The Great Grid Upgrade

Eastern Green Link 5 (EGL 5)

Stage 1 consultation document

May 2025

nationalgrid

About National Grid and The Great Grid Upgrade

National Grid delivers electricity safely, reliably and efficiently to the customers and communities we serve – all while working towards building a cleaner, fairer and more affordable energy system for the future.

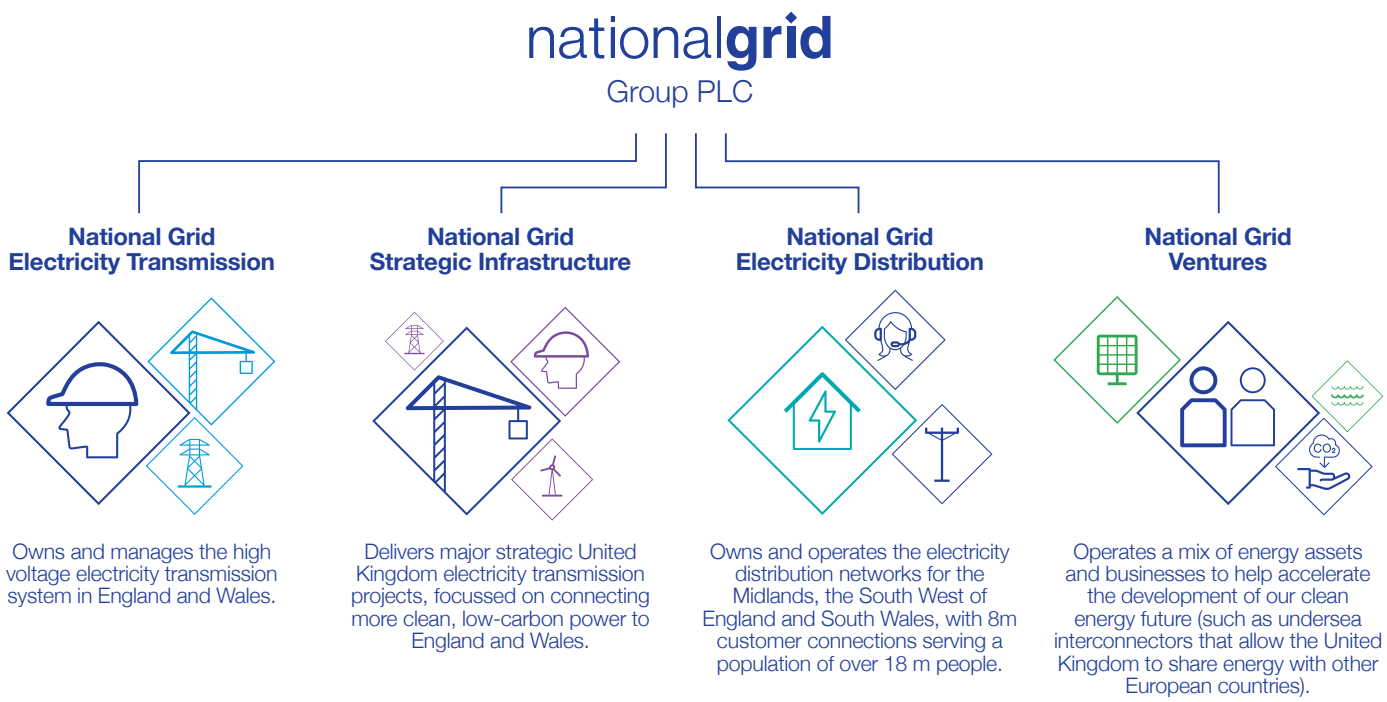


Figure 1 – Divisions of National Grid

National Grid Electricity Transmission's (NGET) Strategic Infrastructure delivery unit is developing the proposals set out in this document. It must, under the Electricity Act 1989, do so in an efficient, coordinated, and economical way which also considers people, places and the environment. We have published 10 commitments on how we go about doing this in our stakeholder, community and amenity policy[1].

NGET's role

NGET does not generate electricity. We own and maintain the high voltage network in England and Wales, transporting large amounts of electricity from where it is generated to where it is needed. The local network operators then deliver it at lower voltages to individual homes and businesses.

To find out more about how we develop our proposals, please see our video[2] explaining how we work.

[1] National Grid's commitments when undertaking works in the UK: Our stakeholder, community and amenity policy (National Grid, December 2016) – Available at https://www.nationalgrid.com/electricity-transmission/document/81026/download

[2] National Grid Electricity Transmission, 'How we work' video players.brightcove.net/867903724001/default_default/index.html?videoId=6329276694112

Scan this QR code for more information on The Great Grid Upgrade, or visit our website at **www.nationalgrid.com/the-great-grid-upgrade**

What is The Great Grid Upgrade?

The Great Grid Upgrade is the largest overhaul of the grid in generations.

The existing transmission system – the infrastructure including pylons, overhead lines and underground cables which transports electricity around the country – was largely built in the 1960s. It was not designed to transport electricity from where it is increasingly being generated today – from offshore wind and from other low carbon sources generated in Britain.

Electricity demand in Britain is forecast to at least double by 2050, increasing the amount of energy we need to transport to homes, businesses and public services.

New transmission infrastructure is needed to meet Government targets for connecting renewables, including up to 50 GW of offshore wind, enough to power every home in the country, helping reduce our dependency as a country on fossil-fuels[3].

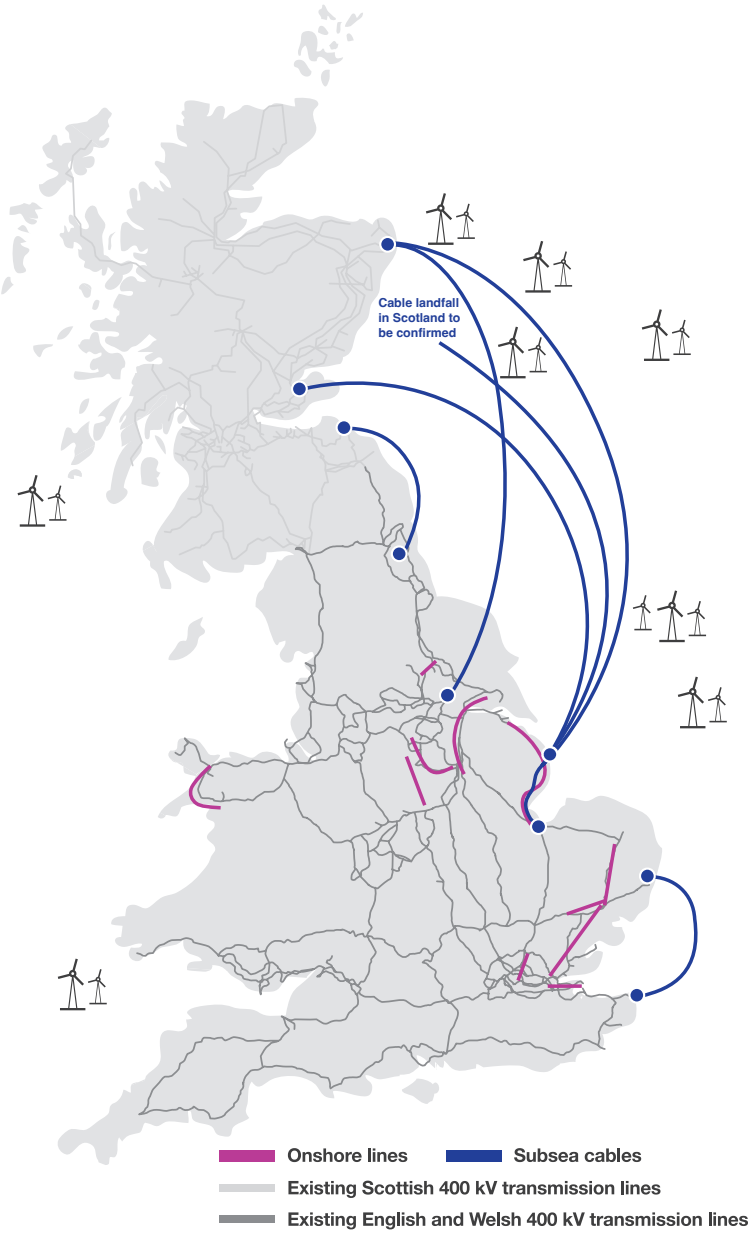


Figure 2 – Map of existing high voltage electricity transmission network and projects proposed as part of The Great Grid Upgrade

The Great Grid Upgrade will:

- Contribute to lower energy bills over the long term and make the UK's energy more self-sufficient.
- Support hundreds of thousands of jobs and contribute an average of £18.4bn to GDP.

[3] https://assets.publishing.service.gov.uk/media/677bc80399c93b7286a396d6/clean-power-2030-action-plan-main-report.pdf

Contents

Foreword

Thank you for your interest in our proposals to upgrade the electricity grid in your local area. These proposals are key to delivering The Great Grid Upgrade.

Eastern Green Link 5 (EGL 5) is a new primarily offshore high voltage electricity link, with associated onshore infrastructure, between Scotland and England.

EGL 5 would transport enough clean energy from Scotland to power up to two million homes in parts of the Midlands and South of England. By doing so, it would play an important role in building a more secure and resilient future energy system, and decarbonising the UK.

We are pleased to share our early proposals for EGL 5 with you and seek your feedback throughout this stage 1 consultation, which runs from 12pm noon Tuesday 13 May to 11:59pm Monday 23 June. We encourage you to share your views on the proposed siting of new infrastructure and what you would like us to consider as we further develop our proposals. We will present our refined proposals and seek further feedback in the future.

All documents published as part of this consultation, including this stage 1 consultation document, can be found at **nationalgrid.com/egl5** and are available on request by contacting the project team at **contactegl5@nationalgrid.com** or **0800 358 4817**.

We encourage everyone to take time to review our proposals, get in touch with any questions, and respond by **23:59pm on Monday 23 June 2025**. More information on how to respond to our consultation can be found on page 10.

Stephen Mathers,
Project Director, Eastern Green Link 5

Our proposals for EGL 5 in England and English waters, include:

- **Underground and subsea cables**
- **One converter station**

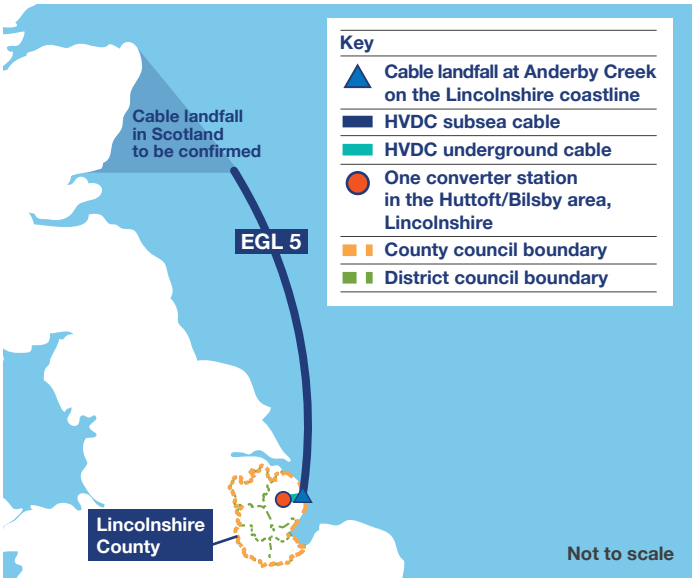


Figure 3 – Overview of EGL 5

Consulting on our proposals

Public consultation is an important part of the planning process. The EGL 5 project is in the early phases of development and feedback from consultation – alongside the outcomes of technical assessments and environmental surveys – will help shape our proposals. This is stage 1 of our public consultation on EGL 5.

We will run at least two stages of public consultation. The EGL 5 project is in its early stage of development, and we intend to seek consent for the English onshore elements via an application to the Planning Inspectorate for a Development Consent Order (DCO). We also intend to consent the marine elements of the project within English waters as part of the DCO. This will require a direction from the Secretary of State pursuant to s.35 of the Planning Act 2008. The project has requested this direction from the Secretary of State (SoS) for the Department of Energy Security and Net Zero (DESNZ). If approved, we will then submit an application to the Planning Inspectorate for a DCO to build and operate EGL 5.

Scan this QR code to view a short film about the development consent order process, or visit the Planning Inspectorate website – **infrastructure.planninginspectorate.gov.uk/application-process/the-process/**

Our approach to consulting with communities

All infrastructure projects have impacts and benefits locally and nationally. We will consult and work with local residents and their representatives through all stages of the planning and construction process. Our aim is to minimise the impacts and maximise the benefits for local communities.

EGL 5 is part of the The Great Grid Upgrade. We want The Great Grid Upgrade to deliver social and economic benefits as well as providing a vital contribution to decarbonising the electricity network.

Public consultation stages

Consultation on EGL 5 is planned to take place over two stages.

This stage 1 consultation – running from 12pm noon Tuesday 13 May to 11:59pm Monday 23 June 2025 – is designed to introduce our early proposals and gain your feedback. This stage is 'non-statutory' – an optional stage of consultation. Local knowledge plays an important part in the development of our proposals, and seeking feedback from local communities as soon as we have enough detail about the project allows people to have an opportunity to influence it. The deadline to provide feedback is 23:59pm on Monday 23 June 2025.

Statutory consultation is a required stage and takes place when the project proposals are more defined.

Before we move onto stage 2 consultation, we will work with all local authorities in the project area to develop and agree a Statement of Community Consultation (SoCC). The SoCC is a document which explains how we will consult the community, including information for members of the public on how to get involved and submit feedback.

At stage 2 consultation we will show how we have considered the feedback received at this stage, along with the outcome of technical assessments and environmental surveys. Stage 2 consultation will offer a further opportunity to share your views on our more developed proposals.

EGL 5 timeline

2025
Stage 1 (non-statutory) consultation
EGL 5 is at this stage

2026
Stage 2 (statutory) consultation

2027
DCO application submission

2030
Construction starts if approved

2035
Fully operational

During stage 1 consultation, we are seeking views on the proposed siting of new infrastructure and what you would like us to consider as we further develop our proposals.

The key onshore and offshore elements of our proposals for consultation include:

- offshore high voltage direct current (HVDC) cables. In English waters, EGL 5's cables would be approximately 415 km long (in English and Scottish waters the total cable length would be up to 555km)
- a transition joint bay (TJB) which will enable the connection of the offshore and onshore HVDC underground cables, located onshore and underground near to our proposed cable landfall at Anderby Creek on the Lincolnshire coastline
- underground HVDC cables running approximately 9 km from the proposed landfall at Anderby Creek on the Lincolnshire coast to a converter station in East Lindsey
- one converter station located either to the north-east of Bilsby or north-west of Huttoft
- underground high voltage alternating current (HVAC) cables running approximately 3 km to connect our proposed converter station to the proposed Lincolnshire Connection Substation-B (LCS-B) and onto the electricity transmission network (please note that LCS-B is being proposed as part of NGET's seperate Grimsby to Walpole project).

We are jointly developing EGL 5 with Scottish and Southern Electricity Networks Transmission (SSEN Transmission). SSEN Transmission is responsible for obtaining the relevant consents in Scotland and in Scottish waters.

See the 'Our proposals' chapter for more information on the above proposed infrastructure.

Grimsby to Walpole project's Lincolnshire Connection Substation-B

The Grimsby to Walpole project involves building a new high-voltage overhead electricity transmission line to carry more clean energy across Lincolnshire, Cambridgeshire, and Norfolk. Grimsby to Walpole is responsible for seeking consent for the proposed Lincolnshire Connection Substation-B (LCS-B), located near Bilsby, East Lindsey.

We are not proposing a substation as part of our project, however we are proposing that EGL 5's converter station connects to the proposed LCS-B substation.

By connecting into this substation, EGL 5 will facilitate the transmission of renewable energy (particularly from offshore wind) throughout the wider transmission network and onto homes and businesses.

Removal of Eastern Green Link 3 (EGL 3) and Eastern Green Link 4 (EGL 4)'s proposed converter station and direct current switching station near Bilsby

EGL 3 and EGL 4 are two new primarily offshore high voltage electricity links with associated onshore infrastructure between Scotland and England. EGL 3 and EGL 4 have now confirmed the removal of the three-ended link to the proposed Grimsby to Walpole project, which was shown during their initial stage 1 (non-statutory) consultation in Spring and Summer 2024.

The removal of this link means the removal of the associated converter station, direct current switching station and associated HVDC and HVAC underground cables from the Bilsby area. It also means that the number of converter stations originally proposed in the vicinity of the proposed LCS-B substation, in the Bilsby area, would not be increased with the introduction of the proposed EGL 5 project.

Our proposals are outlined in this stage 1 consultation document, along with information about where to find out more and how to get involved in the consultation.

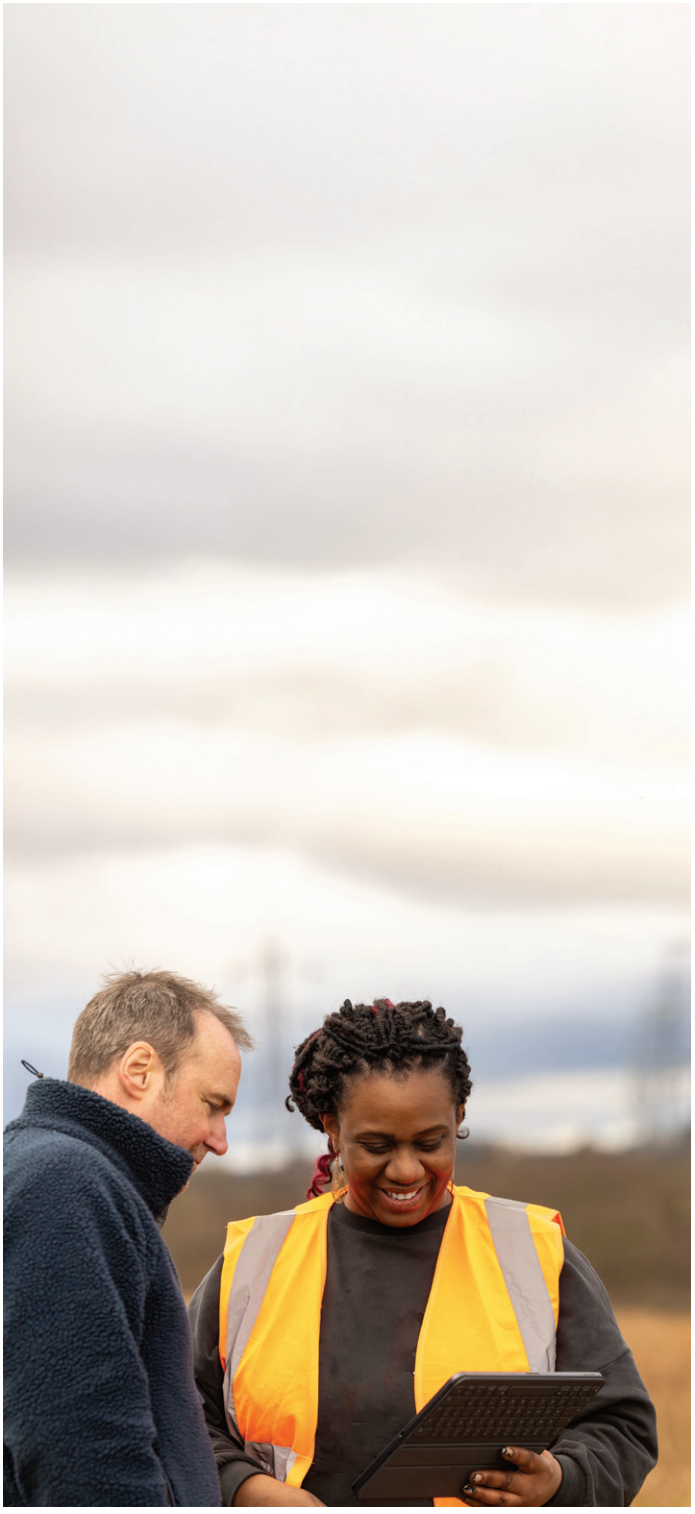
As part of this consultation, we have also published:

- **Feedback form:** to gather comments and feedback on our proposals
- **Community newsletter:** summarising details of the EGL 5 project and our public consultation
- **Strategic options report (SOR):** explaining the strategic options considered, and the strategic option proposed, to deliver the necessary network upgrade in England
- **Corridor preliminary routeing and siting study report (CPRSS):** providing detailed information on the components of EGL 5 including the need, the options considered, the routeing and siting options assessed, our proposed options and a summary
- **Overview and individual route section maps for onshore elements:** showing the proposed locations for EGL 5 in England
- **Overview maps for offshore elements:** showing the proposed locations for EGL 5 in English waters
- **English marine options appraisal report:** providing detailed information on EGL 5's offshore proposals and how the proposed cable route was developed
- **Non-technical summary of the English marine options appraisal report:** a simplified overview of EGL 5's offshore proposals.

All of these documents are available to download from our project website at **nationalgrid.com/egl5**. Please note that these documents address only the English elements of EGL 5.

Printed copies of our consultation documents can be made available free of charge on request, by emailing **contactegl5@nationalgrid.com** or by calling **0800 358 4817**. Some detailed technical documents may be subject to a printing charge.

Key consultation documents will be available to view at local information points and public information events (see page 11 for details).



How to find out more

All consultation information is available on our website: **nationalgrid.com/egl5**.

Printed copies of the Community newsletter, Feedback form and this Stage 1 consultation document are available free of charge on request or to collect at our public information events and at local information points. Reference only copies of the Corridor preliminary routeing and siting study (CPRSS), Strategic options report (SOR) and the English marine options appraisal report are also available to view at local information points.

Throughout the consultation we are holding two face-to-face public information events (**see Table 1**). At these events we will present information about our proposals and members of the project team will be available to answer your questions. You will also be able to view copies of our maps and technical documents. As our proposals are located close to NGET's proposed Eastern Green Link 3 (EGL 3) and Eastern Green Link 4 (EGL 4), we will be holding joint events, although they are separate projects.

We will also run online webinar sessions, where we will present our proposals and hold an open question and answer session. We will be holding two joint webinars with EGL 3 and EGL 4, focusing on our proposed onshore infrastructure in England and our proposed offshore infrastructure in English waters. For more information, **see Table 2**. Details on how to sign-up for a webinar are available on the project website, by contacting us on **0800 358 4817** or by emailing **contactegl5@nationalgrid.com**.

You can also book a 'team call-back' telephone appointment with the team by using the contact details above. These sessions will be available for the duration of the consultation period.

To learn about our proposals:

- read this Stage 1 consultation document
- visit our website at: **nationalgrid.com/egl5**
- come to a public information event (**see Table 1**)
- join an online webinar session (**see Table 2**)
- visit a local information point (**see Table 3**)
- book a 'team call-back' by visiting our website or calling or emailing us (see below)
- sign up to receive project update emails (visit our website)
- call us on freephone **0800 358 4817**. Lines are open Monday to Friday 9am–5pm, with an answerphone facility taking messages outside of these hours
- email us: **contactegl5@nationalgrid.com**

To respond to the EGL 5 consultation:

Complete the online Feedback form on our website

Email your comments to: **contactegl5@nationalgrid.com**

Post your written responses (no stamp required) to: **Freepost EGL 5**

Complete a printed Feedback form and return it using the freepost address

Your comments must be received by 11:59pm Monday 23 June 2025.

Table 1 Public information events

Location	Date	Time	Address
Huttoft*	Thursday 22 May 2025	2pm – 7pm	Huttoft Village Hall, Sutton Rd, Alford, LN13 9RG
Alford*	Saturday 31 May 2025	2pm – 7pm	Alford Corn Exchange, 9 Market Place, Alford, LN13 9EB

Table 2 Webinars

Name	Date	Time
Webinar 1: Offshore proposals*	Friday 23 May 2025	12pm – 1pm
Webinar 2: Onshore proposals*	Thursday 5 June 2025	7pm – 8pm

Table 3 Local information points

Alford Library and Focal Point*	6 South Market Place, Alford, LN13 9AF
Skegness Library*	23 Roman Bank, Skegness, PE25 2SA

* Joint public information events, webinars and local information points with Eastern Green Link 3 (EGL 3) and Eastern Green Link 4 (EGL 4). See **nationalgrid.com/egl3andegl4** for more information.

Local information point opening hours can be subject to change. **Please check with the relevant venue for the most up to date opening hours.**

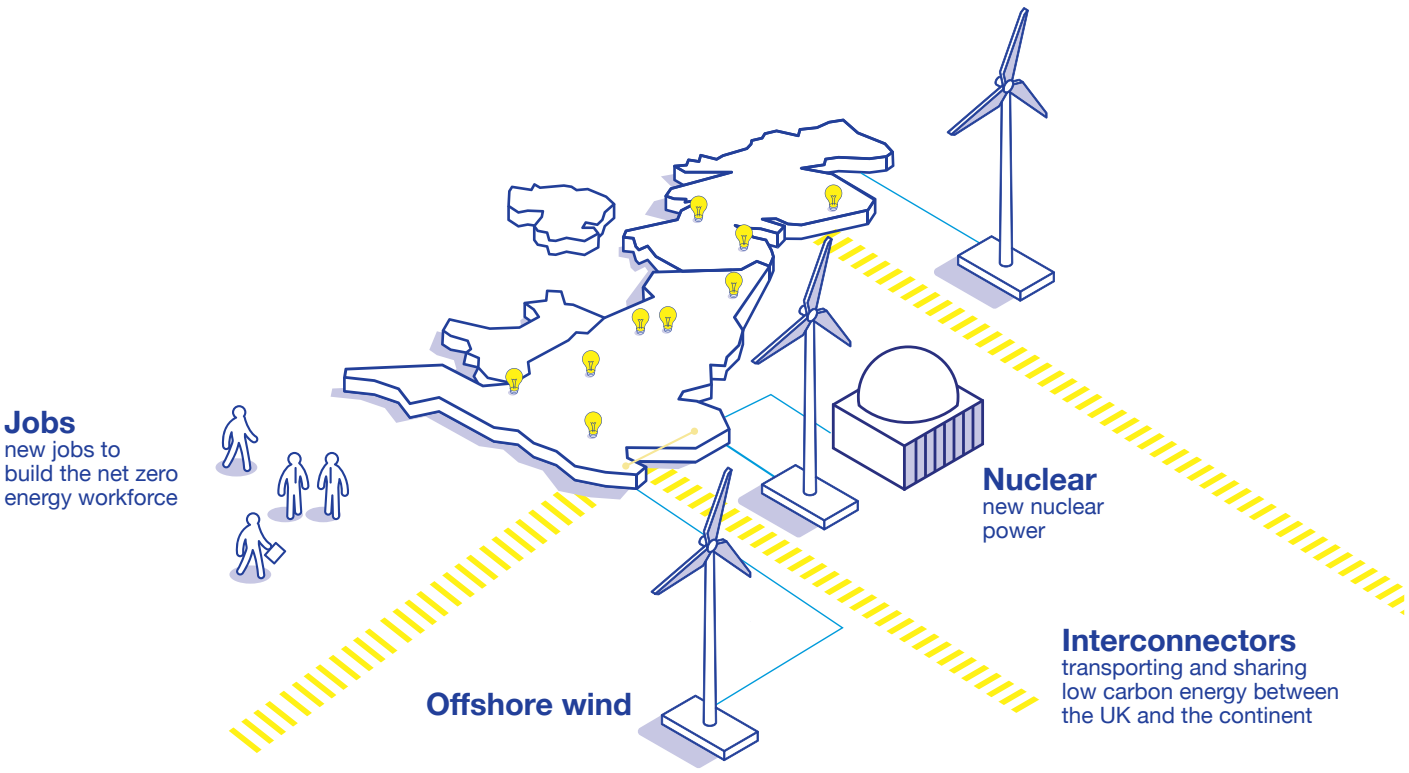
The need

EGL 5 would play an important role in building a more secure and resilient future energy system by reliably transporting electricity generated in Scotland, particularly from offshore wind, to the Midlands and South of England.

The way electricity is generated is changing, with more renewable energy being generated in Britain. Demand is also set to significantly increase as the way we power our homes, businesses, industry and transport changes. The fossil fuels that once powered our economy are being replaced with sources of low carbon electricity. Meeting Government targets will be a major step towards decarbonising our economy and providing homes and businesses with clean, secure, and affordable energy.

To deliver more home-grown clean power to where it is needed and increase our energy security, we must also upgrade the transmission system – 'the grid'.

Delivering the infrastructure needed to achieve this ambition will boost local economies, provide jobs and opportunities to learn new skills and bring vital investment right across the country.



Reinforcing the transmission network between Scotland and the Midlands and South of England

EGL 5 would form part of a major programme of reinforcement of the electricity transmission system to accommodate substantial and increasing power flows between Scotland and England. It is designed to transport low-carbon electricity, particularly from offshore wind, to where there is demand from consumers.

Following guidance from the National Energy System Operator (NESO), NGET identified that the existing transmission network between Scotland, and the Midlands and South of England does not currently have the capacity to reliably transport this increasing energy (see Chapter 4 of our Strategic options report for a detailed need case).

EGL 5 would help provide the increased capacity needed between Scotland, and the Midlands and South of England. It would carry up to 2 GW of electricity, enough for two million homes.

Increasing network boundary capability

The electricity network system in Britain is split into boundaries. Each boundary has a limit to the amount of electricity that can flow through it. As more electricity is being generated in Britain and demand is growing, we assess where the power flows between these boundaries will need to rise. The boundaries shown in figure 4 – through the north and the midlands – are where we need to increase the capacity of the grid for this increased amount of electricity. EGL 5 is one of the projects needed to help achieve this.

A watt is a measure of power and there are 1 billion watts in 1 GW. 1 GWh is the equivalent of powering one million UK homes for one hour.

See chapter 4 of our Strategic options report for detail on the project's need case.

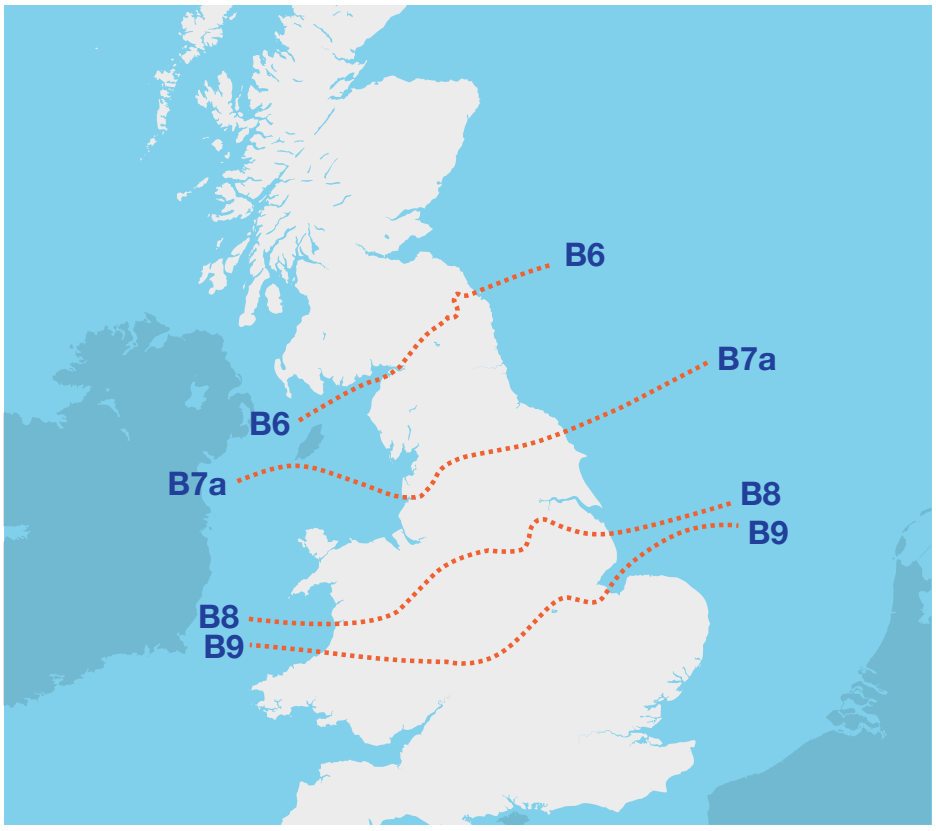


Figure 4 – Boundaries B6, B7a, B8 and B9 that EGL 5 is designed to transport electricity across from Scotland

Why is EGL 5 being located here?

When a need to upgrade the transmission system is established by the National Energy System Operator (NESO), which is the publicly owned organisation that operates both the electricity transmission and gas distribution systems in the UK, NGET studies and evaluates the potential options for addressing it. We are bound by Government policy, legislation, regulation and industry rules which inform the balance that needs to be struck between benefits and potential impacts when developing our proposals. Our projects will also be assessed by our regulator Ofgem, who will expect the proposals to be as cost-effective as possible for electricity bill payers.

Having identified the need to provide increased capacity across the transmission boundaries shown on page 13, we explored options for locating the recommended network upgrade on the East coast of England.

Key considerations for potential locations included whether existing (or planned) NGET substations could meet the need without additional upgrades, along with:

- technology options available and whether they could be delivered
- environmental and socio-economic constraints
- initial capital costs along with lifetime costs (calculated over a 40-year period)
- the potential system benefits of each option
- impacts to other infrastructure.

An initial appraisal identified six potential options. The appraisal established:

- overall English offshore and onshore route length (as a straight line rather than actual route length) ranged between 546km and 636km
- the lowest cost option for fully addressing the need.

The outcome of this appraisal concluded that connecting to the proposed new substation near Bilsby (proposed under the Grimsby to Walpole project) via the Lincolnshire coastline is the preferred option when considering socio-economic, environmental, cost and technical factors.

Do you want more detail?

You can learn more about how we identified the need and our appraisal process by looking at the following on our website, public information events and local information points:

- Strategic options report (SOR)
- Corridor and preliminary routeing and siting study (CPRSS)
- English marine options appraisal report.

Our proposals

The following pages explain our proposals for the EGL 5 project. We make reference to the type of infrastructure we would need to build. Please read the table below as it explains what each element of the project does.

Infrastructure explainer	
High voltage direct current (HVDC) cables	HVDC cables can be used to transport large amounts of power over long distances, onshore and offshore. When used onshore, these are installed underground. Offshore cables are installed under the seabed where possible.
High voltage alternating current (HVAC) cables	Power is normally generated, transmitted and distributed as alternating current (AC) through high voltage alternating current cables. AC is efficient for distributing energy into homes and businesses as its voltage can be easily changed to suit the need. These cables are installed underground.
Converter stations	Converter stations enable us to control the direction in which energy flows along high voltage direct current cables and contain specialist electrical equipment that converts electricity from direct current to alternating current or vice versa.
Transition joint bays	Transition joint bays connect offshore and onshore cables. These are located underground.
Cable joint bays	Cable joint bays are used to connect different sections of underground cables together along the onshore route. These can be located underground or above ground depending on the type of cable.
Marker posts	Marker posts are located above ground, to confirm the presence of a cable route, where it crosses roads, field margins or changes direction.

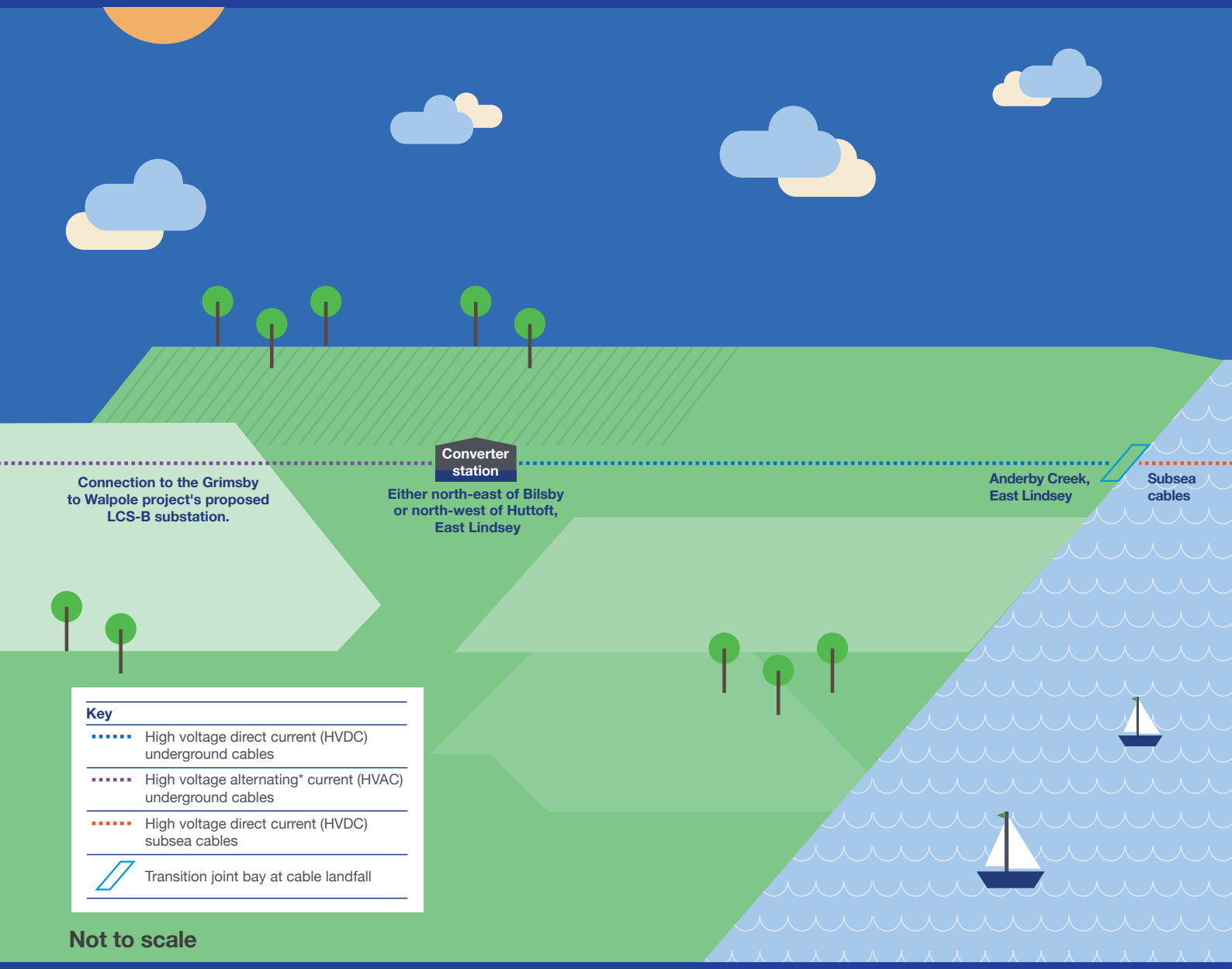


Figure 5 – EGL 5 onshore in England

*alternating. Please note that this was incorrectly stated as 'direct' in printed versions of this document.

EGL 5's subsea offshore cables would run from a location in Scotland (which is to be confirmed) via English waters and make landfall on the Lincolnshire coastline at Anderby Creek. The length of the offshore cables in English waters would be approximately 415 km. SSEN are responsible for receiving consent for the Scottish parts of the project.

Once onshore, the underground HVDC cables would run for approximately 9 km to a single proposed converter station located either to the north-east of Bilsby (called EGL 5 west converter station) or to the north-west of Huttoft (called EGL 5 east converter station).

From the converter station, the HVAC underground cables would run up to approximately 3 km to the proposed Lincolnshire Connection Substation-B (LCS-B) near Bilsby, East Lindsey that is being proposed as part of NGET's separate Grimsby to Walpole project (see **nationalgrid.com/g-w** for more information).

Connecting into this substation would allow renewable energy, particularly from offshore wind, to be transmitted through the wider network and on to homes and businesses. Sufficient land would be required to build EGL 5 and provide space for mitigation of impacts, which would include:

- temporary land for construction activities including working areas for construction equipment and machinery, site offices, welfare, storage, access and drainage; and
- land required for mitigation, compensation and enhancement of the environment as a result of the environmental assessment process, and for the purposes of delivering biodiversity net gain (an approach to development that leaves biodiversity in a better state than before), for example by landscaping and planting.

These proposals have been developed following initial engineering and environmental assessments for the cable routes and locations of supporting infrastructure (see our Corridor preliminary routeing and siting study (CPRSS) and Strategic options report (SOR) for more detail).

Our proposed onshore infrastructure

Converter station location options

We are in the early stages of designing our converter station. As part of this design process and for this stage of consultation, we are showing two potential siting zones. EGL 5 west converter station siting zone is located northeast of Bilsby and EGL 5 east converter station siting zone is located north-west of Huttoft.

See pages 34 and 35 for more information on our proposed converter station siting zones.

We will consider feedback from this consultation to help us select a final preferred site.

In the CPRSS, the EGL 5 west converter station siting zone is called CS05 and the EGL 5 east converter station siting zone is called CS06.

See the CPRSS for further detail on the location options for our proposed converter station.

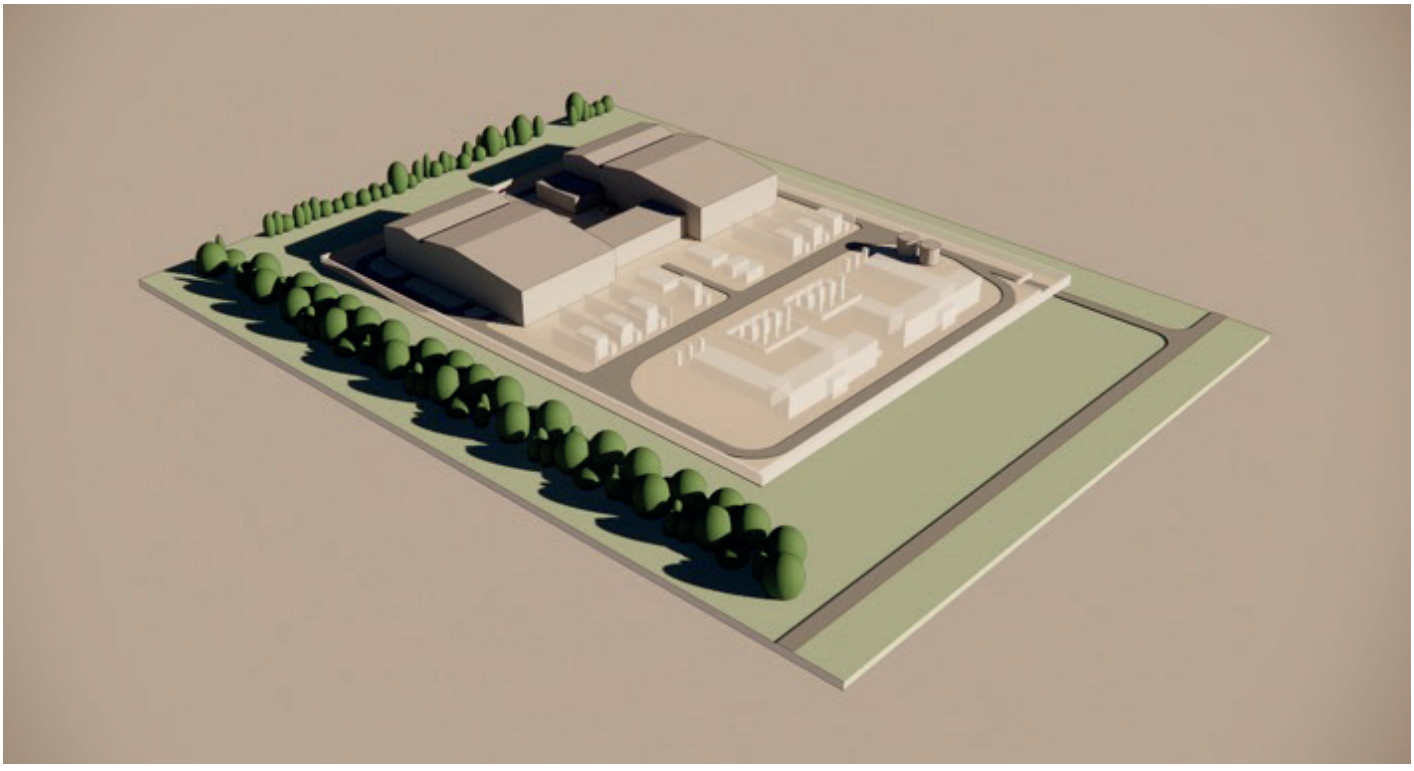


Figure 6 – An example image of a converter station

Converter station building design approaches

We will be exploring potential design approaches for our converter station at a later stage of the design process. Possible approaches are outlined below in figure 7.

Design and dimensions of converter station

We expect that the converter station would have a footprint of approximately 350 m by 250 m (approximately 9 ha), with a construction compound of approximately 200 m by 200 m (approximately 4 ha). Some of the converter station's specialist electrical equipment must be located indoors in buildings potentially up to 30 m tall, excluding aerials, lightning protection, earthworks and platform raising that may be required.

Permanent access would be needed to the new converter station, together with peripheral landscaping, drainage, and other related works.

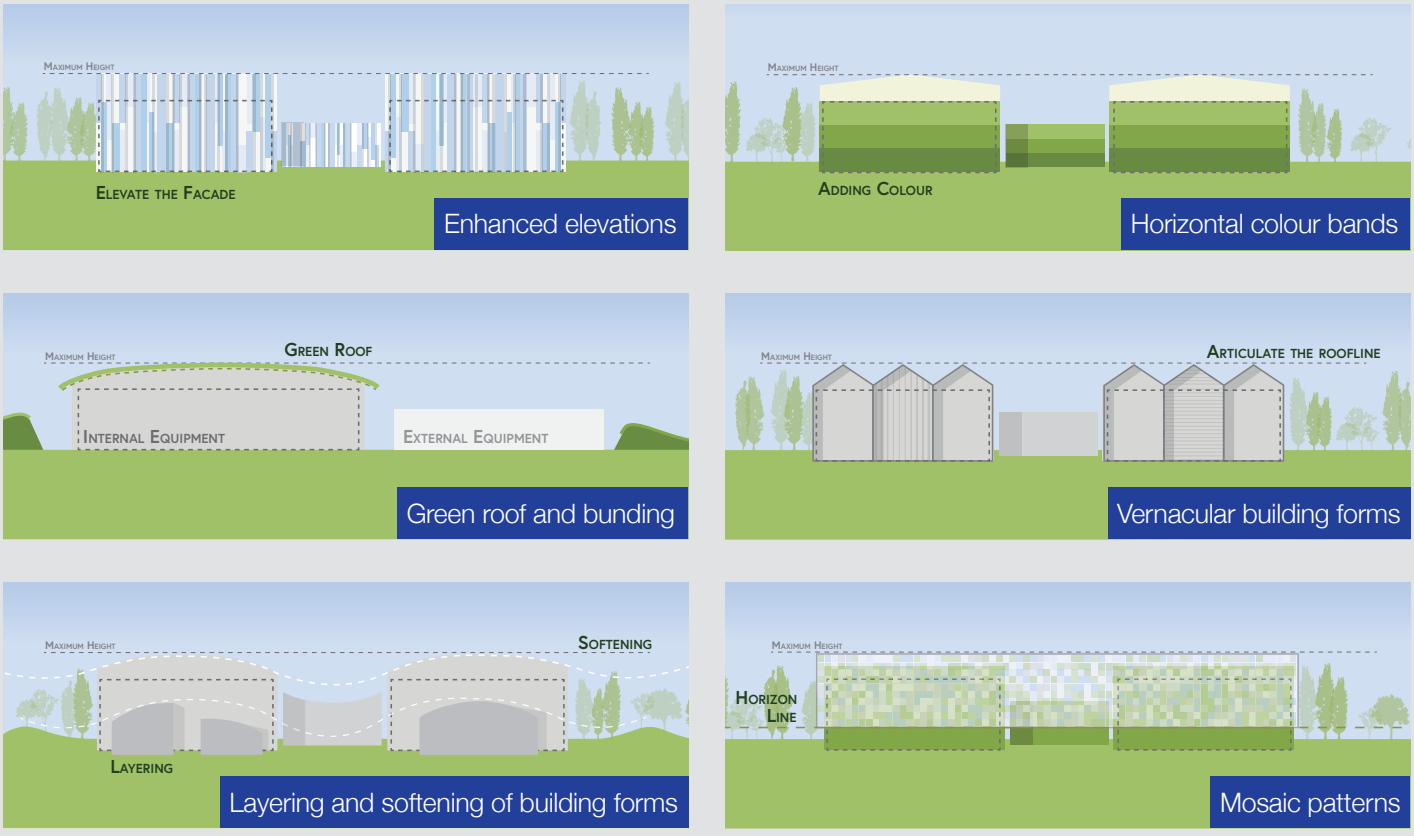


Figure 7 – Showing possible converter station designs.

Underground cables

Our onshore cables, both HVDC and HVAC, will be buried underground. The only above ground infrastructure required along the cable routes would be 1 m high marker posts for the HVDC cables, and 1 m high marker posts and small link pillars (boxes that connect or switch underground cables) for the HVAC cables.

EGL 5 would have a set of two HVDC cables (see figure 8), which will both run together from the landfall at Anderby Creek to the converter station.

A set of three HVAC cables, would then run from the converter station to LCS-B, proposed as part of the Grimsby to Walpole project.

A fibre optic cable would also be added to the HVDC and HVAC cable bundle for monitoring purposes.

You can learn more about the installation of the cables on pages 40 – 41 and their proposed locations on pages 32 – 33.

Transition joint bay

A transition joint bay is a permanent underground chamber constructed of reinforced concrete that houses the cable joints and a fibre chamber/link pit. A single transition joint bay typically comprises an area of 60 sq. m. A larger area will be required temporarily during construction and installation of the transition joint bay to accommodate temporary construction equipment and storage areas.

Figure 8 – a cross section of HVDC cable

Figure 9 – National Grid Venture's Viking Link converter station which illustrates what EGL 5's converter station could look like

Developing our onshore proposals

For all the elements of our onshore proposals, we have sought to minimise potential impacts on residential properties, landowners, the environment and communities.

Following identification of the Lincolnshire coastline as the connection location, we considered the potential route of the cables as well as the siting of the landfall and converter station.

To do this, we defined a study area – informed by the locations of built-up areas, natural features, protected sites, offshore activities and existing transmission corridors – and mapped key environmental features within it. We used computer modelling to devise potential routes (for example on one side of a town or the other), and zones for the location of other onshore elements.

Further studies of potential environmental and socio-economic effects, technical complexity, cost and programme help to identify emerging preferred corridors for the cable route. Siting zones are identified with further consideration of proximity to communities, locations of public rights of way and cycle routes, environmental effects, the potential for screening the proposals behind existing woodland and the nature of roads of access.

Graduated swathe

Following the selection of the emerging preferred corridors for underground cables and siting zones for the converter stations, we produced a graduated swathe, which is informed by technical assessments.

The darker shading in the graduated swathe indicates the areas that are likely to be more suitable for new infrastructure, while lighter shading indicates areas we believe are less appropriate. It is important to note that the graduated swathe is both initial and indicative and will be reviewed and refined following further detailed assessment work and stakeholder and community feedback.

We will not need all the area shaded for EGL 5.

See pages 29 – 35 for our maps showing the graduated swathe.

What is an emerging preferred corridor?

An emerging preferred corridor is the area we have identified further to initial technical and environmental assessments where new infrastructure, such as our underground cables and converter station, could be located.

What is a siting zone?

Siting zones are areas within the emerging preferred corridor where above ground infrastructure such as our converter stations, could be located.

See chapter 4 of the CPRSS for more detail on this process.

Our onshore emerging preferred corridors and siting zones

We evaluated several options for the routing of the onshore underground cables. We have identified two emerging preferred corridor options (Corridor 5, to the north of Huttoft and Corridor 6, to the south of Huttoft), which would:

- make landfall at Anderby Creek
- connect from Anderby Creek to the proposed LCS-B through a new converter station.

Both of these corridors (see figure 13) would minimise environmental, and socio-economic impacts while also being the most direct and cost effective. Only one of these corridors is needed for EGL 5.

Feedback from this consultation along with the outputs from surveys, environmental assessments and wider stakeholder engagement will help us develop our proposals, which will form part of our next stage of consultation.

Two siting zones have been identified within the corridors for our proposed converter stations (see figure 14).

The two zones – EGL 5 west converter station siting zone and EGL 5 east converter station siting zone – were chosen because:

- potential environmental and socio-economic effects are reduced due to the shorter length of underground cables needed from Anderby Creek, which results in less construction complexity
- landscape and visual effects would be minimised because the zones are near to the LCS-B (part of the Grimsby to Walpole project), meaning infrastructure would be grouped together.

If you have specific feedback on potential routes, please share it in the relevant section in the Feedback form.

Offshore proposals

You can read about our offshore proposals on page 36.

Other NGET projects in the region

Our demand for electricity is rising and the way we generate electricity is increasingly coming from more home-grown renewable sources, like offshore wind. We need to upgrade the grid in order to connect the electricity from where it is being generated to where it is needed.

The grid is a national network and we have to plan its reinforcement as a whole, so the EGL 5 project is connected to other proposed new grid developments which are also being consulted on over the course Spring – Summer 2025. Alongside this stage 1 consultation for EGL 5, we are also consulting on Eastern Green Link 3 (EGL 3) and Eastern Green Link 4 (EGL 4). Like EGL 5, they are both primarily **offshore** projects and the onshore cables are **underground**.

Project	Connection to EGL 5	Consultation timelines
Eastern Green Link 3 (EGL 3) and Eastern Green Link 4 (EGL 4). EGL 3 and EGL 4 are primarily offshore electricity super highways needed to move clean wind energy generated offshore in Scottish waters through offshore subsea cables to the Midlands and South of England. The two projects will each power up to two million homes with clean, renewable energy.	The EGL 3 and EGL 4 projects are consulting alongside this EGL 5 consultation. They are all separate projects. The EGL 3 and EGL 4 proposals have evolved and the three-ended link to the proposed Grimsby to Walpole project, which was shown during the initial stage 1 (non-statutory) consultation in Spring 2024, has been removed. The removal of this link means the removal of the associated converter station, direct current switching station and associated HVDC and HVAC underground cables from the Bilsby area. It means that the number of converter stations originally proposed in the vicinity of the proposed substation, in the Bilsby area, will not be increased with the introduction of the proposed EGL 5 project.	**Stage 2 Consultation** Tuesday 13 May – Monday 23 June 2025
Grimsby to Walpole We are proposing to build a new high-voltage electricity transmission line and associated works between a new substation in North East Lincolnshire and a new substation in the Walpole area, in Norfolk. We consulted the public on the initial proposals at our first stage of consultation last year.	The proposed new Lincolnshire substation is located near Bilsby, East Lindsey, under this project. We are proposing that the EGL 5 converterstation connects to this substation.	**Stage 2 Consultation** June – August 2025
Weston Marsh to East Leicestershire Weston Marsh to East Leicestershire is a proposed network reinforcement, carrying enough electricity into the Midlands to power up to 6 million homes.	Weston Marsh to East Leicestershire will not overlap with EGL 5.	**Stage 1 Consultation** June – August 2025

Supporting local communities in the region

National Grid firmly believes that communities should be compensated for hosting new electricity transmission infrastructure, which is essential to delivering homegrown, cleaner, and more affordable power. The Government has introduced recent guidance which sets a clear framework for working in partnership with communities and their representatives to deliver meaningful, legacy benefits.

More details can be found at **https://www.gov.uk/government/publications/electricity-transmission-network-infrastructure-community-funds**.

The Government has also announced – and is developing – plans to introduce a bill discount scheme for households in close proximity to new transmission infrastructure. Further details on this scheme are being developed by the Government.

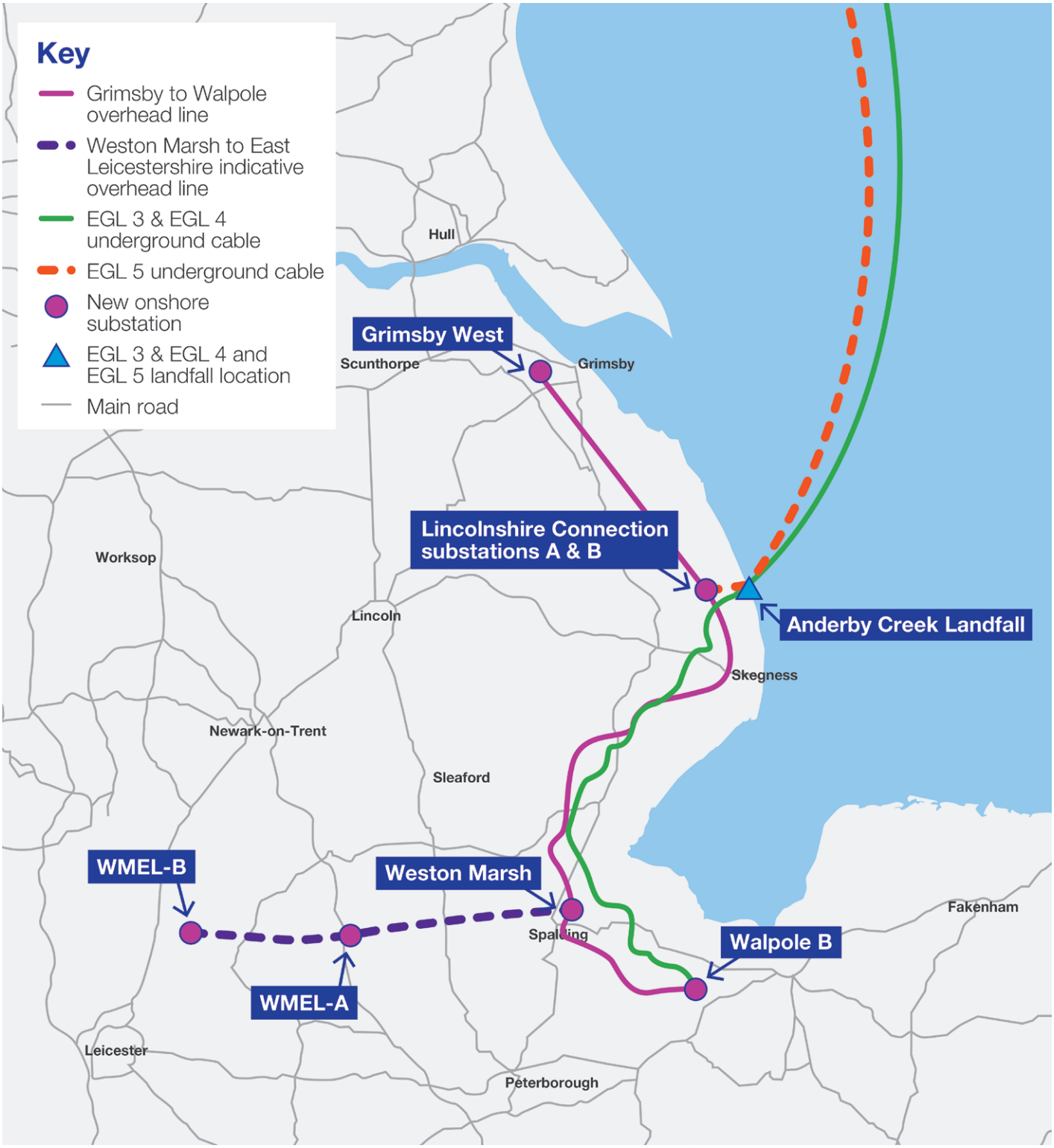


Figure 10 – NGET's projects in the region

Co-ordinating The Great Grid Upgrade locally

Many organisations work together to make sure we can all use the electricity we need, both today, and in the future. The National Energy System Operator (NESO) starts this process by considering future demand and identifying what upgrades to the grid are required.

In developing The Great Grid Upgrade, we have considered how these upgrades can be delivered cohesively, while ensuring maximum benefit for consumers, local communities and the environment. In the region, this has included:

- **Sharing landfall locations:** co-locating the onshore landfall of EGL 3, EGL 4 and EGL 5 all at Anderby Creek
- **Sharing cable corridor routes:** co-locating the EGL 3 and EGL 4 onshore cable routes, reducing potential community and environmental impacts
- **Managing construction impacts:** co-ordinating construction machinery and staff to minimise cumulative impacts of construction
- **Minimising what we build:** connecting EGL 3 and EGL 4 to the existing network near Walpole, removing the need for around 90 km of additional overhead line.

As we progress our proposals for reinforcements in the region, we will continue to consider how we can coordinate all projects in more detail where appropriate, for example in our approach to surveys, stakeholder engagement and in our environmental and construction management plans.

Onshore proposals by location

We have divided our onshore proposals into the following components to make it easier to review and provide feedback:

- Anderby Creek cable landfall
- underground cables emerging preferred corridors
- converter station siting zones.

Figure 11 shows all the onshore components of EGL 5 together.

Summaries of the proposals for the components, including maps, key issues and constraints, are included on the following pages.

An interactive map is also available on our website at **nationalgrid.com/egl5** and at our public information events.

Your feedback will be carefully considered as we refine our proposals. We welcome comments on all aspects of our proposals, particularly the areas that are most important and relevant to you.

Offshore proposals

You can read about our offshore proposals by looking at page 36 and our English marine options appraisal report on our website.

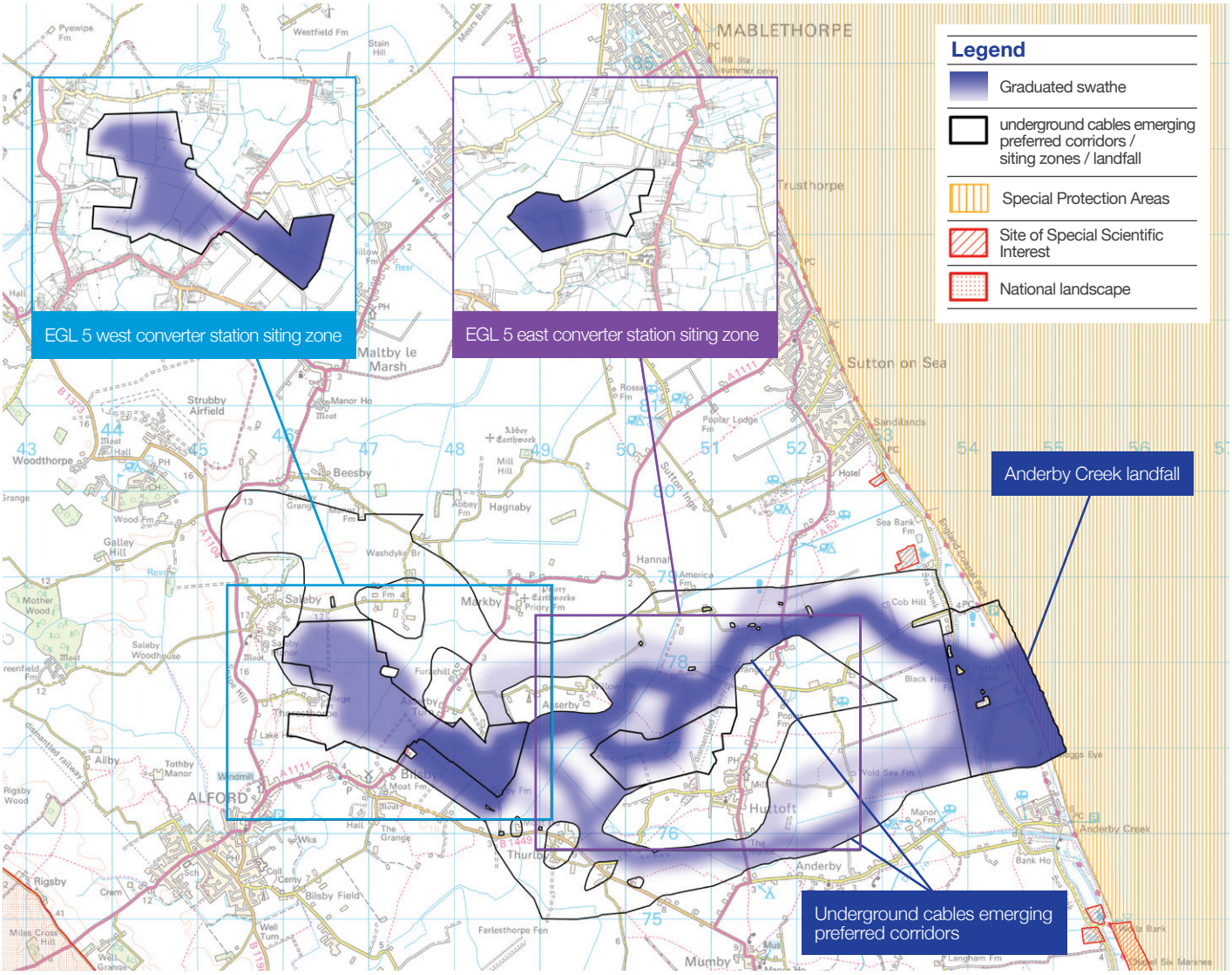


Figure 11 – Map showing overview of our emerging preferred corridors, landfall, siting zones and graduated swathe

Anderby Creek landfall

Proposed infrastructure includes:

- subsea and underground cables: HVDC
- transition joint bay.

Our proposed cable landfall is where the offshore and onshore elements of the project would meet. The landfall site extends from mean low water spring (the average height of the low water levels during spring tides), before terminating at a transition joint bay, where the offshore and onshore cables would be connected (figure 12). The transition joint bay is proposed to be located approximately 1 km inshore from the mean low water spring.

We have identified the area situated north of Anderby Creek and south of the National Trust Sandilands Nature Reserve (formerly the Sandilands Golf Course) as the most suitable location for the landfall of the EGL 5 cables. This area is considered most suitable due to its mainly rural setting, few statutory designated sites and narrower beach and dunes.

The areas further north and south of the area identified are comparatively more constrained by the National Trust Sandilands Nature Reserve, residential properties, EGL 3 and EGL 4 Projects making Landfall and the Outer Dowsing OWF.

To provide feedback on the Anderby Creek landfall, please see question 1 on our Feedback form.

Scan this QR code to visit our project website, where you will be able to view more detailed section maps and an interactive map.

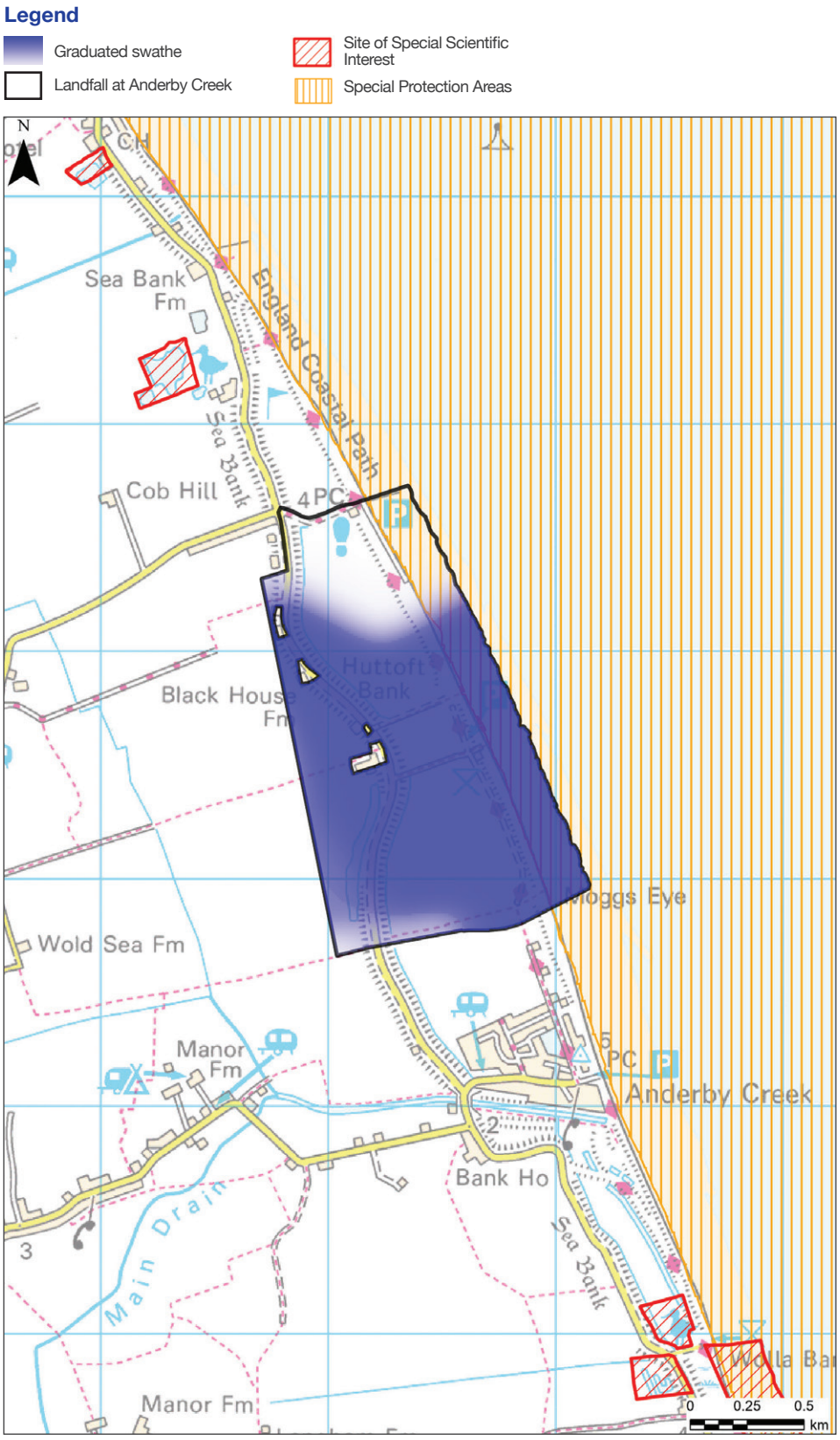


Figure 12 – Map showing Anderby Creek landfall

Underground cables emerging preferred corridors

Proposed infrastructure includes:

- underground cables: both HVDC and HVAC.

We identified two potential routes for the underground cables from Anderby Creek to the proposed LCS-B substation (see figure 13). The EGL 5 cables would only follow one corridor.

More detail about how we selected these potential corridors is available in the CPRSS.

Corridor 5 – north of Huttoft

This emerging preferred corridor broadly runs north of Huttoft. It would run from the Anderby Creek landfall to the proposed LCS-B substation, via either of the two converter station siting zones (see figure 14).

From the Anderby Creek landfall, the underground cables would route west, crossing Roman Bank and Sea Lane, and then the A52 (Sutton Road) north of Huttoft. The route would then continue south-west past Asserby (towards the locations of both siting zones) and finishes at the A1111 (Sutton Road), north-west of Thurlby. This route is shown as darkest blue on the graduated swathe, marginally preferred from an engineering perspective with regard to route length and crossing and spatial constraints.

Corridor 6 – south of Huttoft

This emerging preferred corridor broadly runs south of Huttoft. It would run from the Anderby Creek landfall to the proposed LCS-B substation, via either of the two converter station siting zones (see figure 14).

From the Anderby Creek landfall, the underground cables would route south-west, crossing Roman Bank before routeing north of Anderby and south of Huttoft, crossing Mumby Road between the two. It would then cross Huttoft Road, before routing north on the eastern side of Thurlby to connect with either converter station siting zone and terminate at the A1111 (Sutton Road). This route is shown as a lighter blue on the graduated swathe when compared to Corridor 5, north of Huttoft, however is also retained as an emerging preference for the underground cables for routeing flexibility.

To provide feedback on our emerging preferred corridors, please see question 2 on our Feedback form.

Scan this QR code to visit our project website, where you will be able to view more detailed section maps and an interactive map.

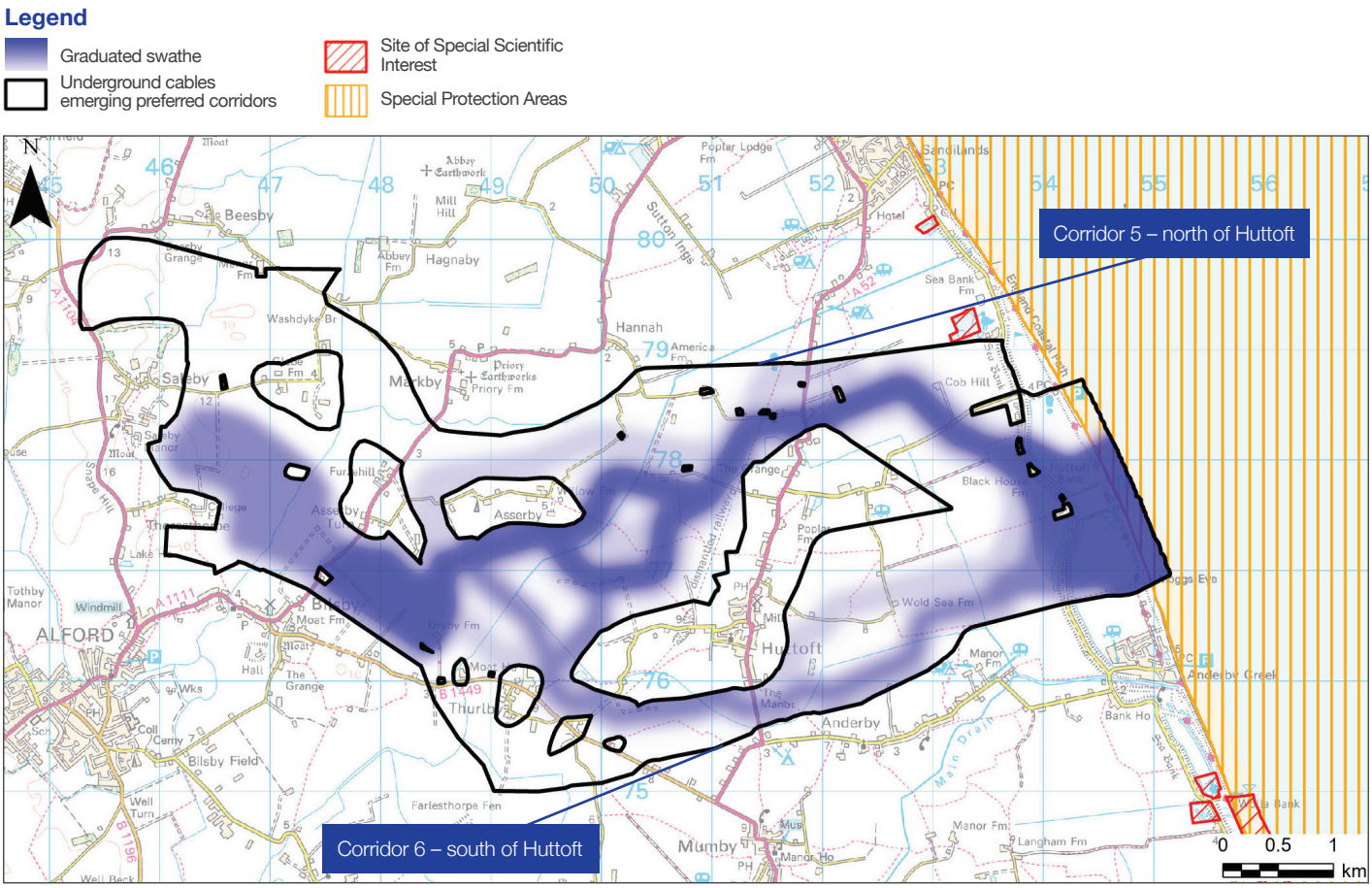


Figure 13 – Map showing underground cables emerging preferred corridors: from landfall to converter stations to LCS-B substation

Converter station siting zones

Proposed infrastructure includes:

- one converter station.

We are only proposing one converter station as part of EGL 5, which is proposed to be located at either north-east of Bilsby (EGL 5 west converter station) or north-west of Huttoft (EGL 5 east converter station).

EGL 5 west converter station siting zone

This siting zone would allow infrastructure to be located adjacent (where practical) to the area that has been proposed for the new LCS-B substation (proposed by the Grimsby to Walpole project) to reduce cumulative impacts upon the surrounding environment, particularly cumulative visual impacts upon nearby sensitive visual receptors.

This siting zone was also identified as it allows for converter station siting outside of Flood Zones 2 and 3, away from designated heritage assets and in an undulating landscape with existing visual screening features. As such, the graduated swathe identified within its siting zone is darkest at its eastern end but retains siting flexibility over the entirety until design details for the proposed LCS-B substation are further developed following our stage 1 consultation.

EGL 5 east converter station siting zone

This siting zone has the benefit of being located further from the Lincolnshire Wolds National Landscape, and although other constraints are present, the size of the siting zone is such that micrositing would allow for avoidance. The graduated swathe identified within siting zone is darkest at its west, furthest from residences in the village of Huttoft and the public right of ways that cross the siting zone.

In the CPRSS, the EGL 5 west converter station is called CS05 and the EGL 5 east converter station is called CS06.

To provide feedback on our siting zones, please see questions 3 and 4 on our Feedback form.

Scan this QR code to visit our project website, where you will be able to view more detailed section maps and an interactive map.

Legend

Graduated swathe Siting zones

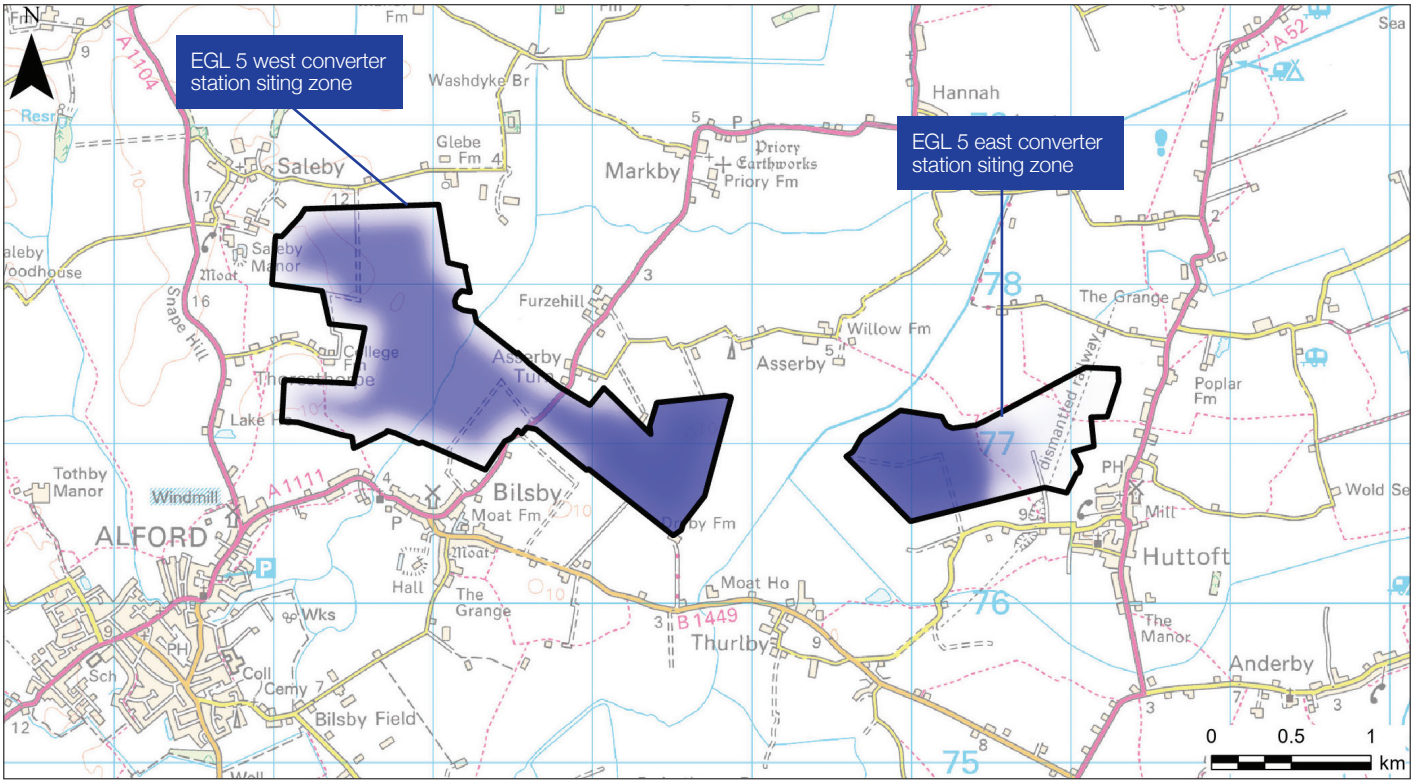


Figure 14 – Map showing proposed converter station siting zones

Offshore proposals

Infrastructure within our offshore proposals includes:

- subsea cables: HVDC.

Should the Secretary of State for the Department of Energy Security and Net Zero accept our s.35 direction application, we will be seeking a deemed marine licence (DML) for EGL 5's offshore proposals in English waters as part of the development consent order (DCO) process, together with the onshore elements of EGL 5 in England. An environmental assessment will be undertaken and a marine environmental appraisal (MEA) will be produced to support applications for the DCO and deemed offshore licence.

Scottish and Southern Electricity Networks Transmission (SSEN Transmission) is responsible for obtaining the relevant consent for its section of EGL 5's proposal in Scottish waters.

We have considered and assessed a number of options for the offshore route corridor. These options have been narrowed down to the route shown in figure 16. The EGL 5 cables would be approximately 555 km in length and extend from landfall in Scotland, to landfall at Anderby Creek on the Lincolnshire coastline in England. Approximately 415 km of the cables would be in English waters.

Offshore cables

Our offshore HVDC cables would be buried along the length of the route with the exception of infrastructure crossing points and areas where sufficient depth of burial cannot be achieved.

EGL 5 would have a set of two HVDC cables. The cables would be installed for the project as a single bundle of two HVDC cables laid in a single trench (see figure 15). As with onshore cables, a fibre optic cable would also be used for monitoring purposes.

The cables would be protected by heavy steel wire to protect them from external damage during construction and operation.

You can learn more about the installation of the cables by seeing page 42, and their proposed locations on page 39.

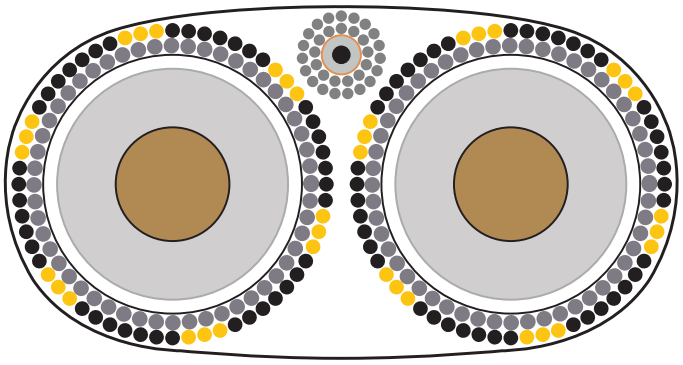


Figure 15 – Example illustration of bundled offshore HVDC cable with fibre optic cable (illustration shows double wire armoured sheathing and is indicative only)

Scan this QR code to visit our project website, where you will be able to view more detailed section maps and an interactive map.

How we chose our proposed route

The proposed offshore route for EGL 5 has been carefully routed to avoid ecologically important areas and minimise interactions with designated sites as much as possible. This has been balanced with finding routes that are technically feasible, as well as considering infrastructure and activities for other industries and sectors.

The subsea cables and associated infrastructure would be installed along our proposed offshore corridor, with the exact alignment of the cables informed by further offshore surveys and consultation feedback. Our routes have been developed through consultation with offshore stakeholders and technical and ecological surveys.

An environmental assessment will be produced to support the application for a development consent order, which will include the offshore elements of the project.

For more information on how we selected our preferred offshore route, please see our English marine options appraisal report on our website.

You can learn more about the installation of offshore cables by looking at page 42.

To provide feedback on our offshore proposals, please see question 5 on our Feedback form.

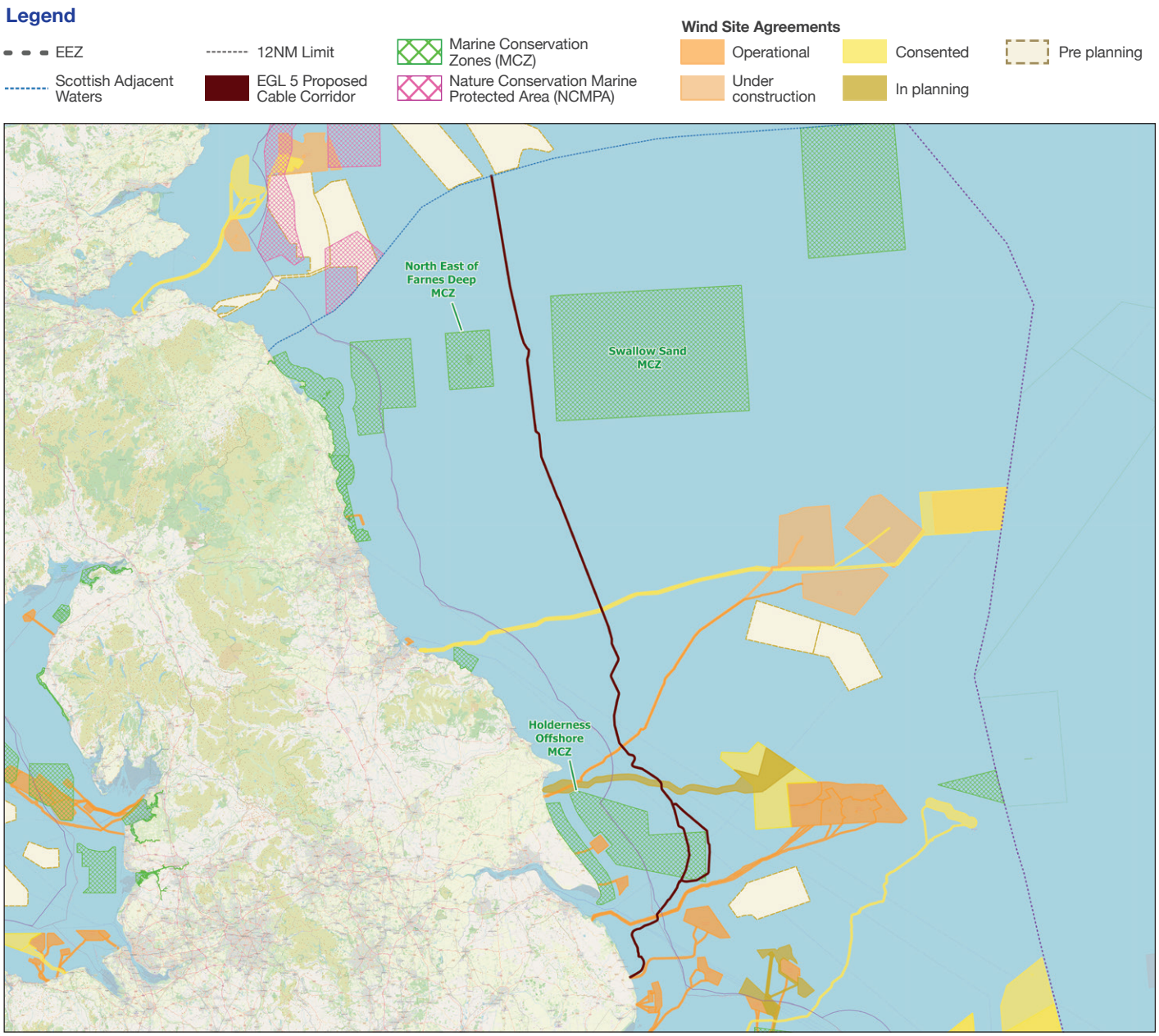


Figure 16 – Overview of our offshore proposals

Construction

Should consent be granted for EGL 5, we would expect construction to start in 2030 and take approximately five years.

As we are at an early stage in the development of proposals of the EGL 5, this section outlines our typical, and relevant, construction methods for projects of this type and scale.

We will be able to share more detail on our proposed construction methods, their likely temporary and permanent impacts, and measures we would put in place to reduce these at our next stage of consultation.

Onshore construction

How we install onshore underground cables

Before we install electricity cables on land, we undertake extensive technical studies and surveys and work with landowners and occupiers to carefully plan the most appropriate route, ensuring that the cables can be installed safely and with minimum disruption.

A variety of methods can be used to lay the high voltage direct current (HVDC) and high voltage alternating current (HVAC) underground cables, including ducted and trenchless methods.

Our cables would be installed in trenches, alongside a temporary road built for construction called a haul road. First, we remove the topsoil and store it alongside the trenches so we can replace it after the work is finished. Then we dig the number of trenches which are required (with the subsoil stored separately to that of the topsoil) on both sides of the access road. Cables are normally buried with 0.9m of material cover above their protective tiles but could be buried deeper depending on the outcome of soil agricultural land classification (ALC), drainage, and ground investigation surveys. The trenches are dug in lengths of up to 1500m. We then lay a bed of cement bound sand along the length of each trench. This helps manage any heat created by the electricity cables. Next, we either lay the cables on the cement, or install ducts (see figure 17) that run the length of each trench. Ducts are tubes that house the cables, and each cable must have its own duct.
At the end of each trench, we dig a wider area that we call the joint bay. A joint bay is where two lengths of cable are joined together. If we are using ducts the cables are then pulled through from one joint bay to the other, using a wire attached to the end of the cable which unspools from a large cable drum.

Depending on the technical details of the project, we may just lay the cables directly onto the cement bound sand. We may put back the subsoil when the ducts have been installed, or when the cables have been laid in their individual trenches, making sure we put the topsoil back where we found it.

Construction videos
You can also see animations of how we install underground cables and construction converter stations on our website.

Figure 17 – The ducted method of cable laying

Onshore cable installation – trenchless

Trenchless methods, such as horizontal directional drilling (HDD) (see figure 18), micro-tunnel and auger bore, allow us to install cables while minimising interaction with the land surface, which reduces the impact on wildlife, traffic, and local communities.

Use of HDD or other trenchless methods depends on local conditions and any obstacles we need to overcome.

Figure 18 is indicative of one potential method of trenchless crossing (HDD) and there may be different methods for different trenchless crossings.

Converter station construction

First, we clear and level the area, then we excavate the earth to make way for the foundations – sometimes this earth is used to relandscape the surrounding terrain. All building structures are built with steel beams. We finish the construction by cladding the buildings in accordance with agreements made during the planning process, and this depends on characteristics of the surrounding area.

Trees, hedges, and shrubs may be planted on the relandscaped area surrounding the site to help screen the converter station from view. An electrical connection is installed between the converter station and the National Grid network – we are proposing HVAC cables to make this connection.

Haul road construction

A temporary haul road is a type of road constructed specifically for use during construction to facilitate the movement of materials, machinery, and people within the site. These roads are designed to handle heavy construction traffic and are typically removed after we've finished the work.

The first stage of haul road construction is to carefully remove the topsoil and store it in line with a bespoke soil management plan. We undertake tests to determine ground conditions before installing drainage. We then lay a membrane on the ground, before installing stone to the required depth. The stone is then rolled and compacted. Finally, a hardwearing and weather resistant top layer is applied and compacted to a smooth layer.

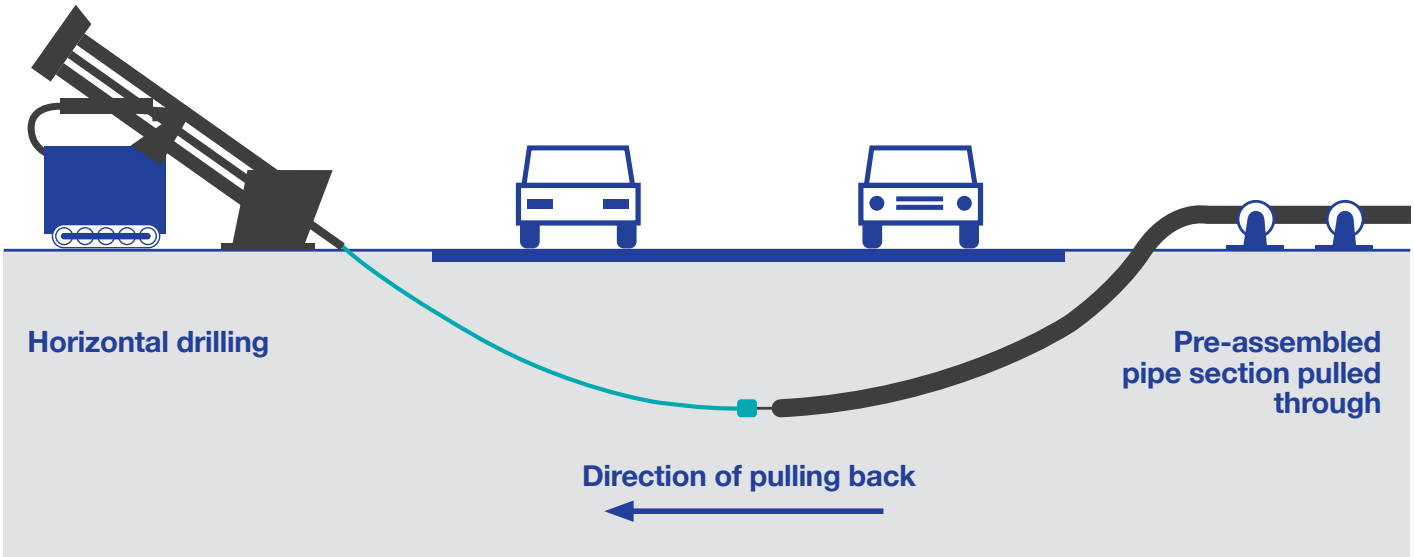


Figure 18 – Diagram showing typical HDD method

Offshore construction

How we lay new subsea cables out at sea

The subsea cables themselves are made from reinforced material and are, for the most part, buried to be further protected from shifting seabed sediments, tidal movements and ship anchors. The cables are loaded onto a large reels on a specialist cable laying vessel. As the vessel advances along the route the cable is lowered onto the seabed and is buried. If our offshore cables cross existing cables or pipelines, then a concrete mattress can be laid on top of the existing cable before a new cable is laid on top. Rock protection can then be used in discrete locations to cover it for protection. Rock can also be used to protect the cables if we have been unable to bury it to an optimal depth due to local ground conditions.

How we make cable landfall

When cables come ashore, our preference is to use a trenchless construction method (figure 19), such as horizontal directional drilling (HDD) to reduce disruption and potential environmental impacts. Consultation with key stakeholders, and ground investigation works are required to confirm whether this is possible.

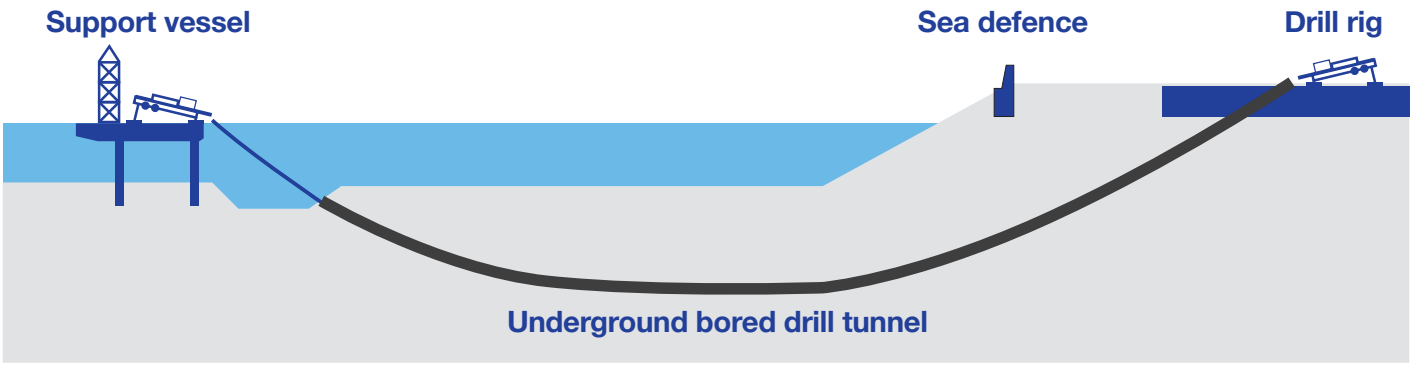


Figure 19 – Showing how we make landfall via HDD

Managing and mitigating effects

Feedback from consultation, along with outputs from our ongoing environmental assessments, will help shape the proposals for EGL 5. We use best practice environmental impact assessment techniques to assess possible effects of our works and identify opportunities for mitigation measures and for delivering biodiversity net gain.

Protecting the environment during construction

Our detailed environmental surveys and assessments will help us understand potential effects and how they can be avoided, reduced or mitigated during construction and operation. Where avoidance and mitigation is not possible, we would consider opportunities to offset – or compensate for – effects by planting or enhancing the environment near to the area of works.

Environmental impact

We are required to follow a set procedure for all nationally significant infrastructure projects to assess the likely significant environmental effects of our proposals. We will carry out an environmental impact assessment and submit a full environmental statement (ES) and non-technical summary as part of our application for development consent.

Our statutory consultation, planned for 2026, will include early design detail and the preliminary environmental information that has been collected and assessed by the date of that consultation, along with the measures that may need to be put in place to avoid, prevent, reduce and mitigate any significant environmental effects.

Biodiversity net gain (BNG)

BNG is a way to ensure that the environment is left in a better state after construction than it was before the work started.

The decline of biodiversity in the UK is well documented and we are conscious that our activities can impact habitats and therefore species' ability to thrive.

BNG is to become mandatory from late November 2025 for Nationally Significant Infrastructure Projects to achieve 10% net gain. BNG can be achieved through habitat creation and/or enhancement and may be delivered on site or off site.

Protecting soil and agricultural land

We understand the national significance of the agricultural land affected by our proposals, and would put measures in place to reduce our impact, including:

- the careful removal of soil to be stored adjacent to the working area, meaning soil of the same texture, organic matter content and nutrient status can be reinstated in the same area it was removed from and to match the existing soil profile as far as it is possible;
- implementing a soil management plan to ensure there is no drop in soil quality as a result of construction works. As part of the plan, soil will be tested before and after construction;
- protection of livestock by erecting suitable fencing; and
- soil handling works will be supervised by appropriately qualified and experienced individuals, and an appropriate aftercare period and plan will be set out.

Our aim is to reinstate land to its original condition and land grade by implementing these mitigation measures.

Drainage

We also recognise the importance of effective drainage for local farmers and propose the following measures for land affected by our proposals:

- a specialist contractor will be employed to carry out a pre-works assessment of the existing drainage systems in consultation with relevant landowners and other stakeholders;
- a pre-construction drainage management plan would then be prepared for review and approval by stakeholders. This plan will set out and record the condition of the existing drainage network; and
- a post-construction drainage management plan would also be prepared later as the cable route is installed.

Best practice guides

'Best practice' guides showing how NGET constructs underground cables are available at:
www.nationalgrid.com/electricity-transmission/document/145316/download

Information for landowners

When developing our proposals, we need to understand who has a legal interest in the land in and around the areas being considered as part of the project.

In the DCO process, anyone with a legal interest in land is known as a person with an interest in land (PIL). If you are identified as a PIL, we will contact you directly.

Whilst much of the information we need is available on public registers, we have appointed land referencing firm Ardent to contact individual landowners to verify the publicly available information and ensure that we have made best efforts to identify any potentially impacted parties.

Ardent provides land and consenting advice to support the promotion and delivery of major projects in the UK. Ardent will also assist with contacting landowners and occupiers to arrange access for non-intrusive and intrusive surveys which we plan to carry out whilst we develop the proposals and prepare the application for a development consent order.

More detailed information for landowners, along with relevant contact information can be found on the landowner page of our project website.

If you are a landowner and believe your property may be affected by our proposals, and want to talk to our lands team, please email **egl5@ardent-management.com** or call **0203 105 0989** or write to: **EGL 5 Ardent, 36 Park Row, Leeds, LS1 5JL**

Next steps

The feedback we receive during this stage 1 consultation, along with outputs from technical assessments and environmental surveys, will shape the development of our proposals for EGL 5.

Following stage 1 consultation, we will:

- consider all consultation feedback as we refine our proposals before the next stage of consultation, which will also include preliminary environmental information
- continue our discussions with landowners and people with a legal interest in land
- continue briefing local elected representatives
- continue working with local authorities and other stakeholders
- continue carrying out environmental impact assessment work and undertaking surveys along the route
- provide updates to those who have asked to be kept updated on our proposals via email. You can register for these updates on our website **nationalgrid.com/egl5**
- post updates on the EGL 5 project website at **nationalgrid.com/egl5**
- continue to refine our proposals in response to feedback and findings from technical studies and surveys.

We will present updated proposals for EGL 5 during our next stage of consultation, planned for 2026.

Following further development and finalisation of detailed proposals, subject to grant of a direction from the Secretary of State pursuant to s.35 of the Planning Act 2008, we will submit our DCO application, including a consultation report showing how we have taken account of feedback, to the Planning Inspectorate.

The Planning Inspectorate will examine our proposals and make a recommendation on the application to the Secretary of State for the Department of Energy Security and Net Zero, who will make the final decision on whether to grant consent.

If consented, we expect construction work to start in 2030, with EGL 5 operational by 2035.

Scan this QR code to view a short film about the development consent order process, or visit the Planning Inspectorate website – **infrastructure.planninginspectorate.gov.uk/application-process/the-process/**

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