biodiversity net gain across the entire project, meaning that the biodiversity of the natural environment will be improved compared to the current situation.

Kent converter station location

Many respondents in Kent focused on the proposed converter station site. As a result, we reviewed our decision-making and the suitability of the proposed site. As part of this process, we reconsidered alternative locations within Search area A and Search area B, which were considered but not progressed during previous stages of work. This activity was presented at both non-statutory and statutory consultation and is set out in detail within the [Option selection and design evolution report](#)⁵, and summarised below.

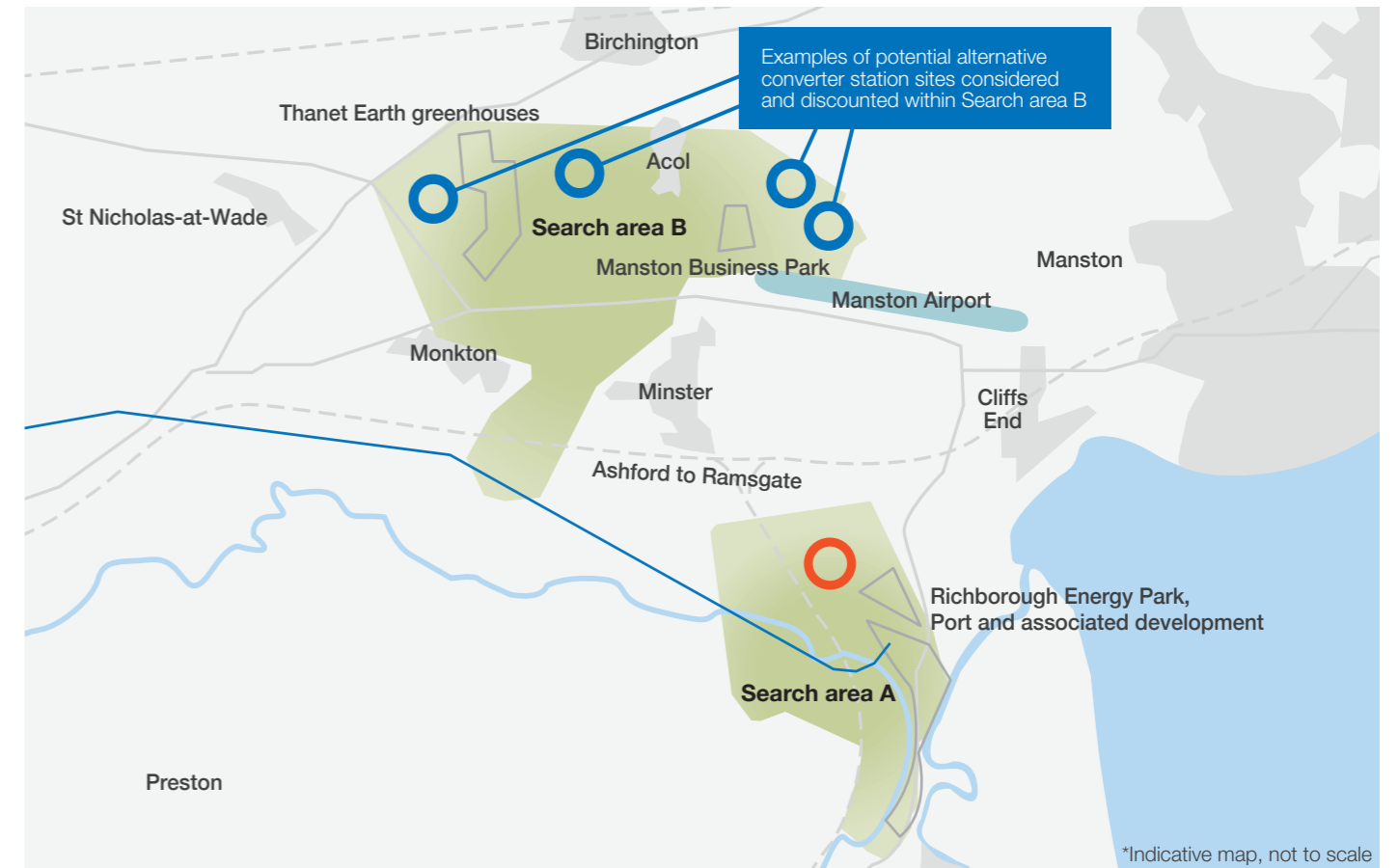
Search area A and Search area B are shown on the map on page 11. Sites within Search area B that were reconsidered include two sites north of Manston Airport, a site north of Monkton and east of Saint Nicholas-at-Wade, and a site west of Acol. On balance, our view remains that the currently proposed site is the most appropriate. This is because it is closest to our proposed landfall point, the existing network, and existing infrastructure (such as that at Richborough Energy Park). However, we also recognise the important ecological designations in close proximity to the proposed converter station and substation site. We have outlined at previous consultations how we would mitigate for this, including through habitat creation.

As part of our application for development consent, we will prepare a Consultation Report. This report will set out all feedback we received throughout each of our pre-application consultations, along with how we have had regard to that feedback.

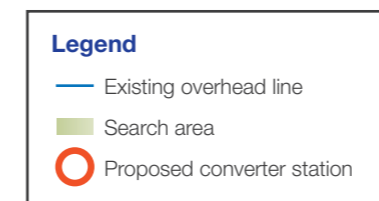
Between now and submission of our application for development consent, we are continuing to refine our proposals based on the feedback we receive from local communities, results from ongoing environmental and engineering assessments, surveys taking place along the route, and engagement with local authorities and stakeholders.

5. <https://www.nationalgrid.com/electricity-transmission/network-and-infrastructure/infrastructure-projects/sealink/document-library>
 6. <https://www.nationalgrid.com/electricity-transmission/document/146256/download>

Alternative converter station location search areas in Kent



Search Areas A and B were previously considered and presented during the non-statutory consultation in 2022 and the statutory consultation in 2023



4. Our proposals

Our plans for Sea Link remain broadly the same as at our statutory consultation in 2023. We are proposing to reinforce the network between Suffolk and Kent via a new, primarily offshore, 2 gigawatt (GW) high voltage direct current (HVDC) link.

Our proposals in Suffolk begin with a connection from the existing transmission network via the proposed Friston substation, including the substation itself. High voltage alternating current (HVAC) underground cables would then run between the proposed Friston Substation and a proposed converter station near Saxmundham. A HVDC underground cable connection would connect the proposed converter station to a landfall point between Aldeburgh and Thorpeness.

Offshore, our proposals include a subsea HVDC cable route approximately 122 km long between the landfall in Suffolk and the landfall on the coast of Kent. In Kent, the offshore HVDC comes ashore at a landfall at Pegwell Bay. A HVDC underground cable would connect from the landfall to a proposed converter station and substation site near Minster. Finally, a new stretch of AC overhead line would connect the new substation into the existing network.




The detail of our proposals as presented during the statutory consultation can be found in the [Project overview document](#)⁷ produced for that consultation. The following pages set out the detail of our proposals, including any changes we have made since the statutory consultation.

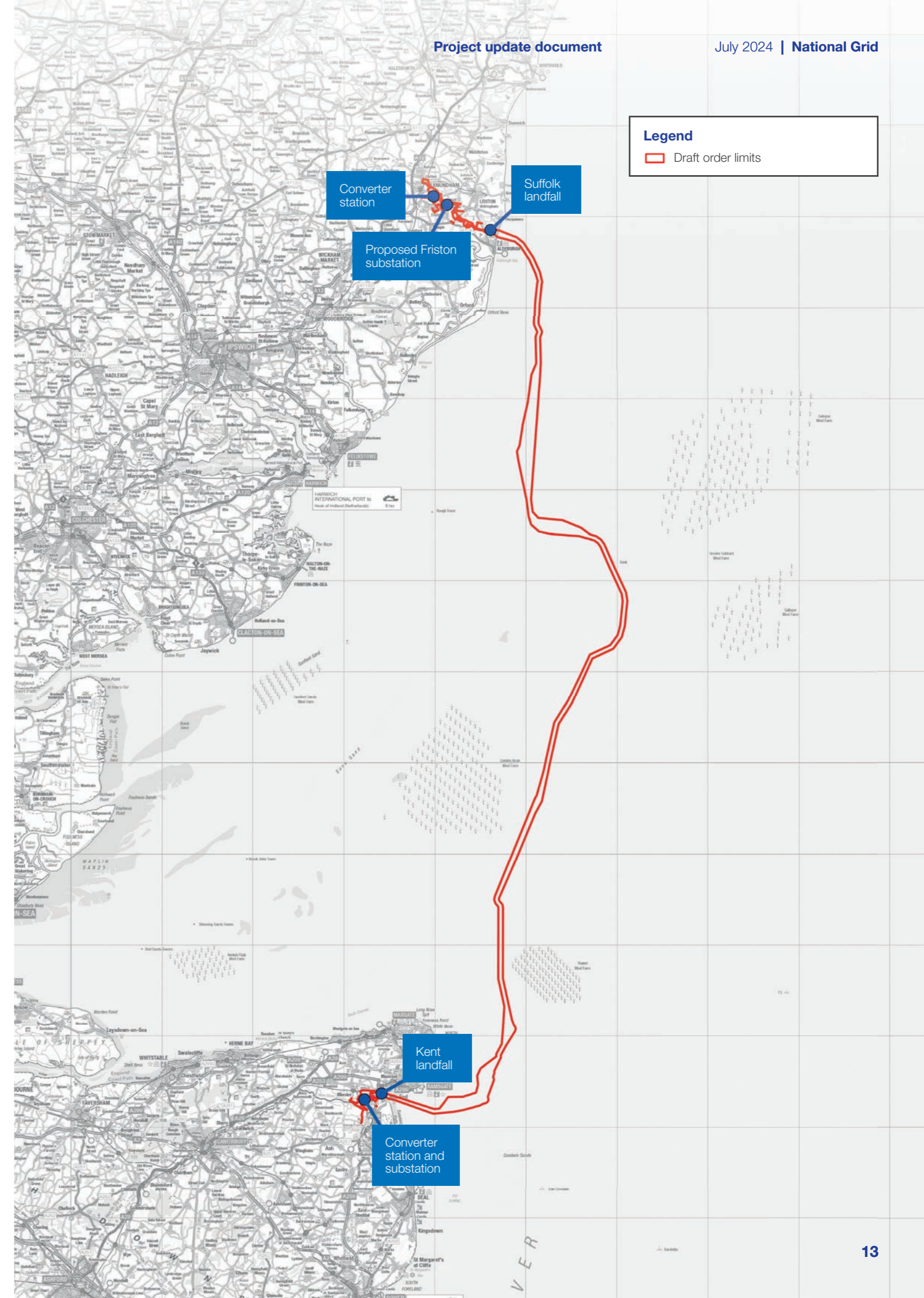
7. <https://www.nationalgrid.com/electricity-transmission/document/150926/download>

To make the changes easier to understand, we have grouped them into four categories:

- **permanent infrastructure:** proposed changes to the permanent infrastructure planned as part of Sea Link, including the cable routes and converter station/substation(s)
- **construction and maintenance work:** proposed changes to how we would build and maintain Sea Link during the construction and operational phases
- **mitigation, enhancements and approach to biodiversity net gain:** proposed changes to how we will mitigate the impact of Sea Link on the environment and deliver enhancements to the local environment
- **strategy for coordination:** proposed changes to how we will coordinate the construction and operation of Sea Link with other projects planned in Suffolk.

As our plans have evolved in response to consultation feedback, further technical work and environmental assessments, we have also made a range of smaller changes to our proposals. These include various refinements, including reductions and increases to the size of the draft order limits. These limits form the current anticipated boundary of the entire area within which Sea Link could take place, including temporary and permanent works, as well as the works to the existing infrastructure. The maps on the following pages show any land that has been added or removed from our draft order limits, the list below sets out how we are showing these changes on the plans.

-  Land removed from draft order limits. This land would no longer be required for the construction or operation of Sea Link.
-  Land in draft order limits (unchanged from previous consultation). This land was in our draft order limits at our statutory consultation in 2023 and continues to be required for the construction and operation of Sea Link.
-  Land added to draft order limits. This land was previously not included in that required to build and operate Sea Link but has now been added to our plans.



Our plans in Suffolk

In Suffolk, our proposals for Sea Link include:

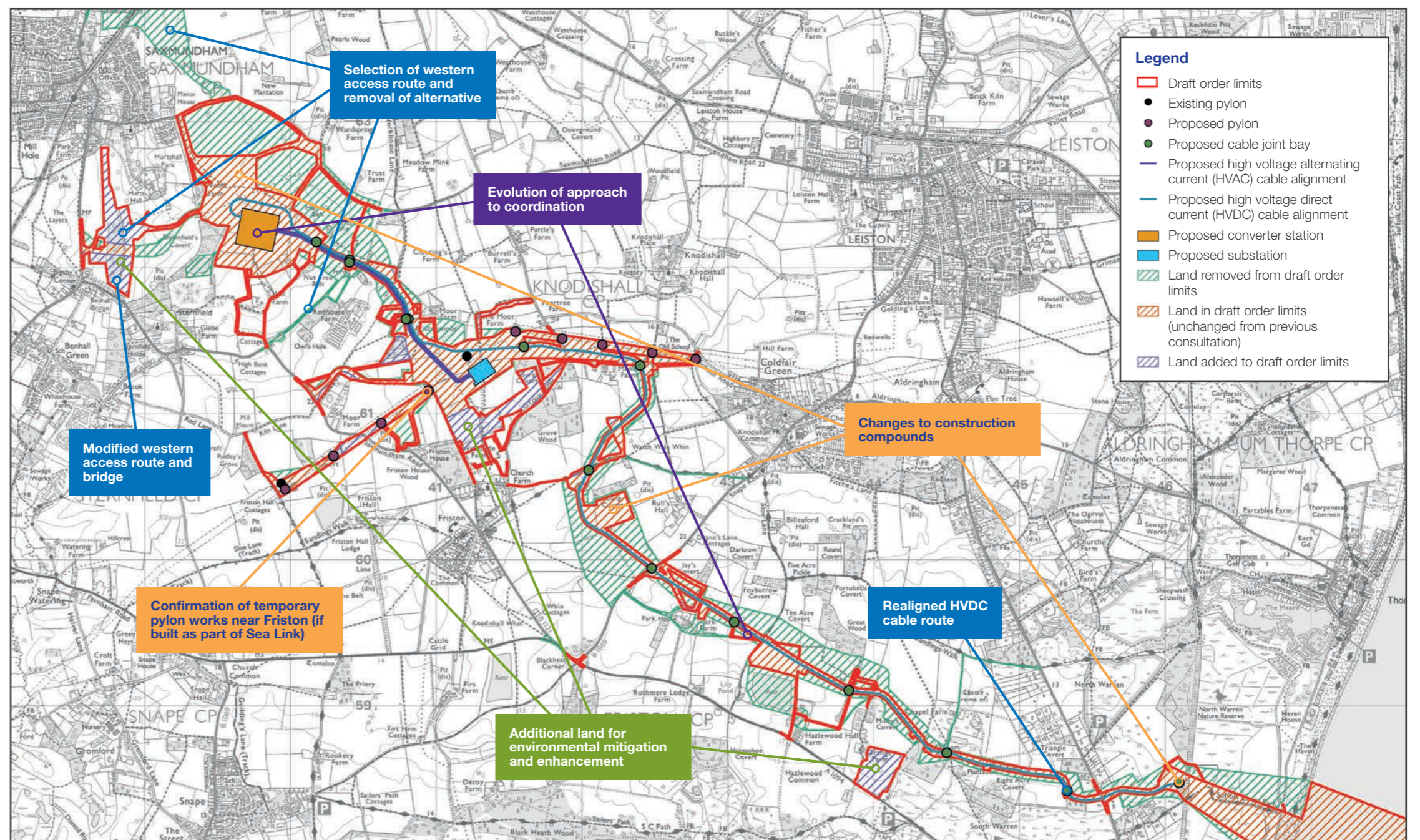
- a connection from the existing transmission network via the proposed Friston substation, including the National Grid part of the substation itself
- approximately 1.9 kilometres (km) of high voltage alternating current (HVAC) underground cable between the proposed Friston substation and a proposed converter station
- a 2 GW high voltage direct current (HVDC) converter station near Saxmundham
- approximately 10 km of HVDC underground cable between the proposed converter station near Saxmundham and a transition joint bay approximately 900 metres inshore from landfall, where the cable transitions between onshore and offshore technology
- a landfall on the Suffolk coast, between Aldeburgh and Thorpeness.

What hasn't changed?

Our proposals in Suffolk remain broadly the same as they were at our statutory consultation in 2023. We are still proposing to use underground cables between the proposed Friston substation, the converter station near Saxmundham and the landfall point on the Suffolk Coast. The route of these cables is mostly unchanged, and for the most part they will be constructed using standard open trenches. However, where our proposals interact with the Leiston to Aldeburgh Site of Special Scientific Interest, we are proposing to use a trenchless construction method to install cables beneath the surface, therefore minimising disturbance to the natural environment.

Our proposals continue to allow for the co-location of key infrastructure with potential future projects. Although it already has consent as part of another third-party project, we have kept the National Grid Electricity Transmission element of Friston substation within our proposals so that, in the unlikely event it is not built under the existing consent, it could be built as part of Sea Link. If the substation is built under the existing consent, we would only need to build a connection into it.

At our statutory consultation in 2023, we sought views on potential converter station architectural design approaches. We are still in the process of considering feedback on this topic, which will inform the detailed design approach within our application for development consent.



Underground cable construction methods

There are two methods we are proposing to lay the underground cables for Sea Link in Suffolk.

The majority of cables will be laid using standard open cable trenches. This method involves digging trenches, laying cable ducts within these trenches and then re-covering the trenches (using the original topsoil and subsoil, where possible) before reinstating the land. We would then pull cables through the previously-installed ducts at a later date.

Around the landfall point between Aldeburgh and Thorpeness, we are proposing to use a trenchless construction method to lay the underground cables. This would involve installing an underground duct or pipe between an onshore transition joint bay (where two sections of cable are connected together) and a point offshore. This approach does not require the removal of the topsoil or subsoil and minimises disturbance at the surface, such as along the beach.

What has changed?

Permanent infrastructure

HVAC cable route

The length of the high voltage alternating current (HVAC) cable route has increased by approximately 0.2 km. This is because of a number of minor refinements to the cable corridor and the routing of the cables into the converter station near Saxmundham and the proposed Friston substation.

HVDC cable route

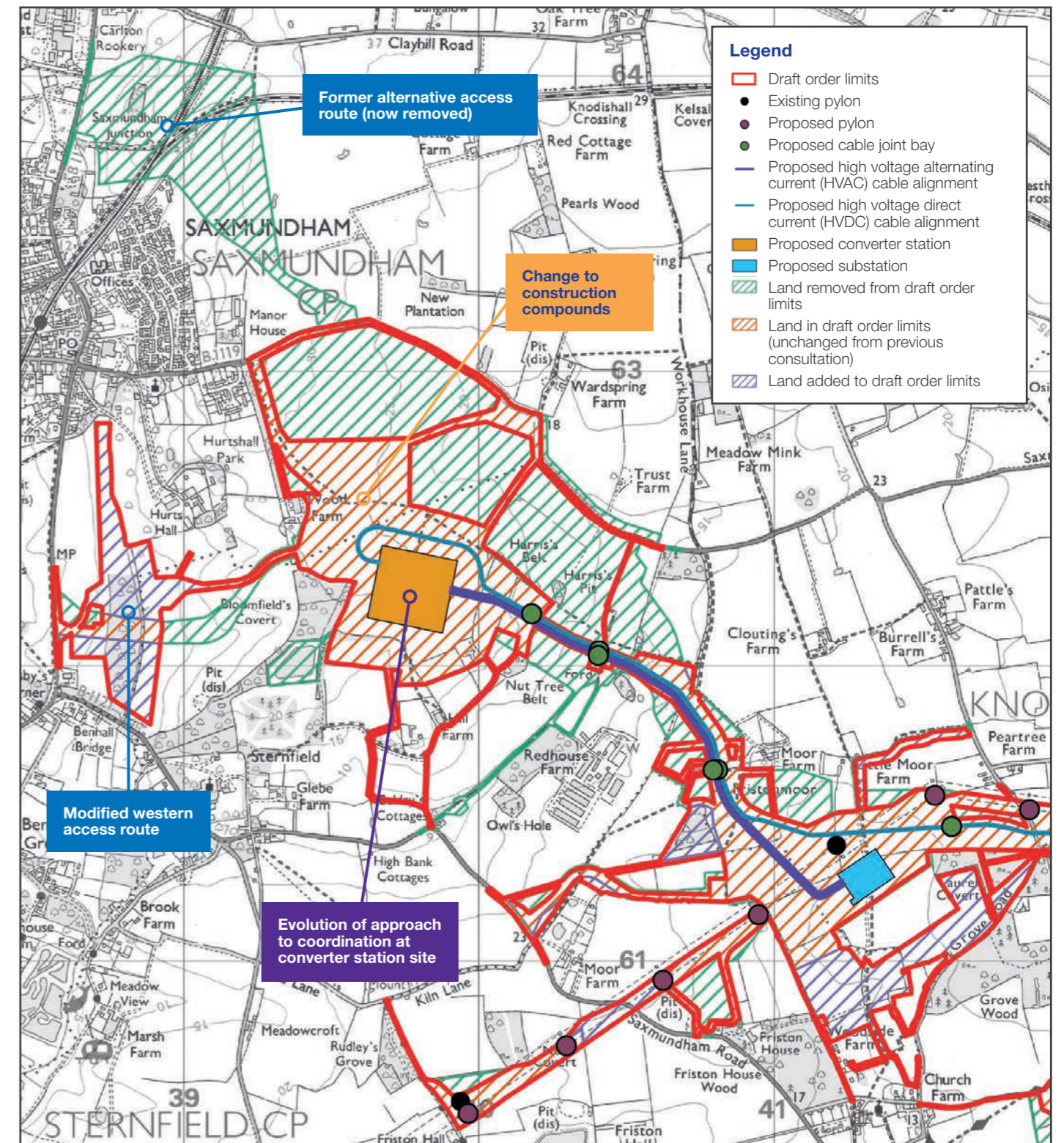
We have realigned the high voltage direct current (HVDC) cable route near Leiston Road, moving it further away from the road. This change would move construction activity further away from nearby residential properties.

Saxmundham converter station access and bridge

We have identified a modified version of the proposed western construction and maintenance access route for the Saxmundham converter station site. The changes include moving the point at which the access route crosses the river further north, to reduce interaction with the flood zone.

A larger bridge crossing than previously anticipated may be needed. During the statutory consultation, we proposed a bridge with a width of six metres and a height of 2.6 metres. Following discussions with the Environment Agency and other stakeholders, we may now require a bridge height of up to 6 metres, with longer approach maps. These discussions are ongoing as we seek to develop a crossing design that would, on the whole, result in the least environmental impact when taking into account various factors. These factors include aquatic and terrestrial ecology, landscape and visual, heritage, and flood risk.

Selecting the western construction and maintenance access route means that we have removed the alternative northern and southern access routes from our plans. The southern access route, following further review, is not suitable for the construction traffic required. The northern access route, which is approximately double the length of the western alternative, would have required bridge crossings of the River Fromus and one or both of the railway lines. There are engineering challenges associated with the construction of these bridges, including the likelihood of significant works being required to either the B1121 or the River Fromus itself. Construction work would have also been required in the immediate vicinity of residential properties at Oak Close and along neighbouring streets in Saxmundham. These factors increase the risk of delay and could result in a longer construction period, hence the decision to remove the northern access route from our proposals.



Construction and maintenance infrastructure

Construction and maintenance compounds

We have refined the size and location of several construction compounds that were shown in the general arrangement plans during our statutory consultation.

Proposed changes include:

- reducing the size of the construction compound at the Aldeburgh landfall, which would lessen the impact of this compound on the flood zone, nearby environmental receptors and residential properties
- relocating the construction compound east of Friston, moving it from the south of the high voltage direct current cable route to the north of the cable route. This change moves the compound further away from Friston
- reducing the number of construction compounds within the Saxmundham converter station site from two to one. The single compound would be located further west within the converter station site area, reflecting ongoing discussions around coordination with other projects.

Construction and maintenance accesses

In addition to the above changes, we have made changes to several construction accesses, including adding or removing accesses in some areas. These changes have been made in response to feedback and construction requirements.

Working hours

The proposed core working hours set out at our statutory consultation did not include Sundays or bank holidays. However, to accommodate contractor requirements, and to give us the flexibility to deliver the construction programme on time, we have identified a need to include 7am to 5pm on Sundays and bank holidays within the core working hours.

Whilst this change would give us the flexibility to carry out works when and where needed, we do not expect construction activity to take place on every Sunday or bank holiday. There will be restrictions on the type of activity that can occur on these days.

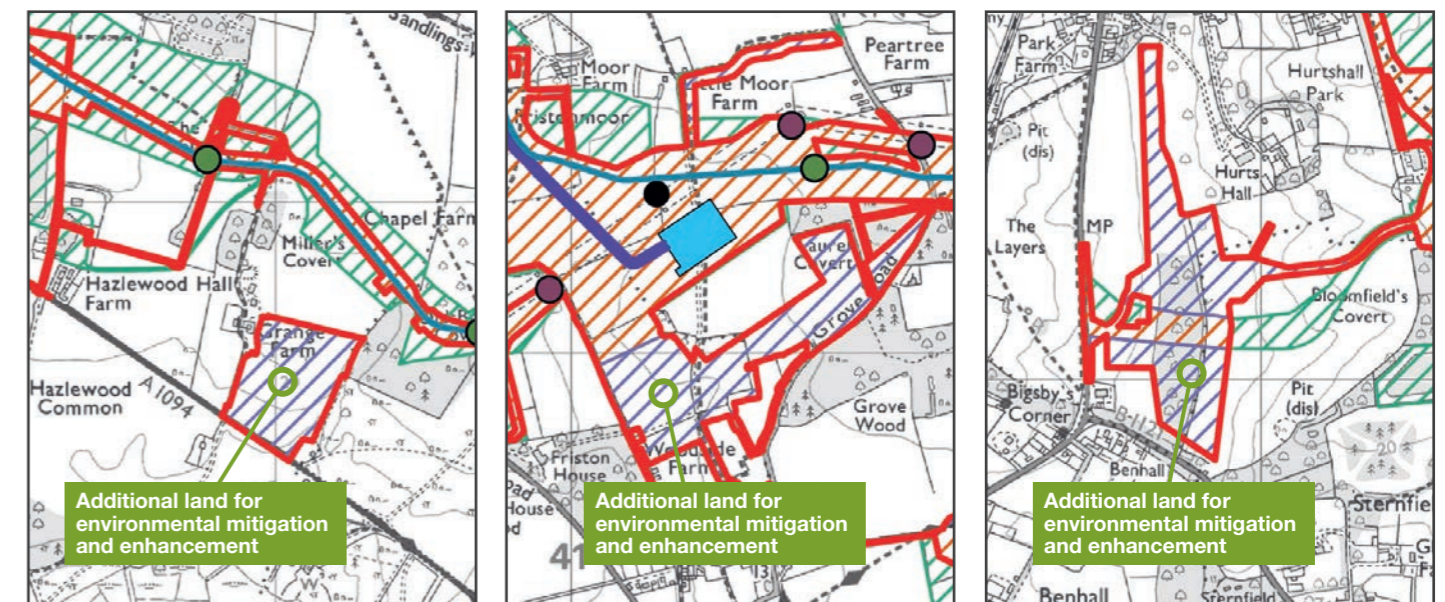
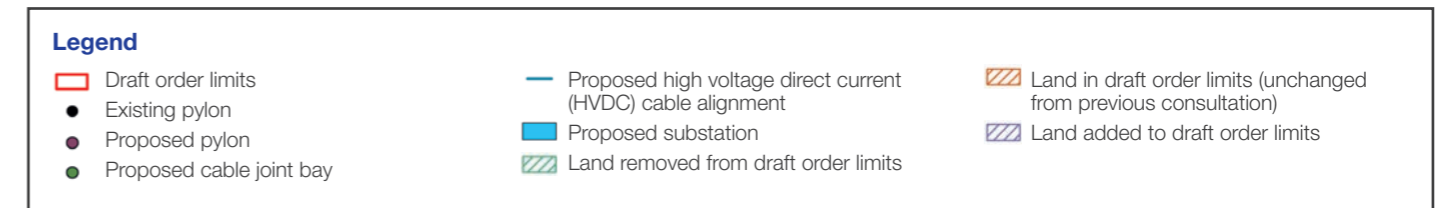
Temporary pylons or masts

In the event that we are required to build Friston substation ourselves (meaning that it is not built under ScottishPower Renewables' existing consent), we are confirming that we will need to build some temporary pylons during its construction. If the substation is built under the existing consent, then we would not need to build any temporary pylons in Suffolk as part of Sea Link.

Mitigation, enhancement and approach to biodiversity net gain

The draft order limits for Sea Link have changed in some areas to allow for further environmental mitigation, enhancement and biodiversity net gain.

Specifically, new land has been added to the draft order limits:



- north of Saxmundham Road near Aldeburgh. We are proposing to deliver new acid grassland here, which would provide ecological mitigation and enhancement to the Suffolk and Essex Coasts and Heaths National Landscape (formerly known as an area of outstanding natural beauty, or AONB)
- south of the proposed Friston substation. This land has been added to the order limits to reflect the mitigation works approved under ScottishPower Renewables' existing consent for Friston substation. We are therefore confirming that this mitigation work will be carried out irrespective of whether it is built under ScottishPower Renewables' or National Grid's application for development consent
- along the banks of the River Fromus. This land would enable the provision of further environmental enhancements.

Strategy for coordination

Our plans in Suffolk have been developed for Sea Link as a standalone project but have been designed in a coordinated way with other projects, including two potential National Grid Ventures (NGV) projects. As development work on Sea Link and these other projects has progressed, our approach to coordination has evolved.

A key part of our coordination strategy is to continue to explore opportunities to co-locate infrastructure where feasible and beneficial.

At statutory consultation, we presented a Sea Link design which showed the NGV works themselves at the landfall and along the cable sections. It also included the entire wider site at Saxmundham, to show how we could be flexible if constructing around one or two additional converter stations. This assumed a scenario where the NGV projects, whose routing and siting work is at an earlier stage, identified the same cable and converter station sites as Sea Link.

In March 2024, NGV's LionLink project announced that it had down selected its potential landfall at Aldeburgh and would be removing it from the LionLink proposals. LionLink is still proposing to co-locate its converter station alongside Sea Link's near Saxmundham.

As our own design work and our engagement with the NGV projects has progressed, we have evolved our approach to coordinating with NGV.

We are considering further ways that we could coordinate our construction activities and other projects and developers, including National Grid Ventures, EDF Energy and ScottishPower Renewables.

Cable corridors and landfall

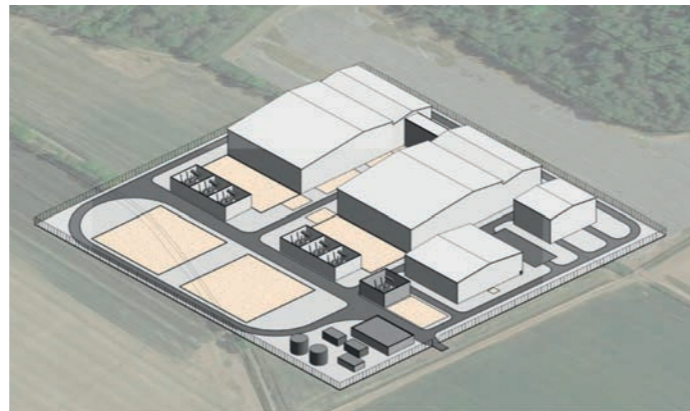
For the direct current (DC) cable route, this reflects the fact that LionLink no longer prefers the Aldeburgh landfall and onward cable route. For the shorter alternating current (AC) route, the Sea Link design has been refined to remove the LionLink cables to allow NGV, whose project is at an earlier stage, to fully consider and consult on the most appropriate AC cable route.

Nonetheless, Sea Link has been designed to allow space for the future delivery of other projects.

Converter stations

We have confirmed the preferred location of the Sea Link converter station within the wider site, and refined the draft order limits to remove the areas that may be required for the future NGV projects' converter stations.

However, one of the reasons that the Saxmundham site was identified was because of its capacity to accommodate further converter stations, and we continue to work collaboratively with NGV to consider the most appropriate way of developing the wider site in a coordinated way.



Indicative CGI of a converter station



Our marine plans

Our marine proposals for Sea Link include:

- a subsea high voltage direct current (HVDC) cable route approximately 122 km in length between the Suffolk landfall location and the Kent landfall location.

What hasn't changed?

Our marine proposals remain broadly the same as they were at our statutory consultation in 2023. Both the Suffolk and Kent landfall locations remain unchanged, with subsea HVDC cable used to connect these two locations.

What has changed?

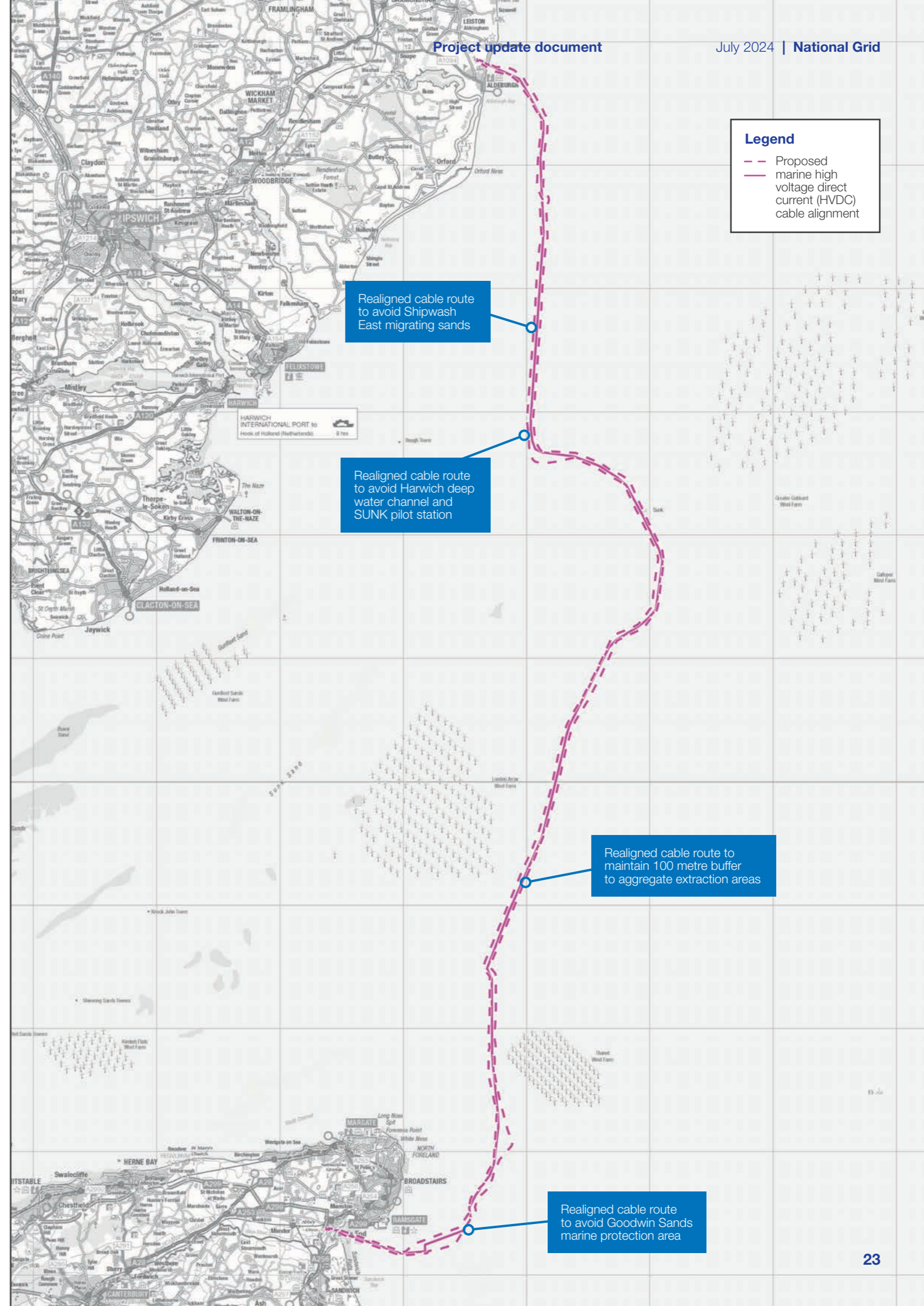
Permanent infrastructure

We have made various refinements to the marine HVDC cable route, resulting in a reduction of the offshore cable route length of approximately 8 km. The changes will allow us to avoid areas where aggregate is extracted from the sea, the Goodwin Sands marine protection area, migrating sands (which are less suited to cable protection), and the Harwich deep water channel and SUNK pilot station.

Further technical work has also identified a need for further rock emplacement (where rock is used to backfill the marine cable trench after the cable has been laid).

Construction and maintenance infrastructure

As a result of further work to understand the construction requirements for Sea Link, our proposals now include additional areas for vessel manoeuvring and temporary anchoring.



Our plans in Kent

In Kent, our proposals for Sea Link include:

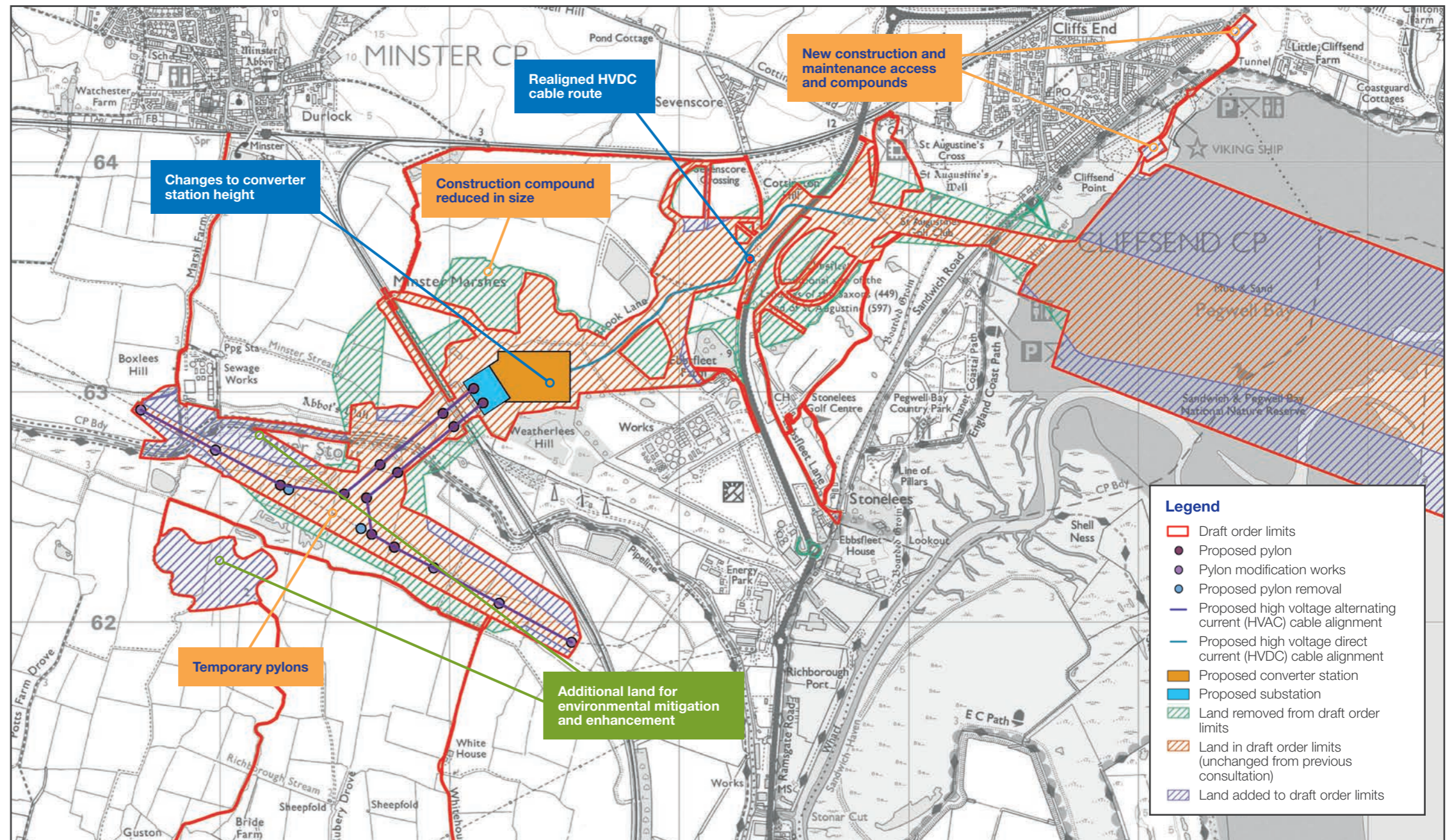
- a landfall point on the Kent coast at Pegwell Bay
- a transition joint bay approximately 800 metres inshore, where the cable transitions between offshore and onshore technology, and approximately 2 km of high voltage direct current (HVDC) underground cable to a proposed converter station near Minster
- a 2 GW HVDC converter station and substation near Minster
- removal of up to 2.2 km of existing high voltage alternating current (HVAC) overhead line, and installation of approximately 3.5 km of new HVAC overhead line between the new converter station and substation near Minster and the existing Richborough to Canterbury overhead line.

What hasn't changed?

Our proposals in Kent remain broadly the same as they were at our statutory consultation in 2023. We are still proposing to use underground cables between the landfall and proposed converter station, before using pylons to connect onto the existing Richborough to Canterbury 400 kV overhead line. The route of the underground cables and overhead line from the landfall point at Pegwell Bay, across to the proposed converter station and substation near Minster, and onto the existing overhead line, remains largely the same as it was previously. The route of these cables is mostly unchanged, and for the most part they will be constructed using standard open trenches. However, around the landfall point at Pegwell Bay we would use a trenchless construction method to install cables beneath the surface, therefore minimising disturbance to the natural environment.

The location of the proposed converter station and substation near Minster also remains the same as at our statutory consultation – please see pages 10 and 11 of this document for more information on how we considered your feedback about the location of this infrastructure.

At our statutory consultation in 2023, we sought views on potential converter station/substation architectural design approaches. We are still in the process of considering feedback on this topic, which will inform the detailed design approach within our application for development consent.



Underground cable construction methods

There are two methods we are proposing to use to lay the underground cables for Sea Link in Kent.

The majority of cables will be constructed using standard open cable trenches. This construction method involves digging trenches, laying the cable ducts within these trenches and then re-covering the trenches (using the original topsoil and subsoil, where possible) before reinstating the land. We would then pull cables through the previously-installed ducts at a later date.

Around the landfall point at Pegwell Bay, we are proposing to use a trenchless construction method to lay the underground cables. This would involve installing an underground duct or pipe between an onshore transition joint bay (where two sections of cable are connected together) and a point offshore. This approach does not require the removal of the topsoil or subsoil and minimises disruption at the surface, such as within Pegwell Bay.

What has changed?

Permanent infrastructure HVDC cable route

We have realigned the high voltage direct current (HVDC) cable route near the A256 to avoid existing buried water infrastructure in this area. We are also proposing the use of trenchless crossing technology here to reduce the impact of construction activity on road users.

Converter station height

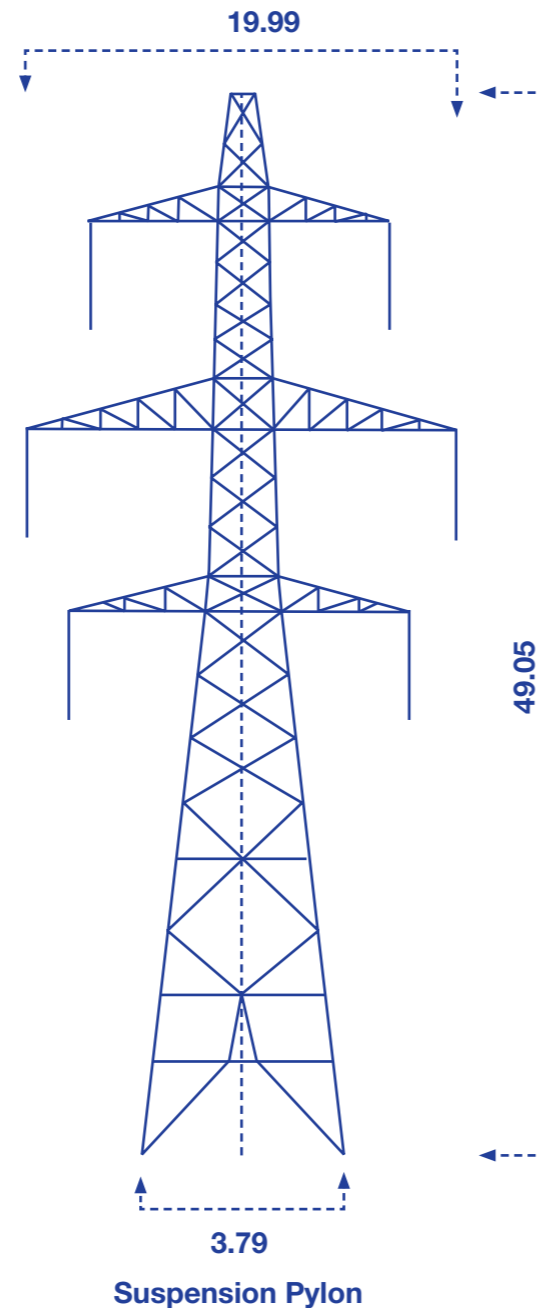
Following more detailed design work after completing site surveys, we are proposing to increase the ground level at the converter site around the converter station height by constructing a stone platform of up to two metres.

We may need to improve the ground beneath the platform, such as by installing modular columns, which are underground concrete supports approximately 20 metres deep that help to spread the weight of buildings above, or by piling into the bedrock below. The approach taken will depend on ongoing and future detailed survey work.

The maximum height of the converter station buildings themselves would not change. However, as these structures would now be on a raised platform, the maximum total height will now be 28 metres rather than 26 metres.

Location and type of new pylons

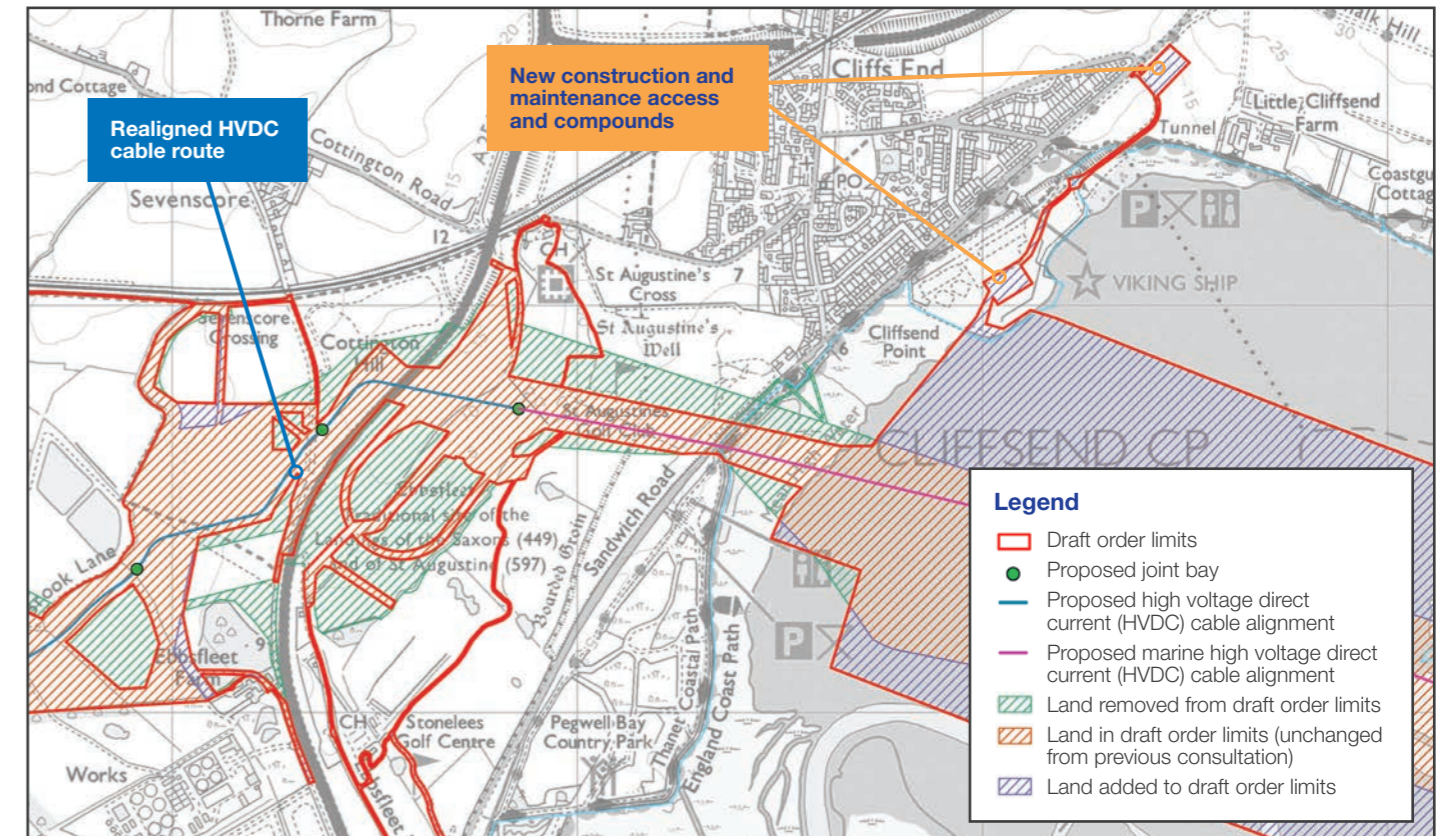
Of the options consulted on previously, we are confirming the use of full-height (approximately 50 metre) lattice pylons for the connection between the proposed combined converter station/substation and the Richborough to Canterbury 400 kV overhead line. This means there would be fewer new pylons in total when compared to the low-height pylon option. Additionally, we have refined the location of these pylons to reduce the size of the triangular area that would be formed by the construction of pylons between the existing overhead line and the proposed substation. This will reduce the risk that birds could become trapped in between the new and existing overhead lines, but would result in an increase of approximately 1.2 km in the total length of new overhead line compared to our proposals at statutory consultation.



Construction and maintenance infrastructure

Construction and maintenance compounds

We have removed one of the construction compounds previously proposed to the east of the A256, and are increasing the size of a construction compound proposed to the west of the A256. We have also reduced the size of the construction compound north of the proposed converter station site.



Construction and maintenance access

To avoid using the saltmarsh as an access route, we are proposing a new construction and maintenance access off Sandwich Road via the former hoverport in Pegwell Bay. This includes a compound off Sandwich Road.

In response to feedback and construction requirements, we have made amendments to several construction accesses, including adding or removing accesses in some areas. The changes include removing the requirement for the majority of construction traffic to pass close to a school and businesses on Jutes Lane.

Temporary pylons and masts

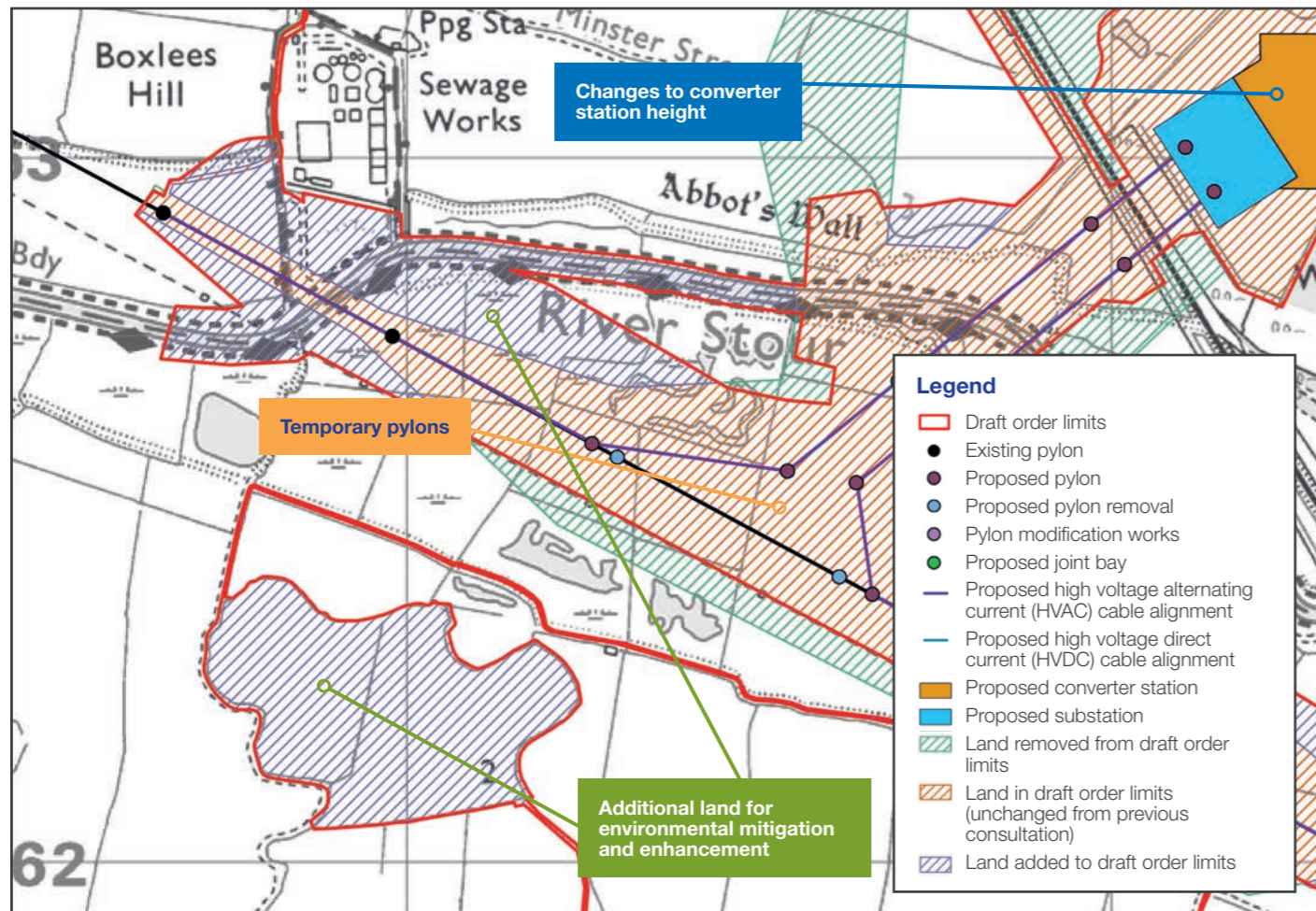
We are confirming that we would need to divert the existing overhead line between Richborough and Canterbury in the vicinity of the converter station and substation site during construction. To facilitate this work, we would need to build up to six temporary pylons or use guyed masts (structures that use tensioned cables attached to the ground for stability).

The draft order limits have been widened in this area to accommodate this change.

Working hours

The proposed core working hours set out at our statutory consultation did not include Sundays or bank holidays. However, to accommodate contractor requirements, and to give us the flexibility to deliver the construction programme on time, we have identified a need to include 7am to 5pm on Sundays and bank holidays within the core working hours.

Whilst this change would give us the flexibility to carry out works when and where needed, we do not expect construction activity to take place on every Sunday or bank holiday. There will be restrictions on the type of activity that can occur on these days.



Mitigation, enhancement and approach to biodiversity net gain

The draft order limits for Sea Link have been increased in some areas so we can deliver additional environmental mitigation, enhancement and biodiversity net gain. Specifically, new land has been added to the draft order limits:

- along the banks of the River Stour, to provide opportunities for mitigation and enhancement
- to the south of part of the existing Richborough to Canterbury 400 kV overhead line. Enhancements would be carried out on this land to provide additional foraging habitat for birds moving inland from Pegwell Bay.

5. Find out more

We have written to over 35,000 homes and businesses across Suffolk and Kent to advertise the changes we are making to our proposals. We have also contacted stakeholders and consultees identified during earlier stages of the Sea Link Project. We are promoting this update via published notices in local and national newspapers, across our website, on social media, and to those who have registered for email updates on Sea Link.

For more information about the changes we are making to our plans, you can:

Join a webinar

A pre-recorded webinar is available to view on our project website, nationalgrid.com/sealink. It covers the latest changes to the Sea Link Project across Suffolk, Kent and offshore.

an opportunity for you to ask questions. Two webinars will focus on the proposals in Suffolk and offshore, and two will focus on our proposals in Kent and offshore.

As well as the pre-recorded webinar, we will be hosting four live webinars where the project team will present a brief overview of the proposals plus the latest changes to the plans. There will also be

The pre-recorded webinar will include a British Sign Language interpreter. To watch a pre-recorded webinar or sign-up for a live webinar, please visit our website.

Date	Time	Location
Monday 15 July 2024	6:30pm-7:45pm	Our proposals in Suffolk and marine proposals
Tuesday 16 July 2024	6:30pm-7:45pm	Our proposals in Kent and marine proposals
Wednesday 17 July 2024	6:30pm-7:45pm	Our proposals in Suffolk and marine proposals
Monday 22 July 2024	6:30pm-7:45pm	Our proposals in Kent and marine proposals

Deposit points

Paper copies of consultation material will be available at the following locations between Monday 8 July and Sunday 11 August.

Please check with the venue for opening hours.

Suffolk	Address	Kent	Address
Saxmundham Library	Block B, Street Farm Rd, Saxmundham IP17 1AL	Ash Library	11 Queen's Rd, Ash, Canterbury CT3 2BG
Leiston Library	Main St, Leiston IP16 4ER	Minster Library	4a Monkton Rd, Minster, Ramsgate CT12 4EA
Aldeburgh Library	Victoria Rd, Aldeburgh IP15 5EG	Sandwich Library	13 Market St, Sandwich CT13 9DA
Snape Village Hall	5 Garrett Cl, Snape, Saxmundham IP17 1RN	Ramsgate Library	Guildford Lawn, Ramsgate CT11 9AY
Friston Village Hall	Church Rd, Friston, Saxmundham IP17 1PU	Newington Library	Royal Harbour Academy, Stirling Way, Ramsgate CT12 6FA
		Thanet Library	Thanet Gateway Plus, Cecil Street, CT9 1A
		Margate Library	Cecil Street, Margate, CT9 1RE

6. Any further feedback

Share your further feedback

All feedback on our emerging proposals for Sea Link is welcomed. If you would like to share further feedback on the latest changes to our plans for Sea Link or on the proposals more generally, you can do so in the following ways:

- **Email us:** contact@sealink.nationalgrid.com
- **Write to us:** FREEPOST Sea Link

You do not need to resubmit comments given at a previous stage of consultation. When sharing your comments, it would be helpful if you could include in your email or letter which part of the Sea Link Project they relate to:

- **permanent infrastructure:** proposed changes to the permanent infrastructure planned as part of Sea Link, including the cable routes and converter station/substation(s)
- **construction and maintenance work:** proposed changes to how we would build and maintain Sea Link during the construction and operational phases
- **mitigation, enhancements and approach to biodiversity net gain:** proposed changes to how we will mitigate the impact of Sea Link on the environment and deliver enhancements to the local environment
- **strategy for coordination:** proposed changes to how we will coordinate the construction and operation of Sea Link with other projects proposed or planned in Suffolk
- **anything else.**

Please submit any comments by 23:59 on 11 August 2024.

If you have questions about our proposals or require information in an alternative format, you can contact the team in the following ways:

- **email us:** contact@sealink.nationalgrid.com
- **call us:** Our information line (0808 134 9659) is available Monday to Friday between 9am-5:30pm
- **write to us:** FREEPOST Sea Link

Next steps

We will continue to carefully consider any feedback we receive, alongside the findings of ongoing environmental and engineering assessment work and surveys, as we prepare our application for development consent.

You can read more about the development consent process on the Planning Inspectorate's website at infrastructure.planninginspectorate.gov.uk.

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