

## The Great Grid Upgrade

Eastern Green Link 3 (EGL 3) and  
Eastern Green Link 4 (EGL 4)

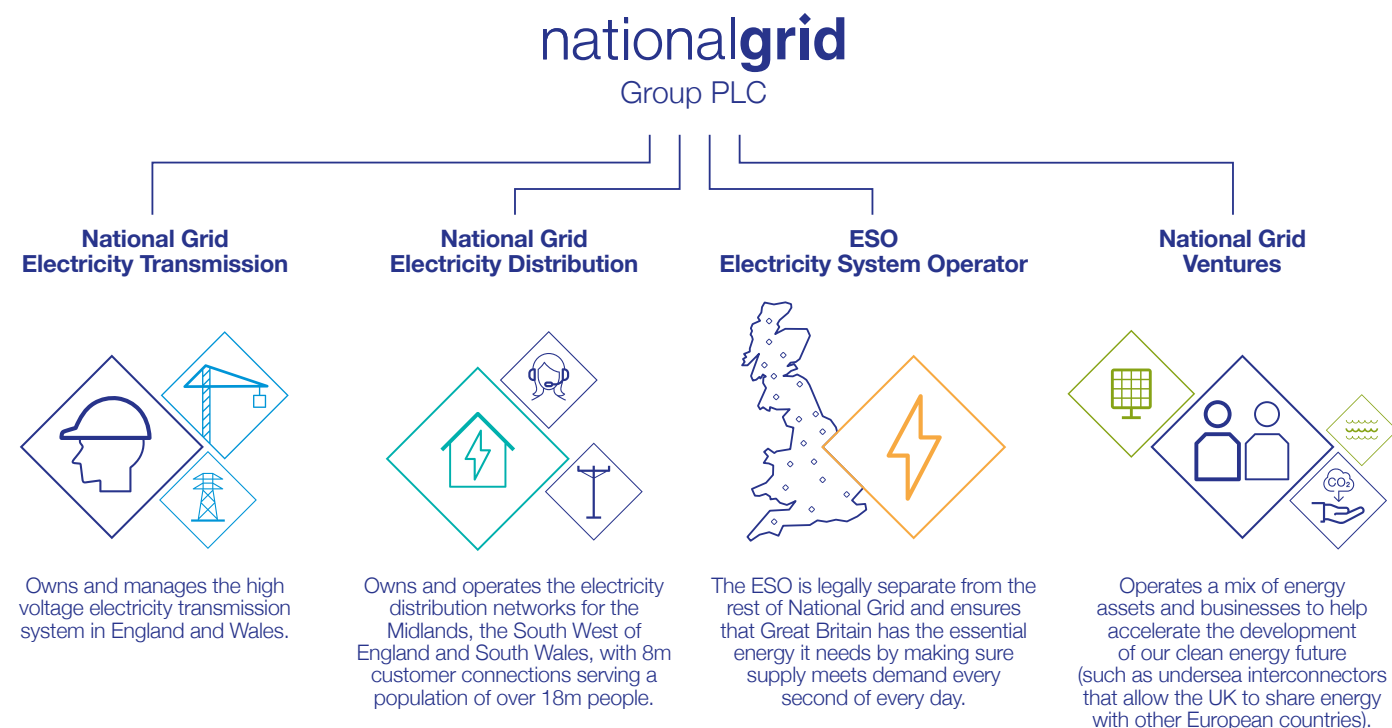
# Project Background Document – Quick read

April 2024

# About National Grid

**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.**

The parts of National Grid involved in ensuring we all have the essential electricity supplies we need, are shown in the diagram below. Each is a separate legal entity with its own role and responsibilities across England and Wales.



National Grid Electricity Transmission (NGET) sits at the heart of Britain’s energy system, connecting millions of people and businesses to the energy they use every day. Every time a phone is plugged in, or a switch is turned on, we’ve played a part, connecting you to the electricity you need.

NGET 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 to how we go about doing this in our stakeholder, community and amenity policy<sup>1</sup>.

To find out more about how we develop our proposals, please see our video<sup>2</sup> explaining how we work.

<sup>1</sup> National Grid’s commitments when undertaking works in the UK: Our stakeholder, community and amenity policy (National Grid, December 2019) – Available at <https://www.nationalgrid.com/electricity-transmission/document/81026/download>

<sup>2</sup> National Grid Electricity Transmission, ‘How we work’ video [players.brightcove.net/867903724001/default\\_default/index.html?videoId=6329276694112](https://players.brightcove.net/867903724001/default_default/index.html?videoId=6329276694112)

# Contents

- 04 Foreword
- 05 Consulting on our proposals
- 09 The need
- 10 Our proposals
- 16 Section 1 – Landfall to Bilsby
  - Section 1a – Theddlethorpe landfall to Bilsby
  - Section 1b – Anderby Creek landfall to Bilsby
- 22 Section 2 – Bilsby to Welton le Marsh
- 24 Section 3 – Welton le Marsh to Little Steeping
- 26 Section 4 – Little Steeping to Sibsey Northlands
- 28 Section 5 – Sibsey Northlands to Hubbert’s Bridge
- 30 Section 6 – Hubbert’s Bridge to River Welland
- 32 Section 7 – River Welland to Foul Anchor
- 34 Section 8 – Foul Anchor to Walpole
- 38 Construction
- 40 Managing and mitigating effects
- 41 Information for landowners
- 42 Next steps
- 43 How to find out more



# Foreword

## Thank you for your interest in our proposals to upgrade parts of the electricity grid in your local area.

National Grid Electricity Transmission's (NGET) aim is to deliver the necessary infrastructure which will achieve energy security for Britain, more affordable bills and the UK Government's urgent policy to reduce carbon emissions. We invest around £1.3bn each year to adapt and develop our network of pylons, overhead lines, cables, and substations to connect new sources of low carbon energy to homes and businesses.

Our proposals for the Eastern Green Link 3 (EGL 3) and Eastern Green Link 4 (EGL 4) projects – two new primarily offshore high voltage electricity links and associated onshore infrastructure between Scotland and England – will work toward our aims and make sure the grid is ready. NGET is jointly developing EGL 3 with Scottish and Southern Electricity Networks Transmission (SSEN Transmission) and EGL 4 with Scottish Power Energy Networks (SPEN).

EGL 3 and EGL 4 are needed as the existing transmission network does not have enough capacity to securely and reliably transport the increasing amount of energy generated in Scotland and Scottish waters, particularly from offshore wind, to population centres in the Midlands and South of England. These proposals form part of 'The Great Grid Upgrade', which is the largest overhaul of the grid in generations.

### To learn about our proposals:

- read this quick read version of our Project Background Document (you can also read our longer version Project Background Document)
- visit our website at: [nationalgrid.com/egl3andegl4](https://nationalgrid.com/egl3andegl4)
- come to a consultation event (see Table 1)
- join an online webinar session (see Table 2)
- visit a local information point (see Table 3)
- book an 'ask the expert session' 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 298 0405** Lines are open Monday to Friday 9am–5pm, with an answerphone facility taking messages outside of these hours
- email us: [contactegl3and4@nationalgrid.com](mailto:contactegl3and4@nationalgrid.com)

The EGL 3 and EGL 4 projects will involve a mix of offshore and onshore development. We are pleased to share our early proposals for the onshore elements of EGL 3 and EGL 4 in England with you. Whilst these are two separate projects, we will be seeking consent under one Development Consent Order (DCO) for both EGL 3 and EGL 4. We are now seeking feedback on these proposals in our first stage of consultation, which runs from Tuesday 23 April to Monday 17 June 2024. We encourage you to share your views on where the new infrastructure could be built, and what you would like to see us consider as we further develop our proposals, which we will present and consult on in the future.

All documents published as part of this consultation can be found at [nationalgrid.com/egl3andegl4](https://nationalgrid.com/egl3andegl4) and are available on request by contacting the project team at [contactegl3and4@nationalgrid.com](mailto:contactegl3and4@nationalgrid.com) or **0800 298 0405**.

We encourage everyone to take time to review our proposals and respond by **11:59pm Monday 17 June 2024**.

**Mark Brackley,**  
Project Director, Eastern Green Link 3 (EGL 3)

**James Goode,**  
Project Director, Eastern Green Link 4 (EGL 4)

# Consulting on our proposals

## We are now consulting on our early proposals for the onshore elements of EGL 3 and EGL 4 in England. The deadline for providing feedback is **11:59pm Monday 17 June 2024**.

NGET is planning to enhance the electricity network with proposals for EGL 3 and EGL 4 – two new primarily offshore high voltage electricity links and associated onshore infrastructure between Scotland and England (see Figure 1).

The links would transport enough clean energy from Scotland to power up to four million homes in the Midlands and South of England, playing an important role in building a more secure and resilient future energy system and the decarbonisation of the UK electricity system.

In England, the proposed onshore elements of EGL 3 and EGL 4 would be in the districts of East Lindsey, Boston and South Holland, in Lincolnshire; and the district of King's Lynn and West Norfolk, in Norfolk (see page 14 for more information).

Although EGL 3 and EGL 4 are independent of one another, developing them in parallel – due to their proposed common connection point in England - offers the opportunity to potentially reduce the extent of community and environmental impact and disturbance. We will be seeking consent for the English onshore elements of both via one application to the Planning Inspectorate for a Development Consent Order (DCO). For more information about the consenting process, please visit the Planning Inspectorate website<sup>3</sup>.

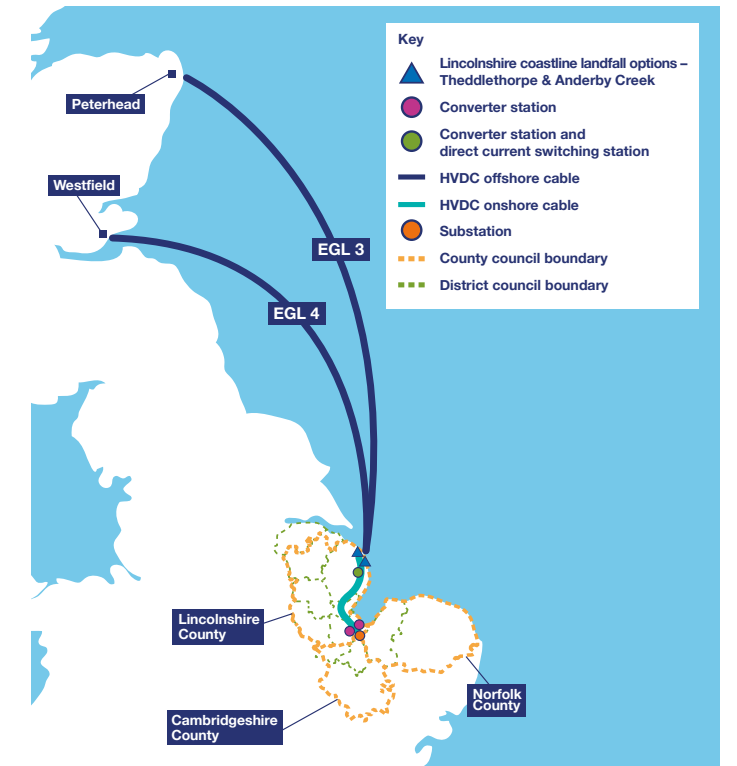


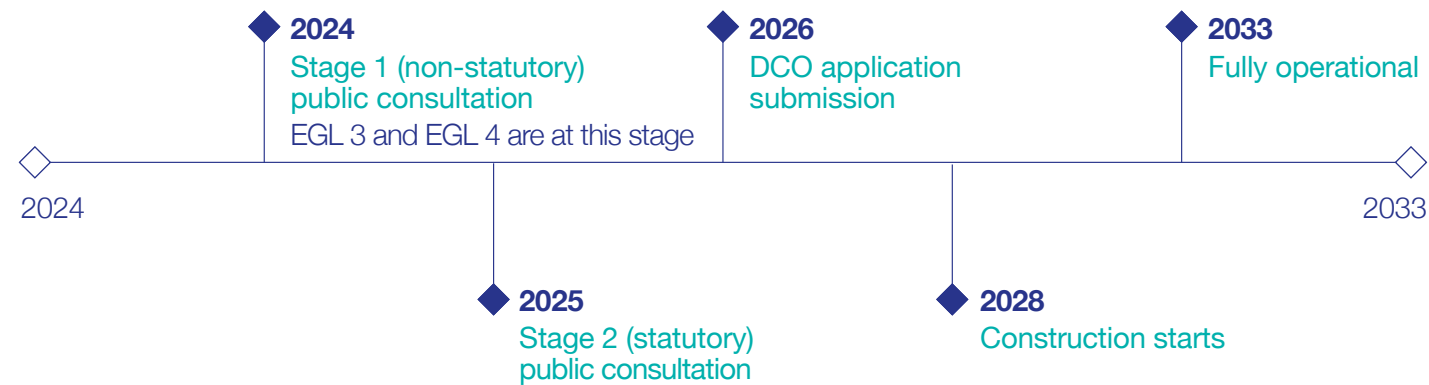
Figure 1 Overview of EGL 3 and EGL 4

We are jointly developing EGL 3 with Scottish and Southern Electricity Networks Transmission (SSEN Transmission) and EGL 4 with Scottish Power Energy Networks (SPEN). SSEN Transmission and SPEN are responsible for obtaining the relevant consents in Scotland. Consent for the offshore elements of EGL 3 and EGL 4 will be sought via separate marine licence applications for development in English and Scottish waters respectively.

<sup>3</sup> National Infrastructure Planning - the process, Planning Inspectorate [infrastructure.planninginspectorate.gov.uk/application-process/the-process/](https://infrastructure.planninginspectorate.gov.uk/application-process/the-process/)



EGL 3 and EGL 4 are both in their early stages of development. We are planning two stages of consultation, which along with technical assessments and environmental surveys, will play an important role in helping shape our proposals.



Our proposals are summarised in this ‘quick read’ document, along with information about where to find out more and how to get involved in the consultation. More detail is available in our Project Background Document. As part of this consultation, we have also published technical documents and detailed maps showing the proposed locations of onshore elements of EGL 3 and EGL 4.

All of the consultation documents are available to download from our project website at [nationalgrid.com/egl3andegl4](https://nationalgrid.com/egl3andegl4). Printed copies of most of our consultation documents are available free of charge on request (email us at [contactegl3and4@nationalgrid.com](mailto:contactegl3and4@nationalgrid.com) or call **0800 298 0405**). Some detailed technical documents may be subject to a printing charge of up to £300.

Printed copies of key consultation documents will be available to view at local information points (see Table 3), and all consultation documents will be available to view at our consultation events (see Table 1), where members of our team will also be available to answer your questions.

We will present our proposals and answer questions at online webinars (see Table 2 and visit the website or contact us to book) and you can also book an ‘ask the expert’ telephone or video appointment with the team throughout the consultation period.

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

**Table 1 Consultation events**

Location	Date	Time	Address
Mablethorpe	Tuesday 30 April 2024	2pm–7pm	Dunes Complex, Central Promenade, Mablethorpe, LN12 1RG
Anderby	Wednesday 1 May 2024	2pm–7pm	Anderby Village Hall, Sea Road, Anderby, Skegness, PE24 5YD
Alford	Thursday 9 May 2024	12:30pm–6pm	Alford Corn Exchange, 9 Market Place, Alford, LN13 9EB
Wisbech	Monday 13 May 2024	2pm–7pm	Leverington Village Hall, Gorefield Rd, Leverington, Wisbech, PE13 5AT
Eastville	Wednesday 15 May 2024	2pm–7pm	Eastville, Midville and New Leake Village Hall, Station Rd, Eastville, PE22 8LS
Kirton Holme	Thursday 16 May 2024	2pm–7pm	Poachers Country Hotel, Swineshead Road, Kirton Holme, PE20 1SQ
Walpole	Monday 20 May 2024	2pm–7pm	Walpole Community Centre, Summer Close, Walpole St Andrew, PE14 7JW
Holbeach	Wednesday 29 May 2024	2pm–7pm	The Holbeach Hub, Boston Rd South, Holbeach, PE12 7LR
Burgh le Marsh	Wednesday 5 June 2024	2pm–7pm	Burgh le Marsh Village Hall, Jacksons Lane, Burgh le Marsh, Skegness, PE24 5LA

**Table 2 Webinars**

	Locations covered	Date	Start time
<b>Webinar 1</b>	Section 1a – Theddlethorpe landfall to Bilsby	Monday 29 April 2024	12pm
	Section 1b – Anderby Creek landfall to Bilsby		
<b>Webinar 2</b>	Section 2 – Bilsby to Welton le Marsh	Tuesday 7 May 2024	7pm
	Section 3 – Welton le Marsh to Little Steeping		
	Section 4 – Little Steeping to Sibsey Northlands		
<b>Webinar 3</b>	Section 5 – Sibsey Northlands to Hubbert’s Bridge	Wednesday 22 May 2024	12pm
	Section 6 – Hubbert’s Bridge to River Welland		
	Section 7 – River Welland to Foul Anchor		
<b>Webinar 4</b>	Section 8 – Foul Anchor to Walpole	Thursday 6 June 2024	7pm



**Table 3 Local information points**

<b>Mablethorpe Library</b>	Stanley Avenue, Mablethorpe, LN12 1DP
<b>Alford Library and Focal Point</b>	6 Market Place, Alford, LN13 9AF
<b>Sutton on Sea Library and Community Centre</b>	Broadway, Sutton on Sea, Mablethorpe, Lincolnshire LN12 2JN
<b>Burgh le Marsh Library</b>	Tinkers Green, Jacksons Lane, Burgh le Marsh, Skegness, PE24 5LA
<b>Skegness Library</b>	23 Roman Bank, Skegness, PE25 2SA
<b>Boston Library</b>	County Hall, Bank Street, Boston, PE21 6DY
<b>Holbeach Community Library</b>	5 Fleet Street, Holbeach, Spalding, PE12 7AD
<b>Long Sutton Library</b>	Trafalgar Square, Long Sutton, Spalding, PE12 9HB
<b>Spalding Library</b>	Victoria Street, Spalding, PE11 1EA
<b>Wisbech Library</b>	Ely Place, Wisbech, PE13 1EU
<b>King's Lynn Library</b>	London Rd, King's Lynn PE30 5EZ

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 3 and EGL 4 are needed as the existing transmission network does not have enough capacity to securely and reliably transport the increasing amount of energy generated in Scotland and Scottish waters, particularly from offshore wind, to population centres in the Midlands and South of England (see p12 of the Project Background Document for more information about how we identified the location for EGL 3 and EGL 4).**

This is because our existing transmission system was originally designed to move energy from power stations near the coal fields of the North and Midlands or gas

fired power stations, for example in the Humber area, to 'demand centres' such as the M62/M18 corridor, the Midlands, the M4 corridor and the South East. Low carbon energy generation is located away from these older fossil fuel power stations that the grid was originally designed to serve.

When a lack of capacity means we are unable to move power to where it is needed, we sometimes need to pay generators to reduce production in other parts of the network. While this can temporarily manage power flows, it can also increase the cost of generation and therefore the cost of electricity to the consumer.



# Our proposals

## Infrastructure explainer

<b>High voltage direct current (HVDC) cables</b>	HVDC cables can be used to transport large amounts of power over long distances, onshore and offshore. When used onshore, these are installed underground.
<b>High voltage alternating current (HVAC) cables</b>	Power is normally generated, transmitted and distributed as AC underground 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 need. These are installed underground.
<b>Converter stations</b>	Convert power from AC to DC and DC to AC. These are above ground and housed within buildings.
<b>Substations</b>	Connect the transmission network to the distribution networks that supply homes and businesses. They also provide a connection point for energy generators to input power to the network. These are above ground.
<b>Three-ended connection</b>	<p>Enables a third connection point for a HVDC cable route (most have one connection point at each end) to provide greater flexibility and resilience in the network. The additional connection would join the existing network via a direct current switching station and a converter station. Typically, the converter station and direct current switching station would be located adjacent to each other.</p> <ul style="list-style-type: none"> <li>• Direct current switching stations: equipment used to tie together two or more electric circuits through switches, allowing electricity to be sent to two or more locations. It is a key piece of infrastructure to enable a three-ended link and is constructed above ground.</li> </ul>
<b>Transition joint bays</b>	Located onshore, near to the coast to connect marine and onshore cables. These are located underground.
<b>Link boxes</b>	Predominantly located below ground, along the cable route, enabling the performance of the cables to be monitored.
<b>Cable joint bays</b>	Used to connect different sections of underground cables together along the route. These can be located underground or above ground depending on the type of cable.
<b>Marker posts</b>	Located above ground, to confirm the presence of a cable route, where it crosses roads, field margins or changes direction.

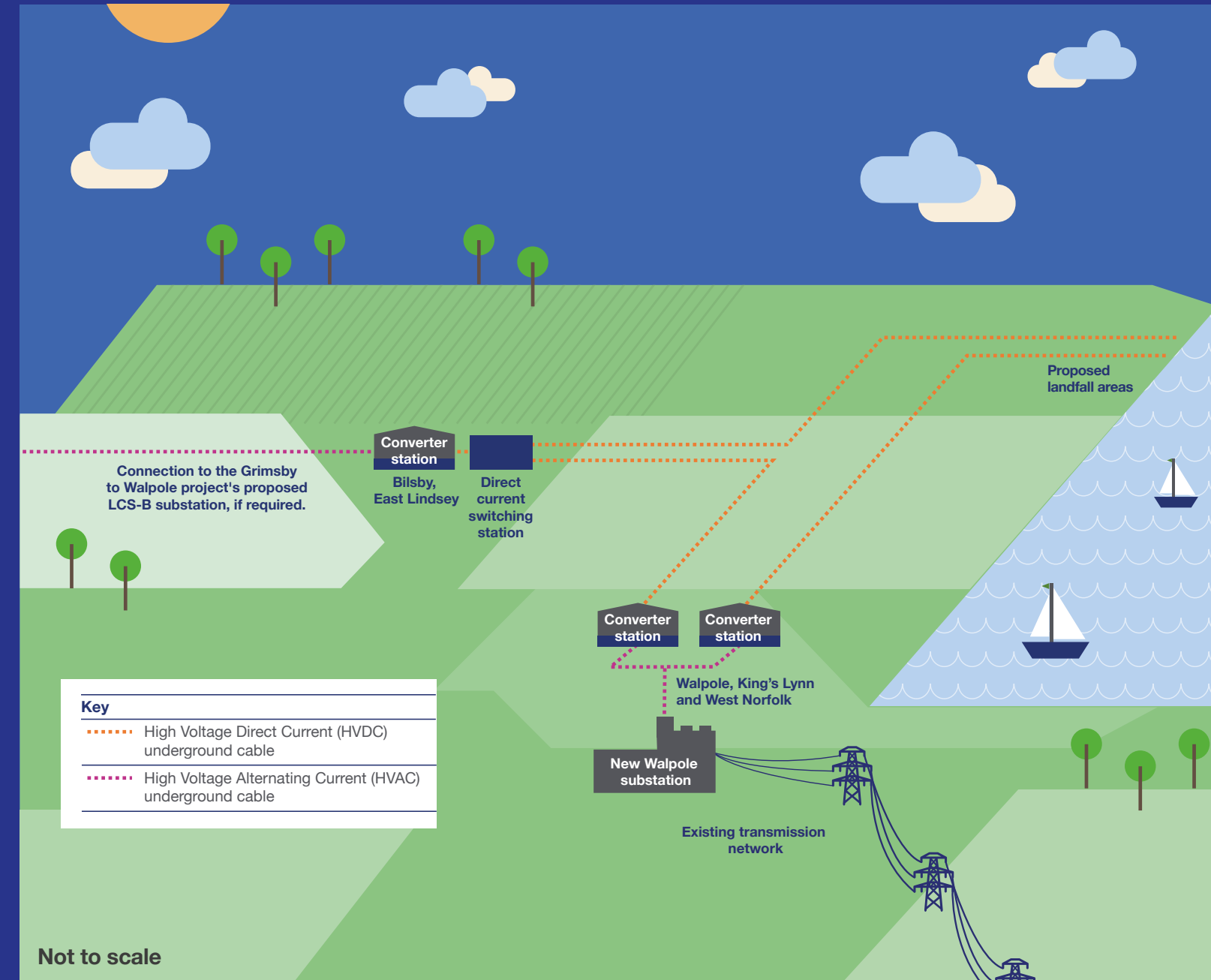


Figure 2 EGL 3 and EGL 4 onshore in England

**During this Stage 1 consultation, we are seeking views on where the new onshore infrastructure in England could be built and what you would like to see us consider as we further develop our proposals.**

The key elements of our proposals for consultation include:

- two co-located HVDC underground cable routes, from one of two potential landfall locations on the Lincolnshire coastline
- one new converter station and direct current switching station near Bilby, East Lindsey
- the route of high voltage alternating current (HVAC) underground cables to connect the converter station and direct current switching station to a new

substation in the Walpole area (also proposed as part of NGET's Grimsby to Walpole project ) and into the electricity network

- two new converter stations in the Walpole area
- the route of two separate HVAC underground cables to connect the proposed converter stations to the proposed substation in the Walpole area, and into the electricity transmission network
- one new substation in the Walpole area (also proposed as part of NGET's Grimsby to Walpole project)
- potential converter station design approaches that we could consider during the later design stages (**see possible design principles in Figure 3**).

**Dimensions of our proposed converter stations, direct current switching station and substation**

We're in the early stages of the design of our converter stations, direct current switching station and substation. We expect each converter station to have a footprint of approximately 100,000 sq. m and a maximum height of up to 30m.

The direct current switching station would have a footprint of approximately 20,000 sq. m and a maximum height of up to 30m. We expect that it would be located adjacent to the converter station near Bilby.

The substation would have an approximate footprint of 160,000 sq. m and height of up to 12m.

<sup>7</sup> We are working with the Grimsby to Walpole project and other developers to identify ways we might be able to reduce effects on local communities and the environment by coordinating our activities. For more information about Grimsby to Walpole visit: [www.nationalgrid.com/grimsby-to-walpole](http://www.nationalgrid.com/grimsby-to-walpole)

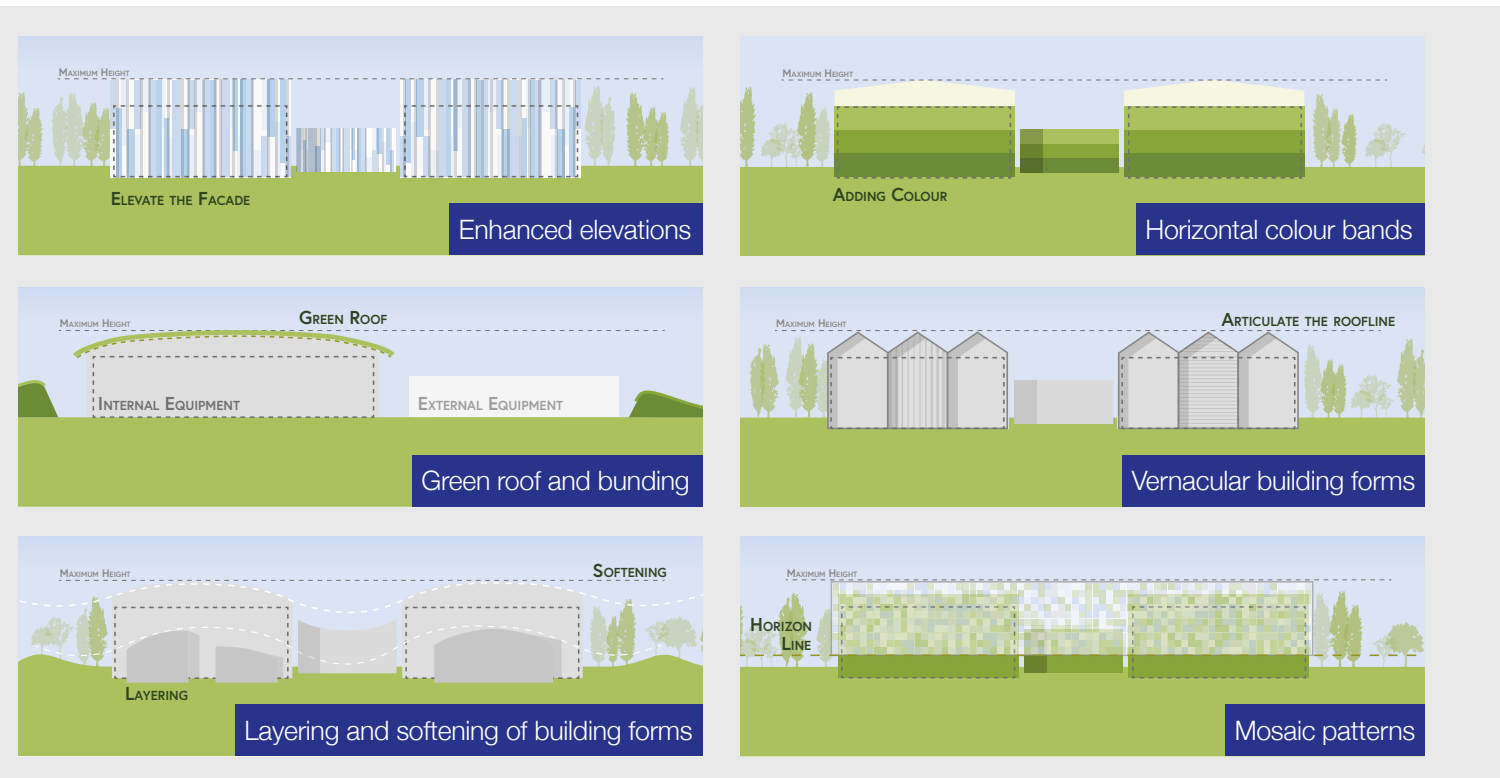


Figure 3 Potential design approaches to proposed converter stations



Figure 4 An example image of a converter station and substation



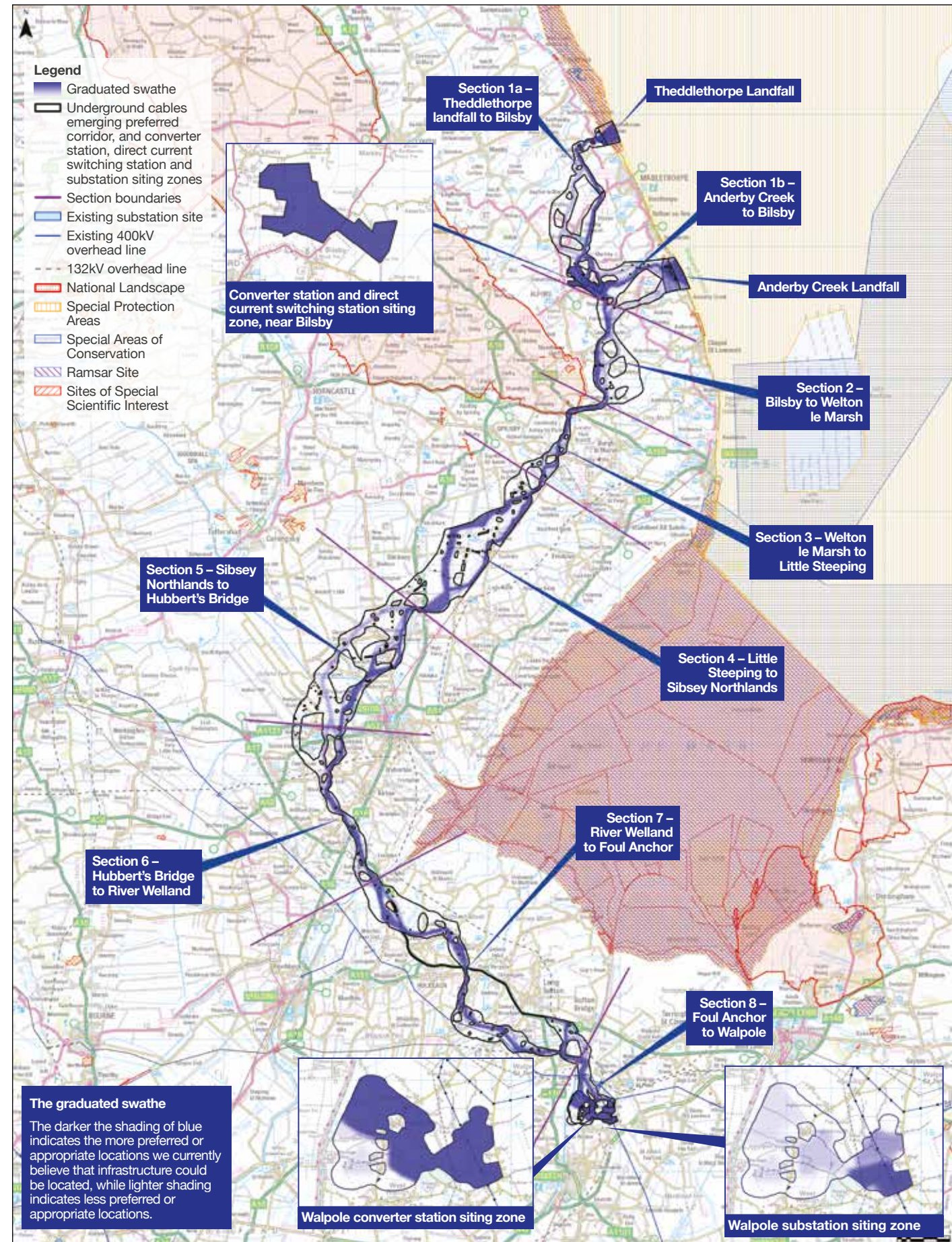


Figure 5 Overview of emerging preferred corridor

**Emerging preferred corridor**

Our emerging preferred corridor (see Figure 5) shows the areas we are considering for the cable routes. We have also identified potential locations (siting zones) within the corridor for our proposed converter stations, direct current switching station and substation.

The shading within the corridor (known as a ‘graduated swathe’) shows the areas where our engineering and environmental assessments undertaken to date indicate would be more, or less suitable for the proposed new infrastructure.

**Developing the corridor**

When a need to upgrade the transmission system is established, NGET studies and evaluates the potential options for addressing it, including whether existing infrastructure could meet 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.

The emerging preferred corridor was identified by studying potential environmental and socio-economic effects, technical complexity, cost and programme for each element of EGL 3 and EGL 4. For more information on how we have defined the area and looked to minimise the potential impact on residential properties, landowners, the environment and communities, see pages 18-20 of the Project Background Document.

**Proposals by location**

We have divided our emerging proposed corridor into the following sections (proposals outlined below) to make it easier to review and provide feedback (see Figure 5):

- **Section 1** – Landfalls to Bilsby
  - **Section 1a** – Theddlethorpe landfall to Bilsby
  - **Section 1b** – Anderby Creek landfall to Bilsby
- **Section 2** – Bilsby to Welton le Marsh
- **Section 3** – Welton le Marsh to Little Steeping
- **Section 4** – Little Steeping to Sibsey Northlands
- **Section 5** – Sibsey Northlands to Hubbert’s Bridge
- **Section 6** – Hubbert’s Bridge to River Welland
- **Section 7** – River Welland to Foul Anchor
- **Section 8** – Foul Anchor to Walpole

An interactive map is also available on our website at [nationalgrid.com/egl3andegl4](https://nationalgrid.com/egl3andegl4) and at our in-person consultation events.

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



# Section 1 Landfalls to Bilksby

This section of the emerging preferred corridor runs from the proposed landfalls at Theddlethorpe and Anderby Creek to Bilksby. Should there be a future requirement for a three-ended connection (which enables a third connection point for a HVDC cable for greater flexibility and resilience), one of the project's underground cables would connect from landfall to the siting zone of the proposed converter station and direct current switching station

station near Bilksby (see Figure 6), before routing south to the B1449.

Infrastructure in Section 1 includes:

- underground cables: both HVDC and HVAC
- one converter station, near Bilksby
- one direct current switching station, near Bilksby.

### Legend

- Graduated swathe
- Converter station and direct current switching station siting zone

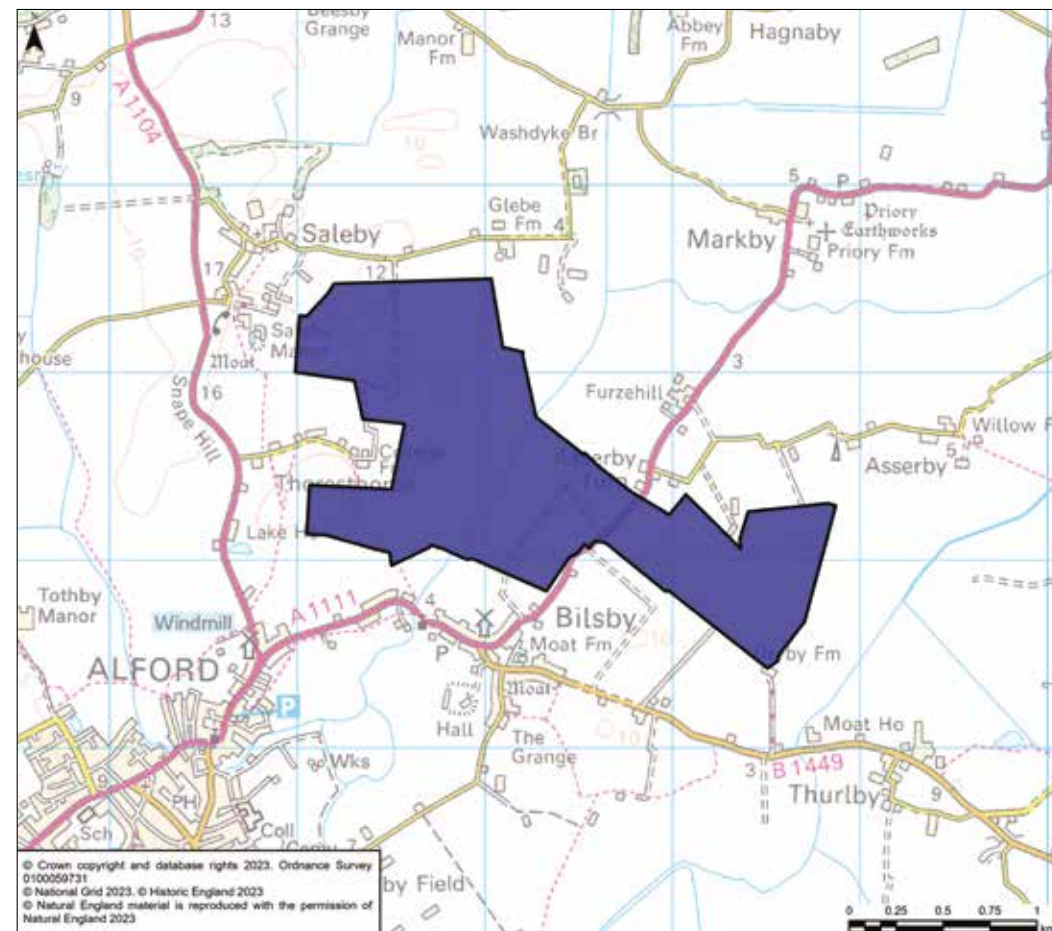


Figure 6 Map showing the proposed siting zone for the converter station and direct current switching station near Bilksby (in Sections 1a and 1b)

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

### Section 1a – Theddlethorpe landfall to Bilksby

From the proposed Theddlethorpe landfall (see Figure 8), the underground cables would route westward, crossing the A1031 south of Theddlethorpe St Helen before turning south to take a direct route to the proposed converter station and direct current switching station siting zone, whilst avoiding properties.

From there, the swathe splits into two options circumventing the settlements of Maltby le Marsh,

Beesby and properties east of Saleby. Of these options the eastern leg offers a more direct route and minimises crossings of major roads. The route would then cross the A1111 before connecting into the proposed converter station and direct current switching station (see Figure 6) siting zone from the north.

**To provide feedback on this section of the emerging preferred corridor and siting zone, please see questions 3a, 3b and 3c on our feedback form.**

### Legend

- Graduated swathe
- Underground cables emerging preferred corridor
- Site of Special Scientific Interest
- Important Bird Areas (GB)
- Area of Outstanding Natural Beauty
- Ancient Woodland
- Ramsar Site
- Special Areas of Conservation
- Special Protection Areas

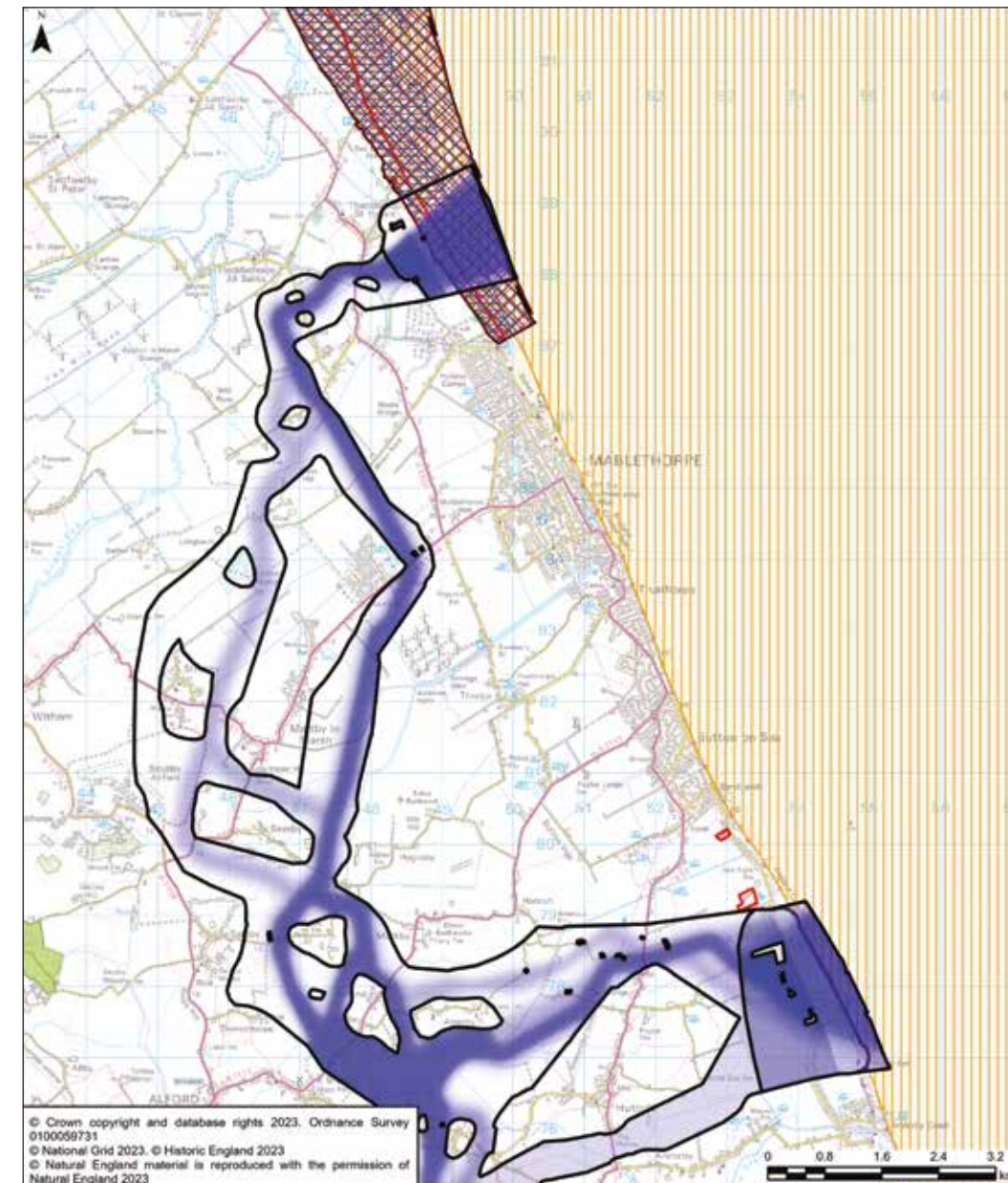


Figure 7 Map showing Section 1a of the underground cables emerging preferred corridor



**Legend**

-  Graduated swathe
-  Landfall at Theddlethorpe
-  Site of Special Scientific Interest
-  Important Bird Areas (GB)
-  Area of Outstanding Natural Beauty
-  Ancient Woodland
-  Ramsar Site
-  Special Areas of Conservation
-  Special Protection Areas

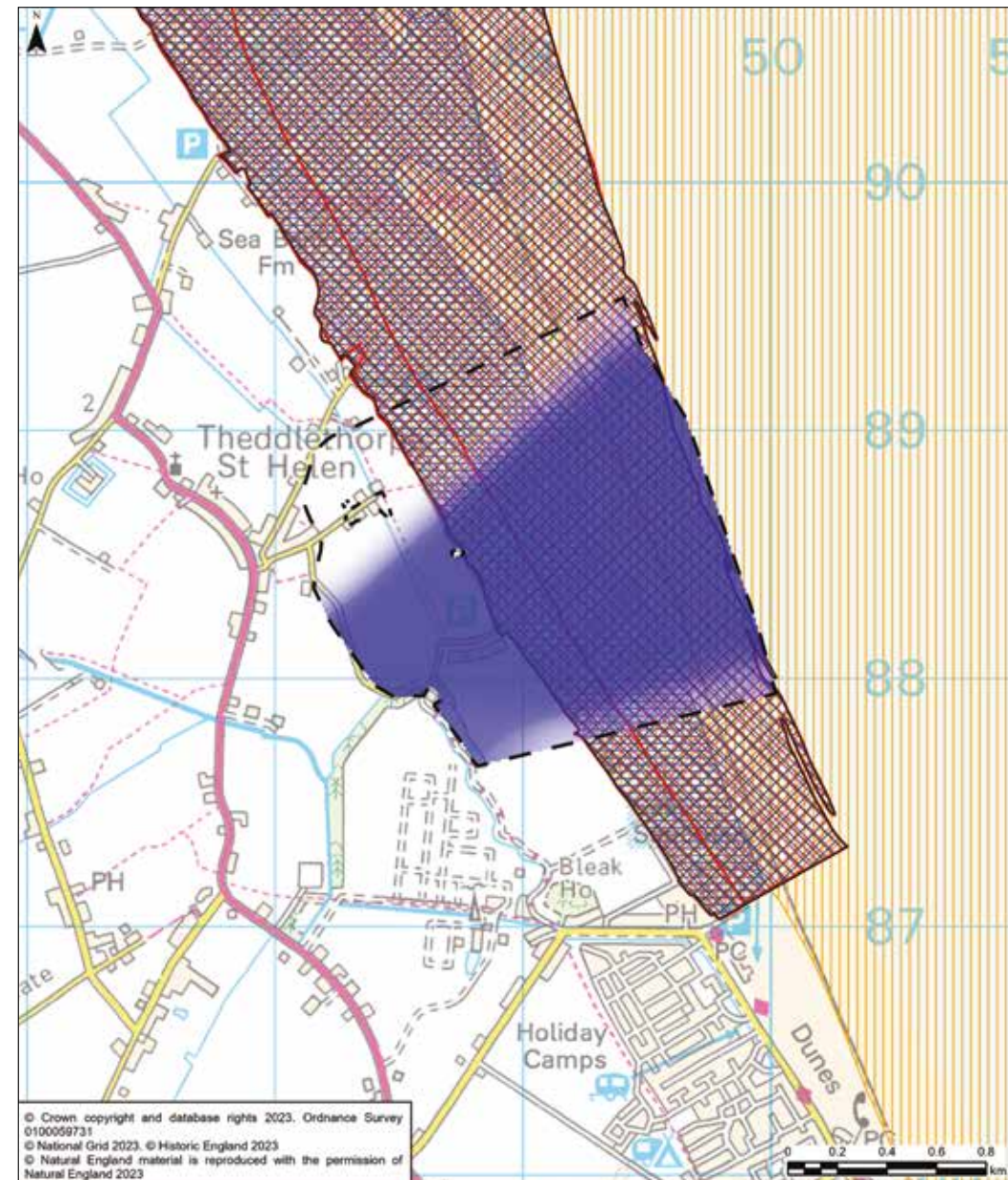


Figure 8 Map showing Theddlethorpe cable landfall

**Section 1b – Anderby Creek landfall to Bilsby**

From the Anderby Creek landfall (see Figure 9), the underground cables would route west and south-west toward Bilsby. Before reaching Bilsby the route would then begin to route south towards Welton le Marsh and crossing the B1449. Should there be a requirement for a three-ended connection, where the proposed underground cable route nears Bilsby it would continue into the proposed converter station and direct current switching station siting zone (see Figure 6) crossing the A52 Huttoft Road south of Hannah.





Options are then introduced to avoid the cluster of properties at Asserby and interaction with the Viking Link Interconnector. The southern option allows for a more direct connection into the proposed converter station and direct current switching station siting zone and would avoid additional crossings of minor watercourses.

**To provide feedback on this section of the emerging preferred corridor and siting zone, please see questions 3c, 3d, 3e on our feedback form.**



Figure 9 Map showing Anderby Creek cable landfall

**Legend**






-  Graduated swathe
-  Landfall at Anderby Creek
-  Site of Special Scientific Interest
-  Special Protection Areas



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



Legend

-  Graduated swathe
-  Underground cables emerging preferred corridor
-  Site of Special Scientific Interest
-  Area of Outstanding Natural Beauty
-  Special Protection Areas

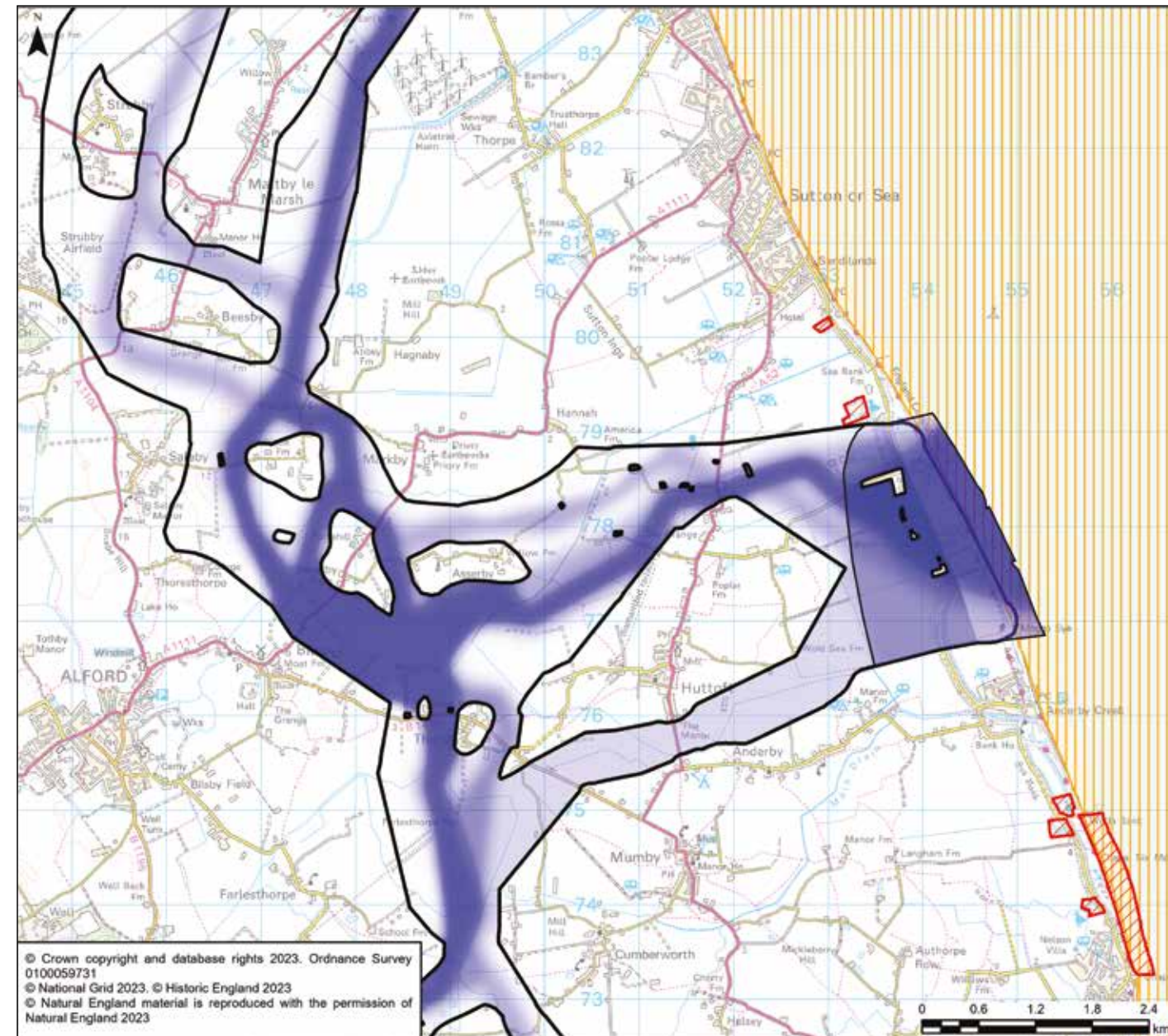


Figure 10 Map showing Section 1b of the underground cables emerging preferred corridor





# Section 2 Bilsby to Welton le Marsh

Infrastructure in Section 2 includes:

- underground cables: HVDC.

This section of the emerging preferred corridor runs from Bilsby (from a proposed converter station and direct current switching station should there be a need for a three-ended connection) to a point east of the village of Welton le Marsh (see Figure 11).

From Bilsby, the underground cable route would continue south, crossing the B1449 either east of, or west of, Thurlby where optionality has been introduced into the graduated swathe to seek to avoid impacts on Thurlby itself and non-designated heritage assets. This would also avoid numerous interactions with the Grimsby to Walpole project's proposed 400 kV overhead line. Crossing the B1149 west of Thurlby would offer marginally greater flexibility for cable routing.

From Thurlby, the underground cables would continue to route south, avoiding constraints in proximity to Farlesthorpe and Cumberworth. North of Bonthorpe, western and eastern optionality has been introduced to avoid the Scheduled Monument Butterbump round barrow cemetery which was specifically excluded from the swathe. Routing west of the scheduled monument would enable us to take advantage of more dense screening vegetation and provide a more direct route south.

From Sloothby, the route of the underground cables would continue south avoiding constraints at Hasthorpe and Boothby whilst also maintaining distance from the Scheduled Monument Castle Hill: a motte castle 250m east of Hanby Hall Farm located approximately 320m west of the swathe at Hanby.

**To provide feedback on this section of the emerging preferred corridor, please see question 3f on our feedback form.**

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



### Legend

- Graduated swathe
- Underground cables emerging preferred corridor
- Site of Special Scientific Interest
- Area of Outstanding Natural Beauty
- Ancient Woodland
- Special Protection Areas

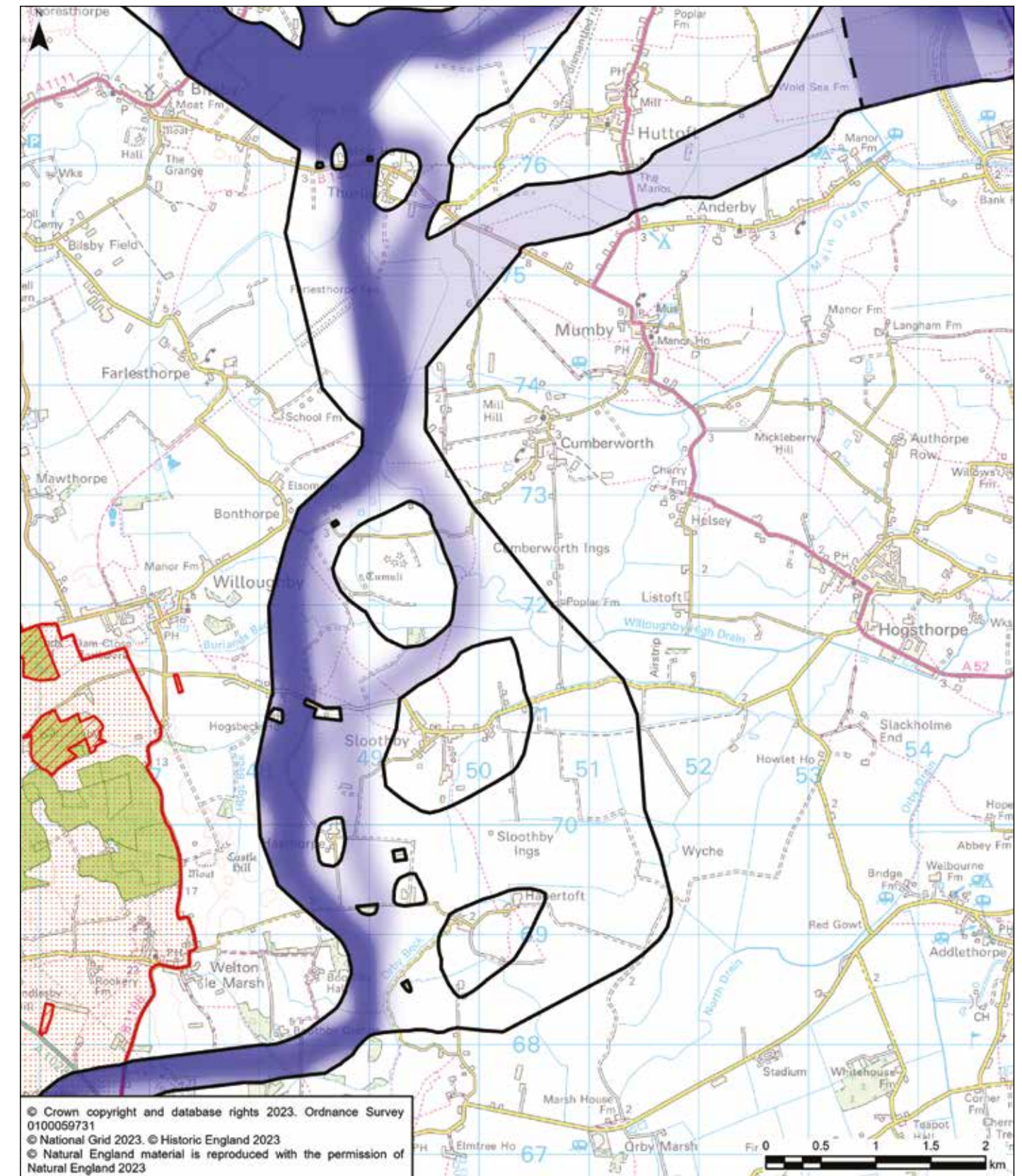


Figure 11 Map showing Section 2 of the underground cables emerging preferred corridor



# Section 3

## Welton le Marsh to Little Steeping

Infrastructure in Section 3 includes:

- underground cables: HVDC.

This section of the emerging preferred corridor runs from Welton le Marsh to a point immediately south of the village of Little Steeping (see Figure 12).

From Welton le Marsh, the route of the underground cables would continue west, seeking to avoid the village of Orby and the Scheduled Monument Manor Farm moated site. The route would continue west before turning south at Gunby Hall. We would utilise construction methods that would reduce potential impacts on woodland, treelines, the Lincolnshire Wolds National Landscape, formerly known as an Area of Outstanding Natural Beauty (AONB), and its setting, and Gunby Hall Estate and Gardens.

From Gunby, the underground cable route would continue south, avoiding areas of ancient woodland and properties in the vicinity of Monksthorpe and Hunger Hill before crossing the B1195 east of Great Steeping.

From the B1195, options are introduced to cross the Steeping River and to avoid the village of Little Steeping. Crossing the River Steeping and routing east of Little Steeping would avoid potential impacts on the Scheduled Monument Churchyard cross, St Andrew's churchyard which would be within 100m of any crossing of the River Steeping north of Little Steeping.

**To provide feedback on this section of the emerging preferred corridor, please see question 3g on our feedback form.**

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



### Legend

- Graduated swathe
- Underground cables emerging preferred corridor
- Site of Special Scientific Interest
- Area of Outstanding Natural Beauty
- Ancient Woodland
- 132kV overhead line

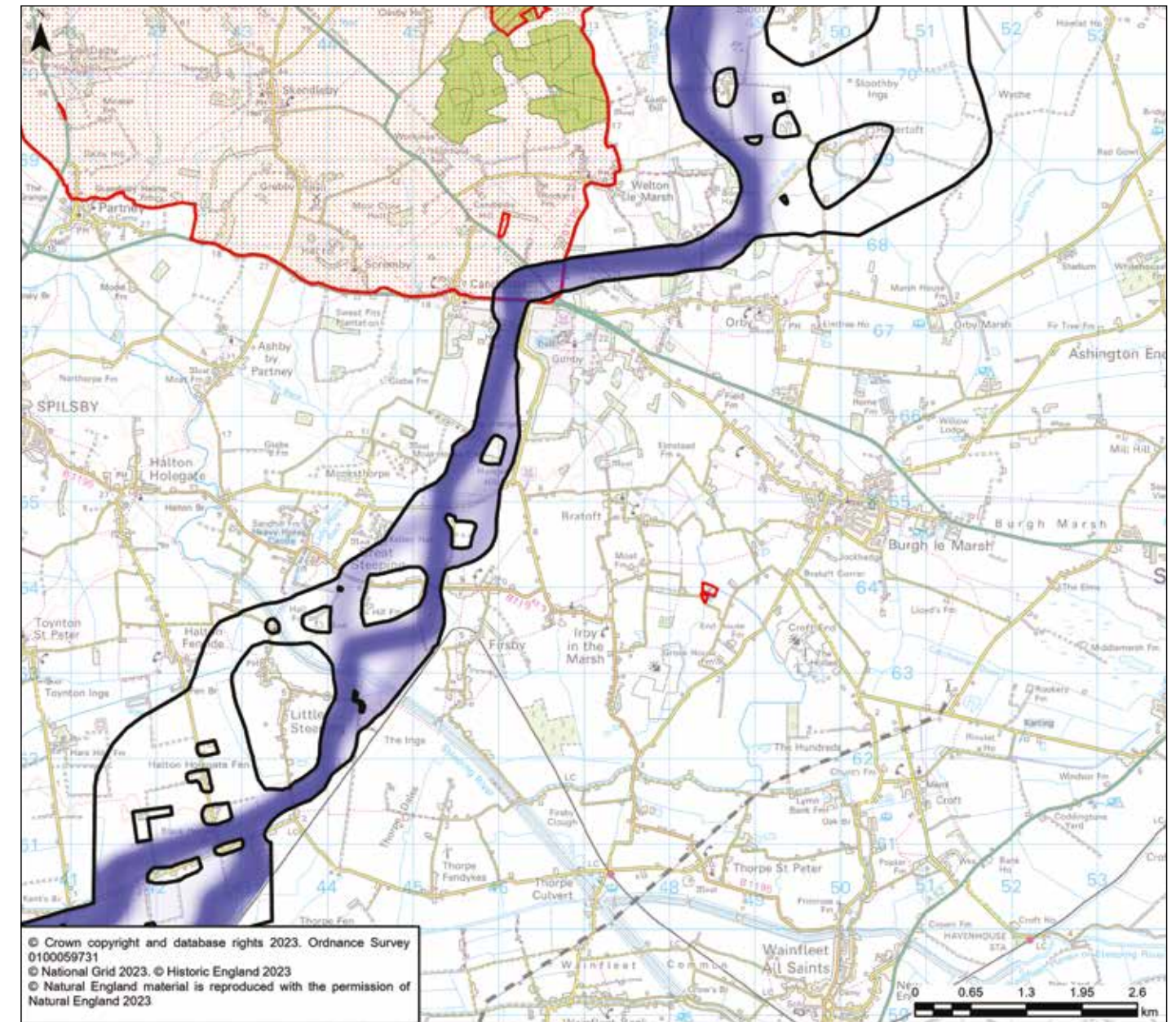


Figure 12 Map showing Section 3 of the underground cables emerging preferred corridor



# Section 4

## Little Steeping to Sibsey Northlands

Infrastructure in Section 4 includes:

- underground cables: HVDC.

This section of the emerging preferred corridor (see **Figure 13**) runs from a point at Little Steeping to a point immediately south of the village of Sibsey Northlands (south of Waltham Road). From the south of Little Steeping, the cables would continue south-west, turning south at Scarborough Bank whilst avoiding residential properties, connecting back to the main route west of Leake Commonside. An alternative route has been developed to the east to avoid properties at Midville, Hobhole Drain and Bell Water Drain, and to introduce more optionality and a more direct solution to Sibsey Northlands.

The eastern option would continue routing south, then south-west in parallel with the heritage railway line, crossing Bell Water Drain north of Eastville and routing adjacent to the west of New Leake. The option would then continue routing south-west before turning west to connect back into the main route, crossing Hobhole Drain north-west of Leake Commonside.

From Leake Commonside, the route would turn to route west seeking a perpendicular crossing of the A16 and East Fen Catchwater Drain south of Sibsey Northlands.

**To provide feedback on this section of the emerging preferred corridor, please see question 3h on our feedback form.**

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

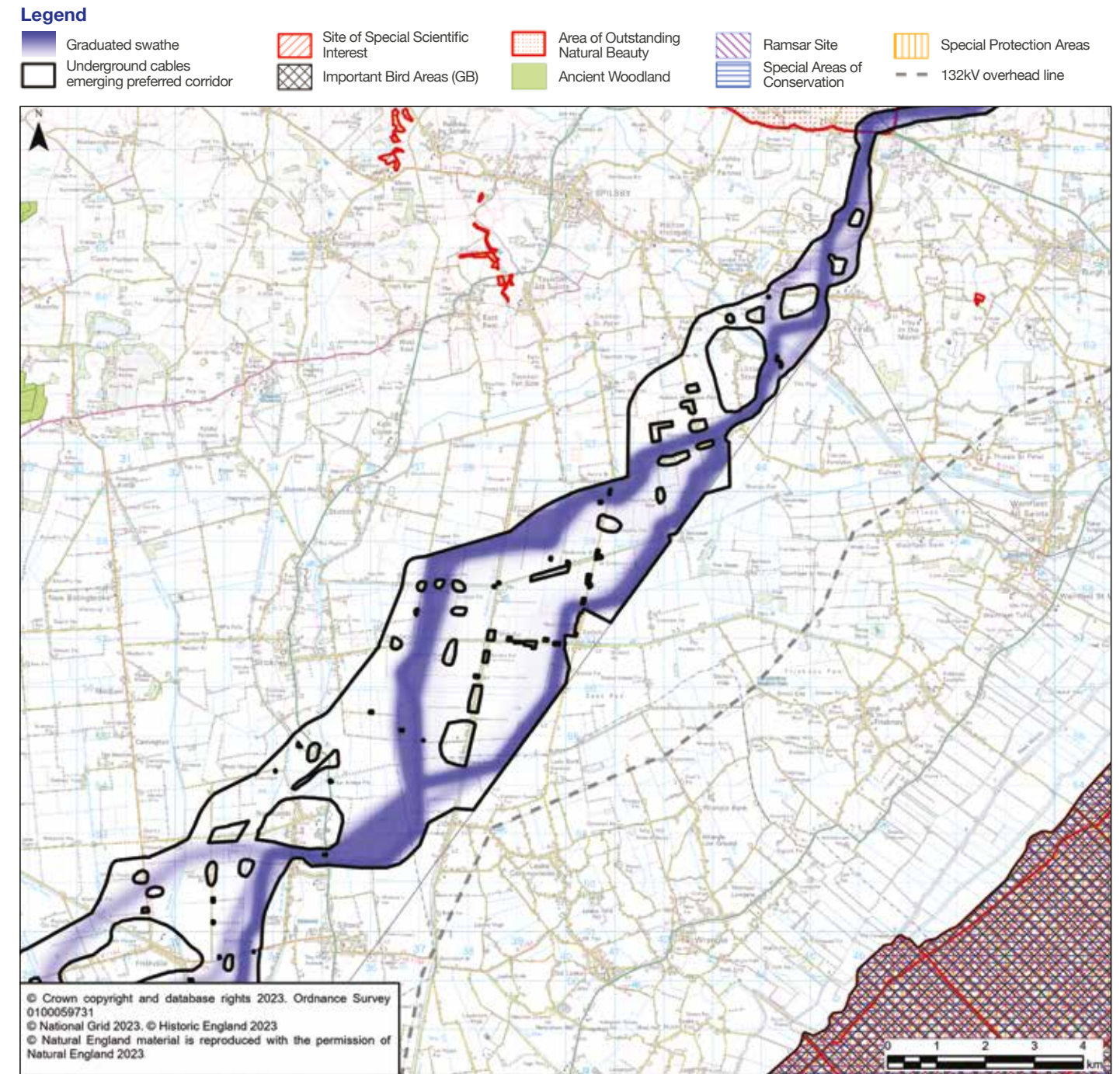


Figure 13 Map showing Section 4 of the underground cables emerging preferred corridor



# Section 5

## Sibsey Northlands to Hubbert's Bridge

Infrastructure in Section 5 includes:

- underground cables: HVDC.

This section of the emerging preferred corridor (see Figure 14) runs from the point at Sibsey Northlands to a point immediately east of Hubbert's Bridge (west of Boston).

From Sibsey Northlands, optionality is introduced to present options to avoid multiple clusters of residential properties and multiple crossings of major and minor watercourses, which include the River Witham, West Fen Drain, Frith Bank Drain and Newham Drain.

After the crossing of the A16, one option would continue routeing west, before turning south-west crossing the B1183, West Fen Drain, B1184 and Newham Drain east of Gipse Bridge, this route would then continue south seeking a perpendicular crossing of the River Witham before crossing the A1121, North Forty Food Drain, South Forty Foot Drain and Poacher Railway Line east of Hubbert's Bridge.

Another option would turn south after crossing the A16, seeking to cross the B1184 between Frithville and Sibsey whilst avoiding residential properties. From Sibsey, further optionality is introduced to avoid a large cluster of properties at Fishtoft. Of these, the northern option would seek to cross West Fen Drain immediately south of Frithville before turning south-west of Fishtoft, whilst the southern option would seek to cross West Fen Drain south of Fishtoft at a narrow area north of Richardson's Bridge. At Fishtoft, these sub-options converge and route south-west avoiding residential and agricultural properties, crossing both Frith Bank Drain and the River Witham south-east of Anton's Gowt. The route would then turn directly south seeking to cross South Forty Foot Drain and the A1121 west of the Boston Aeroclub.

**To provide feedback on this section of the emerging preferred corridor, please see question 3i on our feedback form.**

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



### Legend

- Graduated swathe
- Underground cables emerging preferred corridor
- 132kV overhead line
- Important Bird Areas (GB)
- RSPB Reserves (GB)
- Site of Special Scientific Interest
- Ramsar Site
- Special Areas of Conservation
- Special Protection Areas

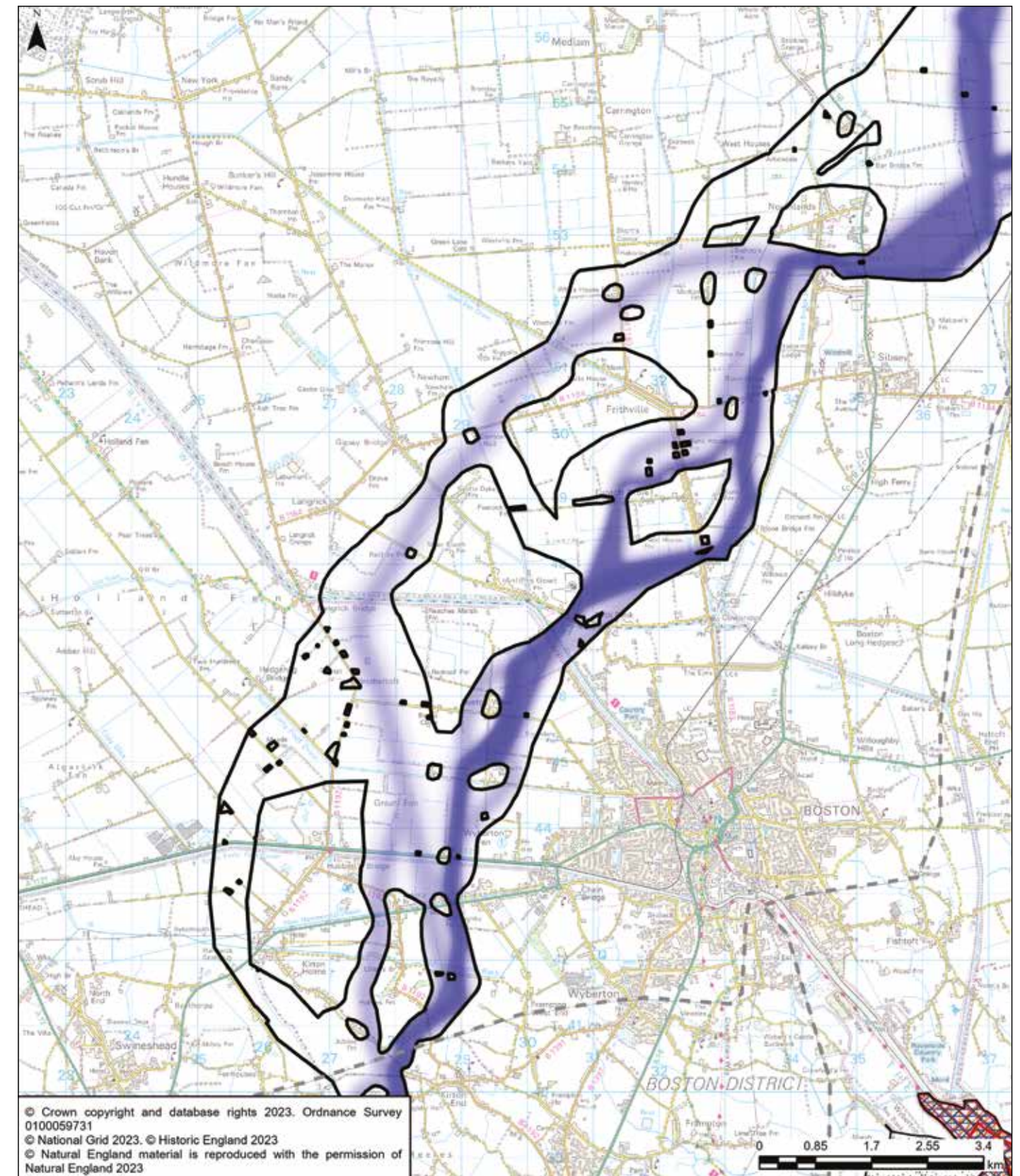


Figure 14 Map showing Section 5 of the underground cables emerging preferred corridor



# Section 6

## Hubbert's Bridge to River Welland

Infrastructure in Section 6 includes:

- underground cables: HVDC.

This section of the emerging preferred corridor (see **Figure 15**) runs from a point east of Hubbert's Bridge to the River Welland, north of the Moulton Seas End (west of the B1357).

From the east of Hubbert's Bridge, optionality is introduced to retain the option of a perpendicular crossing of New Hammond Beck and the A52 whilst seeking to avoid the areas of woodland and a cluster of residential and agricultural properties along the B1192 Holmes Lane. One option would cross to the west of the B1192 and the other would cross east of B1192. Both underground cable routes would require crossing of the Old Hammond Beck watercourse. The route options would then converge west of Kirton End, requiring crossing an existing 132 kV overhead line and the B1391 before continuing to route directly south.

The route of the cables would then turn south-east seeking a perpendicular crossing of the B1397 and A16 north-east of the villages of Sutterton and Algarkirk whilst also avoiding the Scheduled Monument Shrunkon medieval village located within Algarkirk.

After crossing the A16, the cables would then continue south, crossing the A17 and Three Towns Drain west of Fosdyke. Optionality is then introduced to avoid the areas of woodland and a cluster of agricultural properties south-west of Fosdyke before the options converge seeking a perpendicular crossing of Outer Dowsing offshore windfarm and the River Welland west of Fosdyke Bridge to avoid direct impacts on The Wash designated sites located east of Fosdyke Bridge.

**To provide feedback on this section of the emerging preferred corridor, please see question 3j on our feedback form.**

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



### Legend

- Graduated swathe
- Underground cables emerging preferred corridor
- Site of Special Scientific Interest
- Important Bird Areas (GB)
- RSPB Reserves (GB)
- 132kV overhead line
- 400kV overhead line
- 400kV towers
- Special Areas of Conservation
- Special Protection Areas

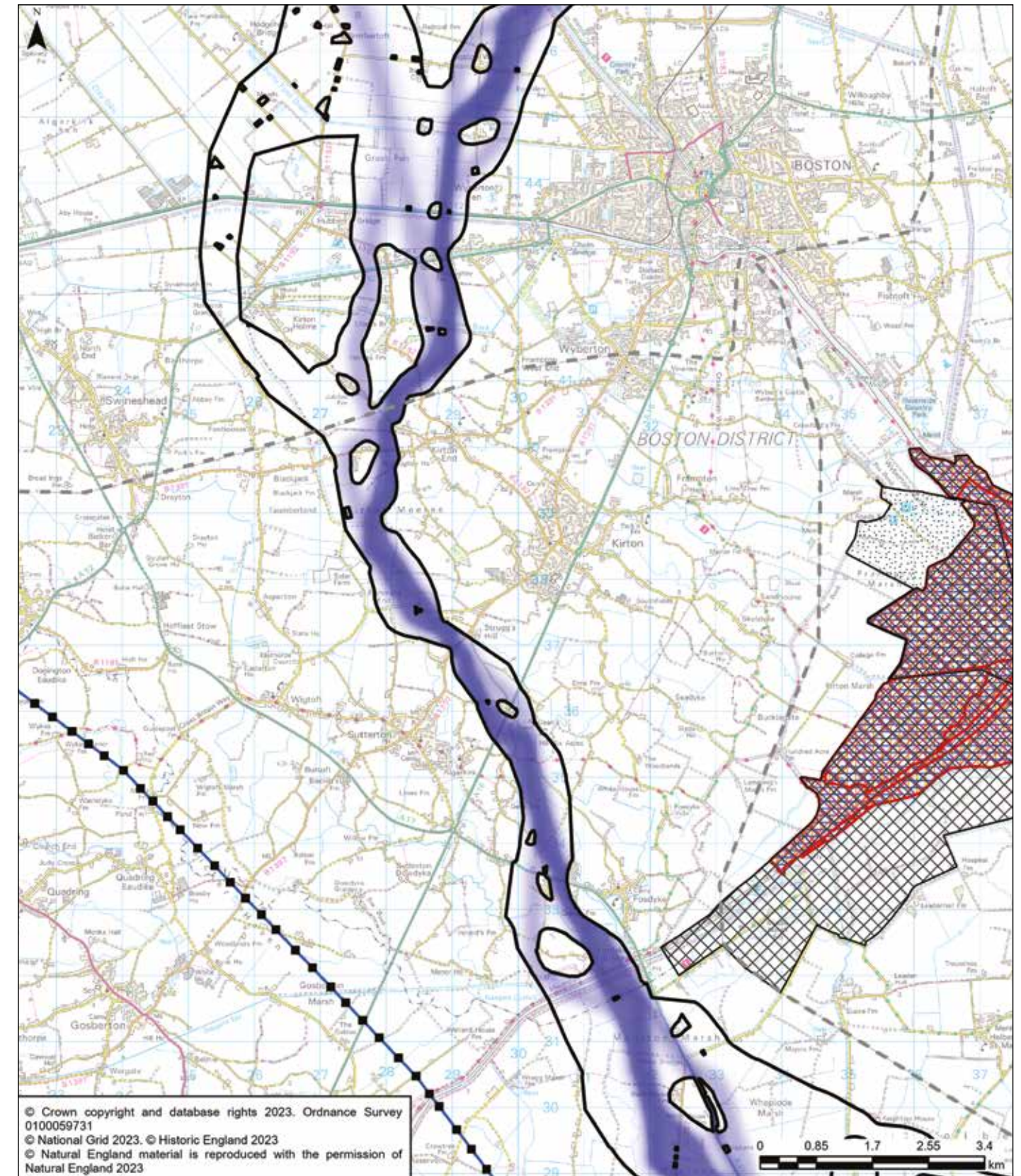


Figure 15 Map showing Section 6 of the underground cables emerging preferred corridor



# Section 7

## River Welland to Foul Anchor

Infrastructure in Section 7 includes:

- underground cables: HVDC.

This section of the emerging preferred corridor (see Figure 16) runs from a point north of Moulton Seas End to a point immediately east Foul Anchor (east of the A1101).

From Moulton Seas End, the cable route would continue eastward to avoid the village of Saracen's Head before turning to route south at Clays Garth (west of Holbeach Hurn) to seek a perpendicular crossing of the A17 and B1515 between Holbeach and Fleet Hargate. However, optionality is also introduced to route along approximately 6km of the A17 between a point north of Saracen's Head to a point between Holbeach and Fleet Hargate to utilise a more direct route south-east towards the connection point at Walpole.


From the east of Holbeach, the route option which does not follow the A17 would route directly south avoiding residential and agricultural properties before turning to route south-east to the north of the B1165 Raven's

Gate to avoid interactions with the existing 4ZM 400 kV overhead line south of Gedney Broadgate. The underground cable route would then cross the B1390 and South Holland Main Drain north-east of Sutton St James before continuing to route directly east, avoiding the villages of Tydd St Mary and Tydd Gote before crossing the River Nene north of Foul Anchor. Crossing of a gas main would be required from either option north of Foul Anchor and at, or south of, the A17.













Additionally, optionality is also included to route along approximately 9.3 km of the A17 between Holbeach and a point between Long Sutton and Sutton Bridge. From Sutton Bridge, the route would turn directly south, with further optionality introduced to avoid interactions with a cluster of wind turbines north of Foul Anchor. Both route options in this location would require crossing South Holland Main Drain, the River Nene and at least one crossing of an existing 132 kV overhead line.

**To provide feedback on this section of the emerging preferred corridor, please see question 3k on our feedback form.**

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



### Legend

- |  |   |   |   |
|--|---|---|---|
|  Graduated swathe                               |  RSPB Reserves (GB)                  |  Special Areas of Conservation |  132kV overhead line |
|  Underground cables emerging preferred corridor |  Site of Special Scientific Interest |  Special Protection Areas      |  400kV overhead line |
|  Important Bird Areas (GB)                      |  Ramsar Site                         |  Existing substation           |  400kV towers        |

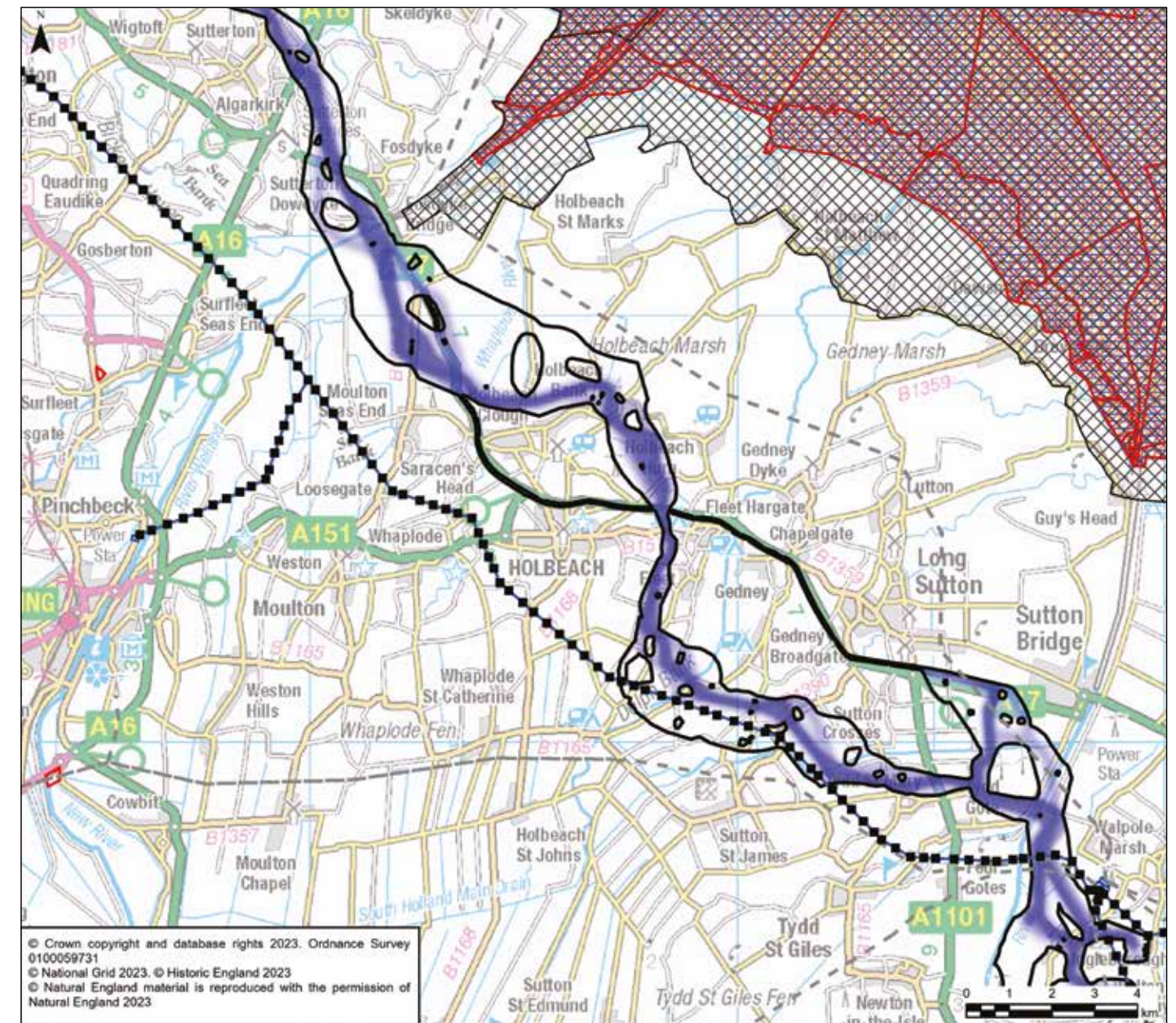


Figure 16 Map showing Section 7 of the underground cables emerging preferred corridor



## Section 8

### Foul Anchor to Walpole

Infrastructure in Section 8 includes:

- underground cables: both HVDC and HVAC
- two converter stations in the Walpole area
- one substation in the Walpole area.

This section of the emerging preferred corridor (see **Figure 17**) runs from a point east of Foul Anchor to the emerging proposed Walpole converter station siting zone and proposed Walpole substation siting zone.

From the east of Foul Anchor, the route would then turn south seeking a perpendicular crossing of the existing 4ZM 400 kV overhead lines and two 132 kV overhead lines which connect to the existing Walpole 400 kV substation. Following this crossing optionality is introduced to allow for multiple entry points into the proposed Walpole converter station siting zone (see **Figure 19**) whilst avoiding properties, West Walton Fire Station and the Rose and Crown solar farm.

The first option would continue south before turning east to follow the boundary of the converter station

siting zone, before turning south again, seeking a perpendicular crossing of the Bacton to Wisbech Nene East high pressure gas pipeline immediately west of the Rose and Crown solar farm.

The underground cable route could also continue further east through a narrow area immediately south of the Rose and Crown solar farm associated with the Bacton to Wisbech West high pressure gas pipeline and an area of traditional orchard priority habitat. This route would allow for connection into a substation siting zone (see **Figure 18**) south-east of the Rose and Crown Solar Farm. There is also an option to route further east in parallel to the high-pressure gas main, crossing the existing 4ZM 400 kV overhead line allowing for a potential connection to a converter station siting zone (see **Figure 19**) north-east of the Rose and Crown solar farm.

**To provide feedback on this section of the emerging preferred corridor and siting zones, please see questions 3l, 3m and 3n on our feedback form.**

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



#### Legend

- Graduated swathe
- Underground cables
- emerging preferred corridor
- 132kV overhead line
- 400kV overhead line
- 400kV towers

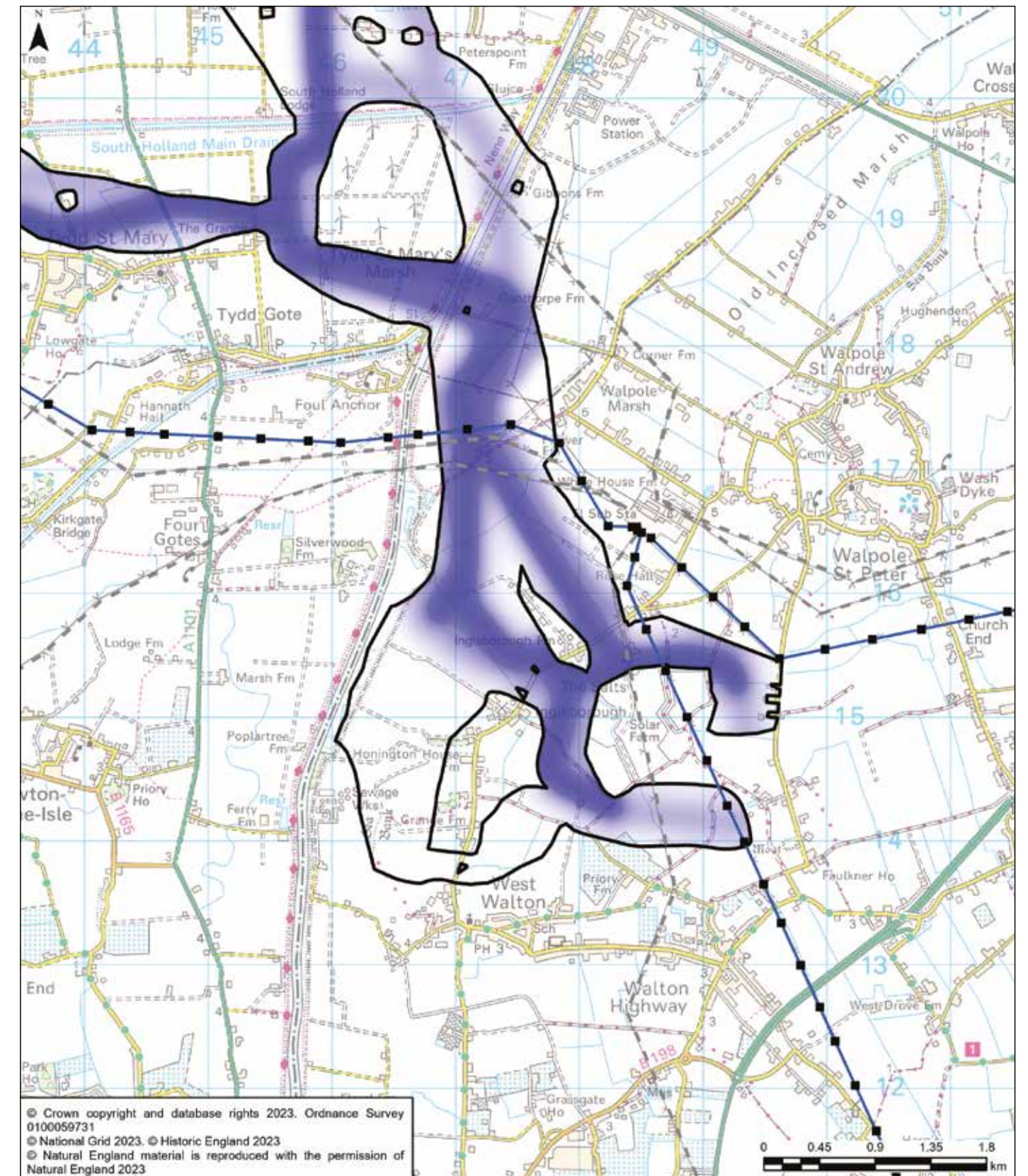


Figure 17 Map showing Section 8 of the underground cables emerging preferred corridor



Legend

- Graduated swathe
- Existing Substation
- 400kV Overhead Line
- Substation siting zone
- 132kV Overhead Line
- 400kV Towers

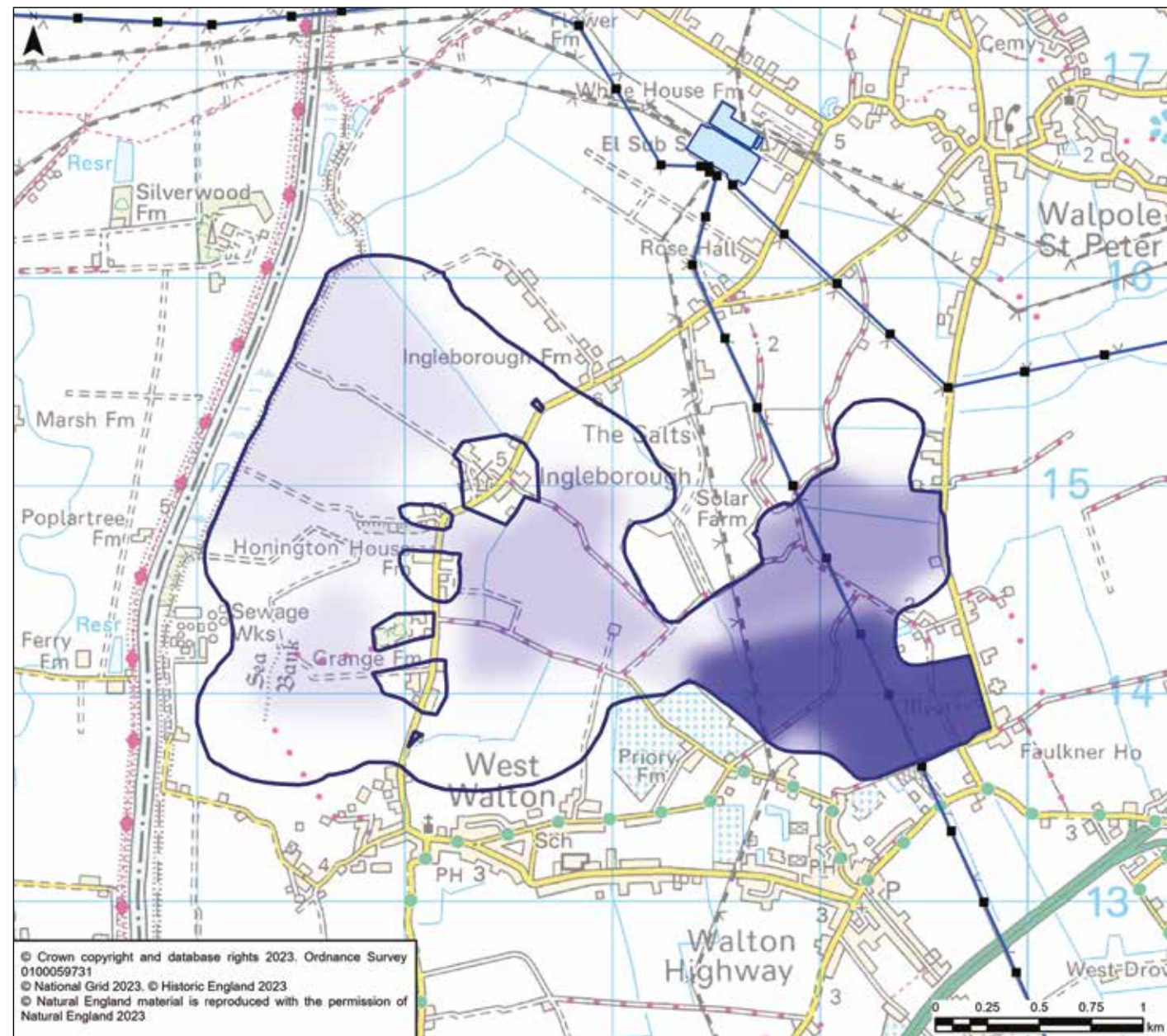


Figure 18 Map showing the proposed siting zone for the Walpole substation

Legend

- Graduated swathe
- Existing Substation
- 400kV Overhead Line
- Converter stations siting zone
- 132kV Overhead Line
- 400kV Towers

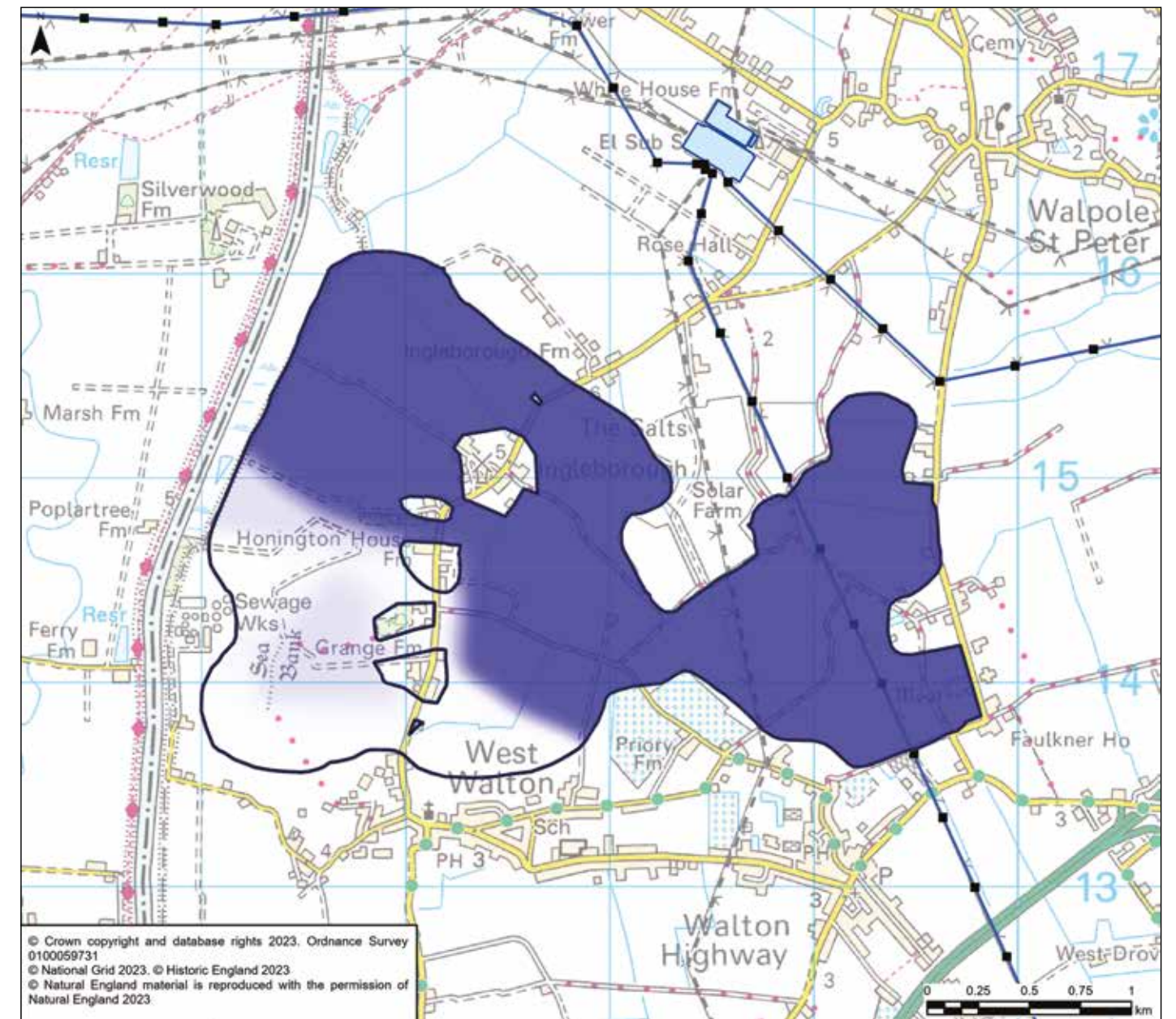


Figure 19 Map showing the proposed siting zone for the Walpole converter stations



# Construction

## Should consent be granted for EGL 3 and EGL 4, construction is expected start in 2028 and would take approximately five years.

We are at an early stage in the development of proposals for EGL 3 and EGL 4, and this section outlines our typical, and relevant, construction methods.

We will be able to share more detail on proposed construction methods, their likely impacts (both temporary and permanent) and impact mitigations at the next stage of consultation when we have refined our proposals in light of consultation feedback, technical assessments and environmental surveys.

### How our cable will make landfall

Our preference is to use a trenchless construction method, such as Horizontal Directional Drilling (HDD) (see Figure 20), to reduce disruption and potential environmental impacts where cables come ashore. Consultation and ground investigation works are required to confirm whether this is possible.

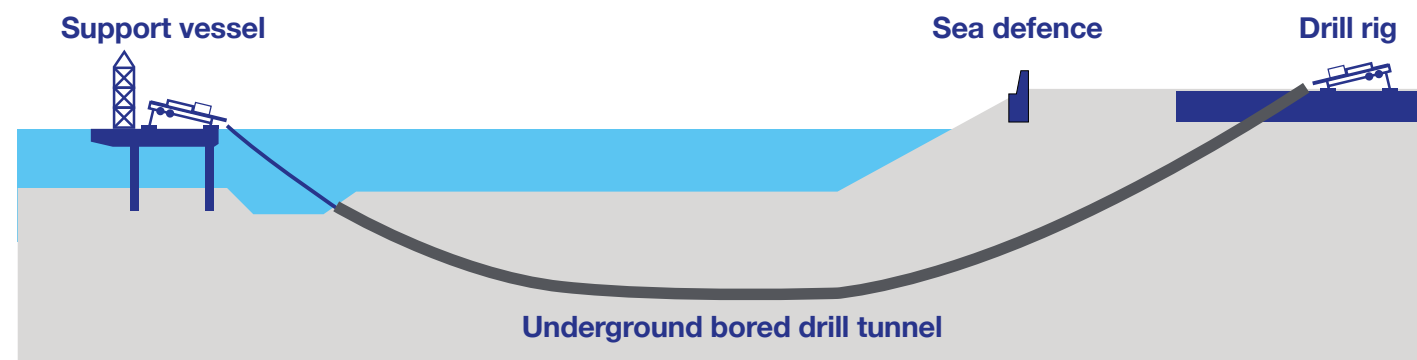


Figure 20 Diagram showing landfall HDD

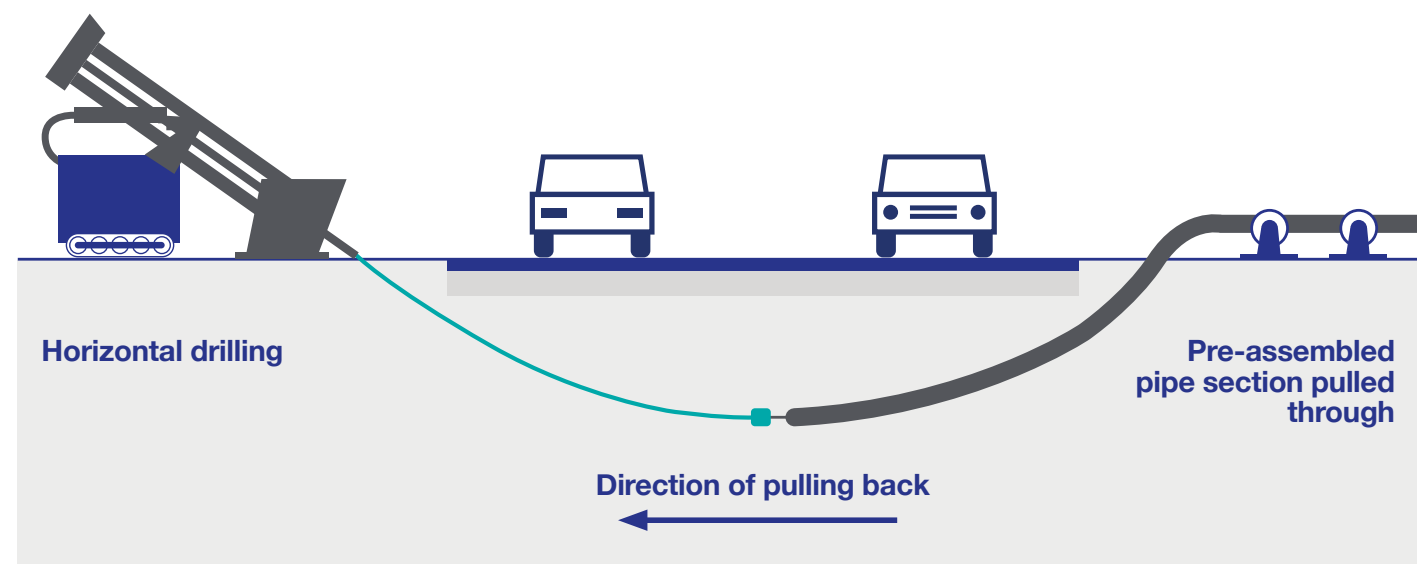


Figure 21 Diagram showing typical HDD method

### How we install onshore underground cables

Before we install electricity cables on land, we undertake extensive technical studies and surveys, and work with landowners 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 HVDC and HVAC underground cables, including ducted and trenchless methods.

In the ducted method (see Figure 22), we would first dig a trench (typically 2.5m wide and 0.9m deep) carefully removing the soil in layers. Then we would install the ducts within the trench, covering them by carefully replacing the soil. The cables would then be pulled through the ducts. This approach minimises the length of time soils are exposed.

Where necessary, trench depths may be deeper. This will be determined through feedback from consultation, information from surveys and ongoing design studies.

Trenchless methods, such as such as Horizontal Directional Drilling (HDD), allow us to install cables while minimising interaction with the land surface, which reduces the impact on wildlife, traffic, and local communities (see Figure 21). Use of HDD or other trenchless methods depends on local conditions and any obstacles we need to overcome.

A construction area is required for the installation of underground cables. This area – or construction corridor, also known as a ‘swathe’ – includes the cable trenches, soil storage and a temporary haul road. We expect that the construction corridor for the co-located HVDC cables for EGL 3 and EGL 4 would be approximately 80m wide, depending on location.

Additional working areas would be required beyond the construction corridor for related construction activities including, for example, site compounds and storage of construction materials. Once the underground cables have been installed, soil removed and stored nearby will then be carefully reinstated and the land returned to its former use.

Figure 22 The ducted method of cable laying





# Managing and mitigating effects

**Feedback from consultation, along with findings of our ongoing environmental assessments, will help shape the proposals for EGL 3 and EGL 4. 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 offset – or compensate for – effects by planting or enhancing the environment near to the area of works. We will work closely with local authorities and relevant stakeholders to identify what kind of enhancement is most suitable and where to locate these.

## Environmental Impact Assessment

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 (EIA) and submit a full Environmental Statement (ES) and non-technical summary as part of our application for development consent.

Our statutory consultation, scheduled for 2025, 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

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. We have committed to achieving a 10% biodiversity net gain for new major projects to ensure we leave the site and local area in a measurably better state than before the development took place. This may be delivered on site or off site through habitat creation and/or enhancement.



## Protecting soil and agricultural land

We appreciate the national significance of the agricultural land where EGL 3 and EGL 4 would be located and would put measures in place to reduce our impact, including:

- the careful removal of soil along the route of the cable to store it adjacent to the working area, meaning soil resources of the same texture, organic matter content and nutrient status can be reinstated in the same area it was removed 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
- soil handling works will be supervised by appropriately qualified and experienced individuals, and an appropriate aftercare period and plan will be set out.

Through the implementation of these mitigation measures the projects aim to reinstate land to its original condition and land grade.

## Drainage

We also recognise the importance of effective drainage for local farmers and propose the following measures for land affected by EGL 3 and EGL 4:

- 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
- 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](http://www.nationalgrid.com/electricity-transmission/document/145316/download)

## Information for landowners

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

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 to confirm a legal interest on is available on public registers, we have appointed land referencing firm Ardent to contact individual landowners to verify the publicly available information and ensure NGET has made best efforts to identify any potentially impacted landowners. Ardent operates across multiple sectors, providing land and consenting advice to support the promotion and delivery of major projects in the UK and Ireland.

Ardent will also assist with contacting landowners and occupiers to arrange access for non-intrusive and intrusive surveys which we plan to carry out from summer 2024. 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 [egl3and4@ardent-management.com](mailto:egl3and4@ardent-management.com) or call **0203 693 2500** or write to: **EGL 3 and EGL 4, Ardent, 36 Park Row, Leeds, LS1 5JL**



# Next steps

## The feedback we receive at Stage 1 consultation, along with outputs from technical assessments and environmental surveys, will shape the development of our proposals for EGL 3 and EGL 4.

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 an interest in land which interacts with the projects
- 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 proposed route

- provide updates to those who have asked to be kept updated on our proposals via email
- post updates on the EGL 3 and EGL 4 project website at [nationalgrid.com/egl3andegl4](https://nationalgrid.com/egl3andegl4). You can register for these updates on our website
- continue to refine our proposals in response to feedback and results from technical studies and surveys.

We will present updated proposals for EGL 3 and EGL 4 during our next stage of consultation, planned for 2025.

Following further development and finalisation of detailed proposals, 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.



# How to find out more

The EGL 3 and EGL 4 Stage 1, non-statutory consultation will run for eight weeks, **from Tuesday 23 April to Monday 17 June 2024**, and is open to anyone with an interest in our proposals. The deadline to provide feedback is 11:59pm on Monday 17 June 2024. All consultation information is available on our website: [nationalgrid.com/egl3andegl4](https://nationalgrid.com/egl3andegl4).

Printed copies of the consultation newsletter, feedback form and Project Background Document are available free of charge on request or to collect at consultation events and local information points. Reference only copies of the Corridor Preliminary Routeing and Siting Study (CPRSS) and Strategic Option Report (SOR) are also available to view at local information points.

Throughout the consultation we are holding a series of face-to-face events (**see Table 1 on page 7**). These

consultation events will include information about our proposals, with copies of maps and technical documents available to view. Members of the project team will be available to answer questions about our proposals.

Our online webinar sessions will include a presentation of our proposals followed by an open question and answer session. You can attend the webinar most relevant to you by joining one of our location-themed webinars (**see Table 2 on page 7**). Details on how to sign-up for a webinar are available on the website or by contacting us on **0800 298 0405** or by emailing [contactegl3and4@nationalgrid.com](mailto:contactegl3and4@nationalgrid.com).

You can also book an 'ask the expert' telephone or video appointment with the team by using the contact details above. These individual sessions will be available for the duration of the consultation period.

### To learn about our proposals:

- read this quick read version of our Project Background Document (you can also read our longer version Project Background Document)
- visit our website at: [nationalgrid.com/egl3andegl4](https://nationalgrid.com/egl3andegl4)
- come to a consultation event (**see Table 1**)
- join an online webinar session (**see Table 2**)
- visit a local information point (**see Table 3**)
- book an 'ask the expert session' 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 298 0405**. Lines are open Monday to Friday 9am–5pm, with an answerphone facility taking messages outside of these hours
- email us: [contactegl3and4@nationalgrid.com](mailto:contactegl3and4@nationalgrid.com)

### To respond to the EGL 3 and EGL 4 consultation:



Complete the online feedback form on our website



Email your comments to: [contactegl3and4@nationalgrid.com](mailto:contactegl3and4@nationalgrid.com)



Call us on freephone **0800 298 0405**



Post your written responses (no stamp required) to: **Freepost EASTERN GREEN LINKS 3 & 4**



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

**Your comments must be received by 11.59pm on Monday 17 June 2024.**



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[nationalgrid.com](https://www.nationalgrid.com)