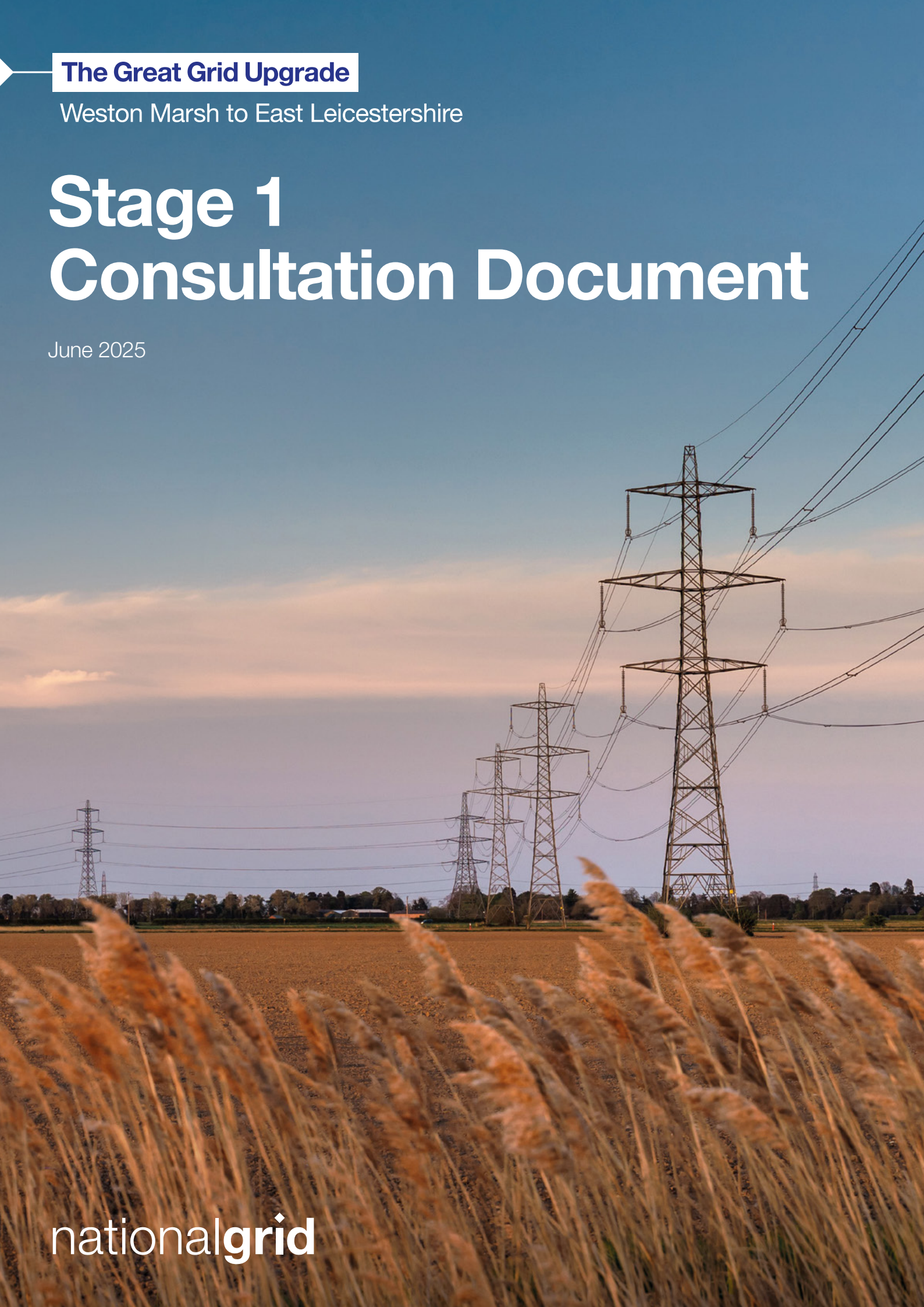
The Great Grid Upgrade

Weston Marsh to East Leicestershire

Stage 1 Consultation Document

June 2025



nationalgrid

About National Grid and The Great Grid Upgrade

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

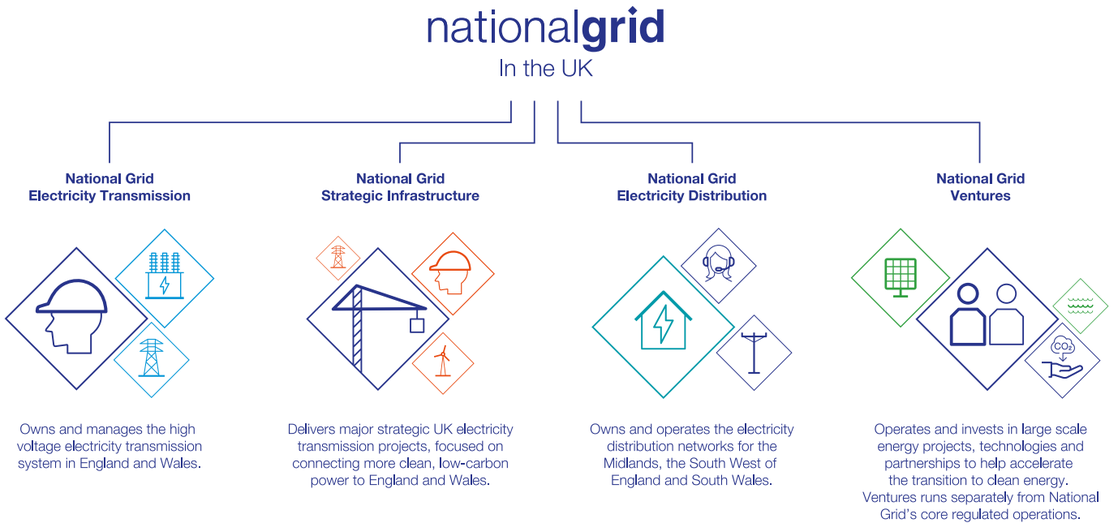


Figure 1 – Divisions of National Grid

National Grid Electricity Transmission's role

National Grid Electricity Transmission (NGET)'s Strategic Infrastructure delivery unit is developing the proposals for Weston Marsh to East Leicestershire, which are 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].

We don't generate electricity. We own and maintain the high voltage transmission network in England and Wales, transporting large amounts of electricity at high voltage from where it is generated to where it is needed. 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 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

What is The Great Grid Upgrade?

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 – offshore and from solar.

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 dependence on fossil fuels[3].

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 £18.4 bn to GDP.

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

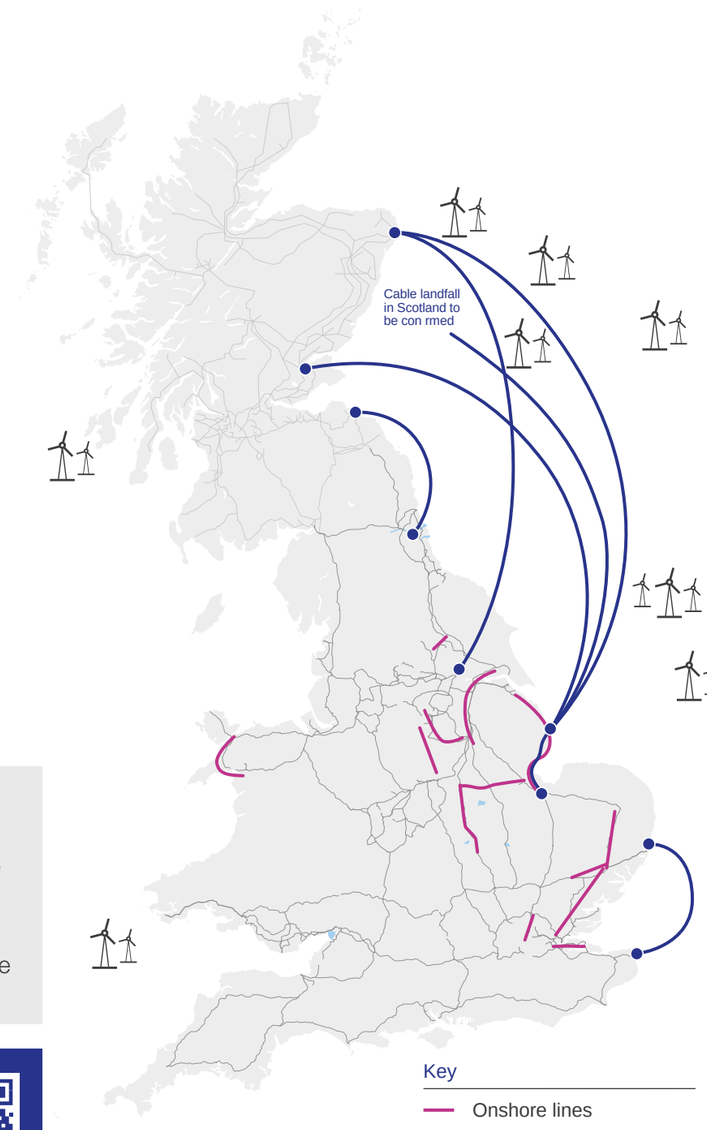


Figure 2: Map of existing high voltage electricity transmission network and projects proposed as part of The Great Grid Upgrade

[3] Clean Power 2030, Department of Energy Security and Net Zero, December 2024, https://assets.publishing.service.gov.uk/media/677bc80399c93b7286a396d6/clean-power-2030-action-plan-main-report.pdf

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Foreword

Thank you for your interest in Weston Marsh to East Leicestershire and our plans for upgrading the electricity grid in your local area. Our work is key to delivering The Great Grid Upgrade.

Our proposals for upgrading the electricity transmission system between Weston Marsh and East Leicestershire include constructing a new 400,000 volt (400 kV) overhead line and two new substations.

The project also includes the reconductoring of approximately 55 km of existing overhead line. This important upgrade will involve the replacement of conductors (wires) on an existing overhead line to increase resilience and upgrade the network.

We are pleased to share our plans for Weston Marsh to East Leicestershire and welcome your feedback as part of our Stage 1 consultation, which runs from **Wednesday 11 June to Wednesday 6 August 2025**.

We encourage you to share your views on our proposals and let us know if there is anything you would like us to consider as we continue to develop them. We will present our refined project and seek further feedback in the future.

All documents published as part of the consultation, including this Stage 1 Consultation Document, can be found at **nationalgrid.com/wmel** and are available on request by contacting the project team at **ContactWMEL@nationalgrid.com** or **0800 138 9191**.

We encourage everyone to review the proposals, get in touch with any questions you may have, and respond by 11:59pm on Wednesday 6 August 2025. More information on how to respond to our consultation can be found in this document.



Ben Muncey
Project Director, Weston Marsh to East Leicestershire

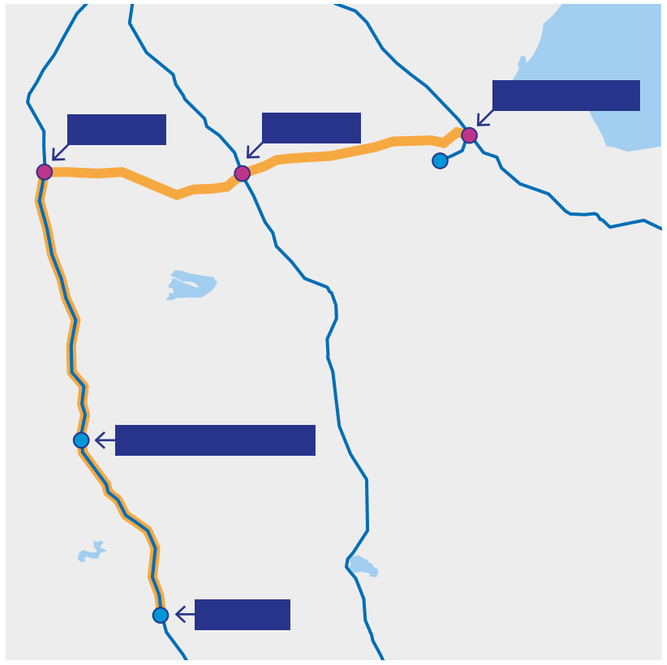


Figure 3: Location of project proposals

Consulting on our proposals

Weston Marsh to East Leicestershire is a project of national significance. This type of project requires a special type of planning consent known as a Development Consent Order (DCO)[4].

Consultation is an important part of the DCO process as it enables everyone to comment on the proposals. The Weston Marsh to East Leicestershire project is in the early stages of development and feedback from all stages of consultation – along with the outcome of technical assessments and environmental surveys – will help us to develop our proposals before we submit our DCO application.

The Planning Inspectorate will examine our application and encourage the submission of views from stakeholders as well as residents in nearby communities and other interested parties. They will then make a recommendation to the Secretary of State for Energy Security and Net Zero who will decided whether to grant consent for the construction and operation of Weston Marsh to East Leicestershire.

Our approach to consulting with communities

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

As part of the Great Grid Upgrade, Weston Marsh to East Leicestershire will contribute to its aims: delivering social and economic benefits as well as providing a vital environmental service to Britain by decarbonising the electricity network.

Public consultation stages

Consultation on Weston Marsh to East Leicestershire is planned to take place in two stages.

This Stage 1 consultation – running for eight weeks from **Wednesday 11 June to Wednesday 6 August 2025** – is designed to introduce our early proposals and gain your feedback. It is a 'non–statutory' consultation, which is an optional stage of the DCO process. We recognise the importance of local knowledge in developing a project and are keen to seek feedback at a point early enough in the process to allow people the opportunity to influence the proposals. The deadline for providing feedback is **11:59pm on Wednesday 6 August 2025**.

Statutory consultation is a required stage of the DCO process and will take place when the Weston Marsh to East Leicestershire proposals are more defined. Before carrying out a statutory 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 gives information about how we plan to engage with the community, including how and where there will be opportunities for members of the public to get involved, ask questions and submit feedback.

Our statutory consultation will show how we have developed our proposals having considered the feedback received as part of this Stage 1 consultation along with the outcomes of technical assessments and environmental surveys. The statutory consultation will offer a further opportunity to share your views.

[4] More information on the DCO process is available at: https://national-infrastructure-consenting.planninginspectorate.gov.uk/decision-making-process-guide

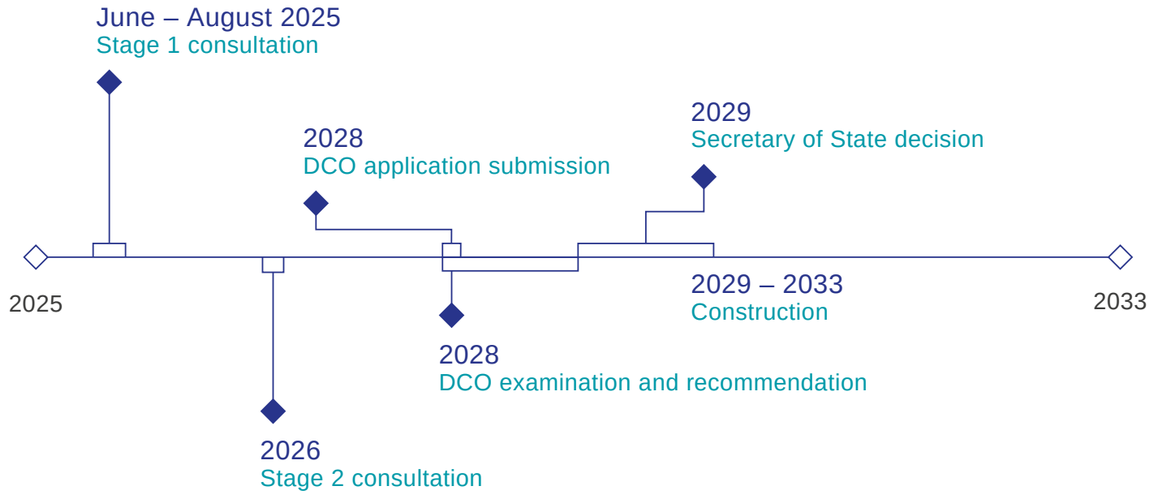


Figure 4: Indicative project timeline

What are we consulting on?

During this Stage 1 consultation, we are seeking views on our proposals for:

- approximately 60 km of new 400,000 volt (400 kV) overhead line from Weston Marsh 400 kV substation(s) in Lincolnshire to East Leicestershire;
- two new proposed substations, one near Corby Glen in Lincolnshire (known as WMEL–A) and one near Wartnaby in Leicestershire (known as WMEL–B); and
- upgrading (reconductoring) approximately 55 km of existing 400 kV overhead line from the proposed new substation near Wartnaby to the existing Grendon substation, east of Northampton.

More detail on these proposals is included later in the document. We are also interested in hearing from you about:

- any concerns or questions you might have about our proposals, or any local factors we should consider;
- local features that are important to you, including any relevant mitigation you would like to see; and
- whether there is anything else we should consider as we develop our proposals further.

Your feedback is important in helping us to develop and refine our plans and we will record all responses we receive.

Following the consultation, we will report back on the key themes raised and how we have responded to comments in the development of our plans. Please see our Stage 1 Consultation Strategy (available at **nationalgrid.com/wmel**) for further details on our approach to this consultation.

Other National Grid projects in the region

Before we propose any necessary new infrastructure, we work to make the most of the existing network. However, demand is rising and the way electricity is generated is changing, so we need to deliver upgrades to the Grid across England and Wales, including between Lincolnshire and the East Midlands.

The Grid is a national network, and we must plan its reinforcement as a whole. There are several other Great Grid Upgrade projects located in the region, each serving a unique purpose in reinforcing the network, connecting clean energy from where it's generated to where it's needed.

You may have received communications in relation to consultations for National Grid's separate projects known as **Eastern Green Link 3 and 4 (EGL 3 & EGL 4), Eastern Green Link 5 (EGL 5) and Grimsby to Walpole**.

These projects will run separate consultation processes. If feedback relating to one of these other projects is provided in response to this consultation for Weston Marsh to East Leicestershire, we will share this with the respective project team. However, if you have specific questions about other National Grid projects, you should engage directly with the relevant project.

You can find more information about EGL 3 & EGL 4, EGL 5 and Grimsby to Walpole on their project websites listed below.

- **Grimsby to Walpole** – nationalgrid.com/g-w
- **Eastern Green Link 3 and 4** – nationalgrid.com/egl3andegl4
- **Eastern Green Link 5** – nationalgrid.com/egl5

Four new National Grid projects connecting in the region

Project name and information	Connection to Weston Marsh to East Leicestershire	Consultation timelines
Grimsby to Walpole Proposals for 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. **Powering up to six million homes**.	Weston Marsh to East Leicestershire would connect to the infrastructure at Weston Marsh substation(s), which are being developed as part of the Grimsby to Walpole project.	**Stage 2 consultation** June – August 2025
Eastern Green Link 3 and 4 (EGL 3 & EGL 4) EGL 3 and EGL 4 are two primarily offshore subsea cables, needed to move clean wind energy generated offshore in Scottish waters through offshore subsea cables and underground onshore cables to the Midlands and South of England. **Powering up to two million homes each**.	The EGL 3 and EGL 4 cable route passes east of Weston Marsh, where the new overhead line for Weston Marsh to East Leicestershire begins.	**Stage 2 consultation** May – June 2025
Eastern Green Link 5 (EGL 5) EGL 5 is a subsea cable, connecting offshore wind generated in Scotland **to power around two million homes** in the Midlands and South of England.	While there is no direct connection to Weston Marsh to East Leicestershire, EGL 5 makes landfall on the Lincolnshire coast and is part of the wider upgrade of the Grid in the region.	**Stage 1 consultation** May – June 2025

Table 1: Four new National Grid projects connecting in the Lincolnshire area

Stage 1 consultation materials

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:

- **Stage 1 Consultation Document** – This document provides an overview of the project, details our proposals and how we are consulting
- **Community newsletters** – These provide the latest updates on the progress of the project and our plans for consultation
- **Project website** – Hosts all project information, including downloadable versions of all consultation documents, Frequently Asked Questions, and the online feedback form: nationalgrid.com/wmel
- **Interactive map** – Shows the location of the preferred overhead line route and substations, and the location of the reconductoring
- **Feedback form** – To gather comments and feedback on our proposals
- **Stage 1 Consultation Strategy** – A document detailing how we intend to carry out our Stage 1 consultation
- **Strategic Options Report** (SOR) – A technical document that shows the need case for Weston Marsh to East Leicestershire and what proposals we considered to address it
- **Corridor Preliminary Routeing and Siting Study** (CPRSS) – A technical document that shows how we developed our preferred strategic options.

These documents are published on our project website: nationalgrid.com/wmel. **We recommend that you read these reports as they contain more detail which could help inform your feedback.**

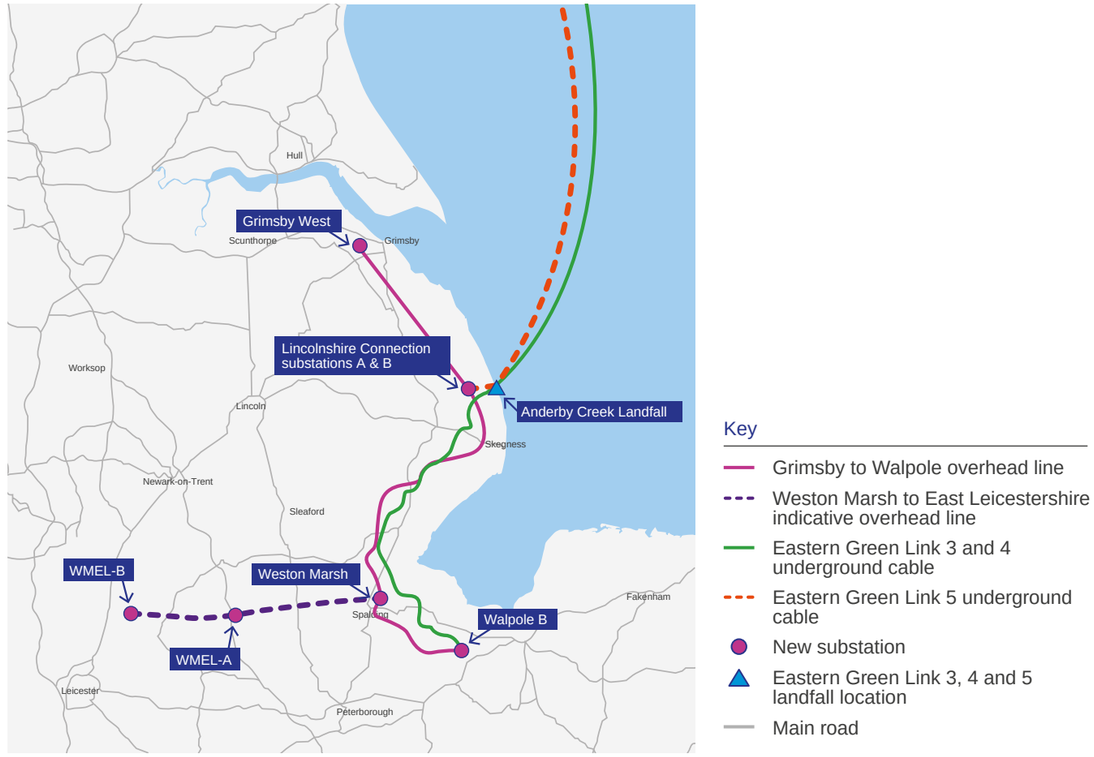


Figure 5: Projects in the region that are part of The Great Grid Upgrade

How to find out more

During the consultation we are holding eight public information events (see Table 2). At these events we will present information about the 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 near to NGET's proposed Grimsby to Walpole project, we will be holding one joint event.

Table 2: Public information events

Venue	Time and date
Corby Glen Village Hall (Ron Dawson Memorial Hall), Swineshead Road, Corby Glen, Grantham, NG33 4NU	Saturday 21 June 2025 2–7pm
Surfleet Village Hall, Glen Gardens, Station Road, Surfleet, Spalding, PE11 4BW	Thursday 26 June 2025 11am–5pm
Great Doddington Memorial Hall, High Street, Great Doddington, Wellingborough, NN29 7TQ	Friday 27 June 2025 1–7pm
Morton Village Hall, 11 High Street, Morton, Lincolnshire, PE10 0NR	Saturday 28 June 2025 11am–4pm
Braybrooke Village Hall, Griffin Road, Braybrooke, Market Harborough, LE16 8LH	Thursday 3 July 2025 2–7pm
South Witham Village Hall, Water Lane, South Witham, Grantham, NG33 5PH	Friday 4 July 2025 1–7pm
Ab Kettleby Community Hall (within Ab Kettleby School), Wartnaby Road, Ab Kettleby, Melton Mowbray, Leicestershire, LE14 3JJ	Saturday 5 July 2025 11am–4pm
Weston Village Hall, Small Drove, Weston, Spalding, PE12 6HU *	Thursday 10 July 2025 1–7pm

*Joint face–to–face public information event with Grimsby to Walpole

Table 3: Webinars

We will run online webinar sessions, where we will present our proposals and hold an open question and answer session. We will be holding five webinars (see Table 3 for details). Details on how to sign–up for a webinar are available on the project website, by contacting us on **0800 138 9191** or by emailing **ContactWMEL@nationalgrid.com**.

Webinar name	Date	Time
General – overview of proposals	Wednesday 18 June 2025	1–2pm
Sections 1, 2 & 3	Tuesday 15 July 2025	6:30–7:30pm
Sections 4 & 5	Thursday 17 July 2025	6:30–7:30pm
Reconductoring section	Monday 21 July 2025	6:30–7:30pm
General – overview of proposals	Thursday 24 July 2025	6:30–7:30pm

Table 4: Local information points

Paper copies of the Community Newsletter, Stage 1 Consultation Document, Feedback Form, Freepost envelopes and reference copies of the Corridor Preliminary Routeing and Siting Study (CPRSS) and Strategic Options Report (SOR) are available to collect from the locations listed below.

Information point	Address	Opening times	
Spalding Library	Victoria Street, Spalding, PE11 1EA	Monday – Wednesday Thursday Friday Saturday Sunday	9am–5pm 9am–6pm 9am–5pm 9am–1pm CLOSED
South Kesteven Community Point / Bourne Library	Corn Exchange, 3 Abbey Road, Bourne, PE10 9EF	Monday Tuesday Wednesday Thursday Friday Saturday Sunday	9am–5pm CLOSED 9am–6pm CLOSED 9am–1pm 9am–1pm CLOSED
Stamford Library	30 High Street, Stamford, PE9 2BB	Monday – Wednesday Thursday Friday Saturday Sunday	9am–5pm 9am–6pm 9am–5pm 9am–4pm CLOSED
Grantham Library	Newton Street, Grantham, NG31 6EE	Monday – Wednesday Thursday Friday Saturday Sunday	9am–5pm 9am–6pm 9am–5pm 9am–4pm CLOSED

Information point	Address	Opening times	
South Witham Village Hall	Water Lane, South Witham, Grantham, NG33 5PH	Monday – Friday Saturday Sunday	6:30am–7pm 7:30am–7pm 8am–7pm
Corby Library	The Cube, George Street, Corby, NN17 1QG	Monday – Friday Saturday Sunday	9am–6pm 9am–5pm CLOSED
North Northamptonshire Council Office	Tithe Barn, Tithe Barn Road, Wellingborough, NN8 1BZ	By appointment only	
Kettering Library	Sheep Street, Kettering, NN16 0AY	Monday – Friday Saturday Sunday	9am–6pm 9am–5pm CLOSED
West Northamptonshire Council office *this office will be closing in July. From July documents can be found at their new location in One Angel Square.	The Guildhall, St Giles Street, Northampton, NN1 1DE	Monday – Friday Saturday – Sunday	9am–5pm CLOSED
Melton Mowbray Library	Wilton Road, Melton Mowbray, LE13 0UJ	Monday – Wednesday Thursday Friday Saturday Sunday	10am–6pm CLOSED 10am–6pm 10am–4pm CLOSED
Oakham Library	Catmose Street, Oakham, LE15 6HW	Monday – Friday Saturday Sunday	9am–5pm 9am–1pm CLOSED

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

How to give feedback

Our Stage 1 consultation runs from **Wednesday 11 June until Wednesday 6 August 2025**. You can respond in several ways:

Online
You can give your feedback by completing our online feedback form, available at nationalgrid.com/wmel

Email
You can send written feedback via email to ContactWMEL@nationalgrid.com

Paper feedback form
You can download and print a copy of our feedback form from our website and post it back to us at **FREEPOST WM TO EL** (no stamp or other address details needed). You can also pick up a paper feedback form from any of the public information events or deposit points. Alternatively, you can request a consultation pack (newsletter, feedback form and freepost envelope) to be sent to you in the post.



Important – to avoid any misinterpretation and to ensure we have an accurate record of what we have received, we can only accept written feedback via the methods above. You are still welcome to use our community information line (**0800 138 9191**) or speak to us at our events for information on the project.

The need

Weston Marsh to East Leicestershire would play an important role in building a more secure and resilient future energy system by reliably transporting clean, renewable energy – generated off the coast of Scotland and England – to the East Midlands and beyond.

Upgrading the network through Lincolnshire, Leicestershire and Northamptonshire would help to ensure that the energy from new home-grown renewable sources can be safely transported to where it is needed.

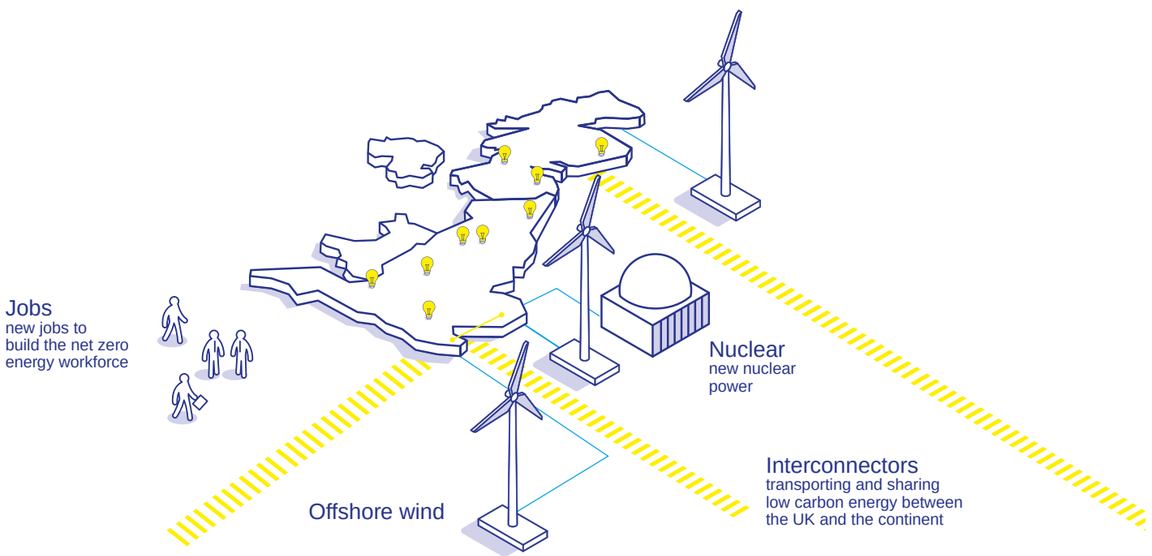
Increasing self–sufficiency of energy supplies

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. 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 Lincolnshire and the East Midlands

Demand for electricity is forecast to increase, and more electricity is being generated off the coast of Scotland and England. We need to make sure the grid has the capacity for the increased amount of power that will be generated, from east to west.

Guidance from the National Energy System Operator (NESO) identified that the existing transmission network in this region required an essential upgrade to be able to transport the increased energy supply.

Weston Marsh to East Leicestershire is our proposal to deliver this network upgrade. It will also enable, directly or indirectly, 44 potential renewable customer generation connections (totalling approximately 14 GW), delivering clean, home–grown power and helping to decarbonise the network. The new overhead line would transmit enough home-grown electricity for up to six million homes.

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.

An assessment of the options for Weston Marsh to East Leicestershire concluded that a new 400 kV overhead line of approximately 60 km between the Weston Marsh substation(s) (to be constructed under the Grimsby to Walpole project[5]) and East Leicestershire and two new substations (WMEL–A and WMEL–B) represented the most appropriate solution.

Combining these works with upgrading (reconductoring) a section of existing overhead line south to Grendon in Northamptonshire, represents the most efficient, coordinated and economical option. It also minimises potential impacts on local communities and the environment by reducing the amount of new overhead line we need to build.

Do you want more detail?

You can learn more about how we identified the need and our appraisal process in the:

- Strategic Options Report (SOR)
- Corridor and Preliminary Routeing and Siting Study (CPRSS)

You can find these at nationalgrid.com/wmel.

[5] Grimsby to Walpole, National Grid, nationalgrid.com/g-w

Our proposals

Introducing the project

We are proposing to upgrade the electricity transmission network through the construction of a new 400 kV overhead line between Weston Marsh and East Leicestershire. This would include the construction of two new substations and the upgrade (reconductoring) of approximately 55 km of existing overhead line between East Leicestershire and Grendon in Northamptonshire.

More detail on the proposed location of the new overhead line is available on pages 26–35. More information on the substations can be found on pages 22–23, with information on the reconductoring available on pages 36–45.

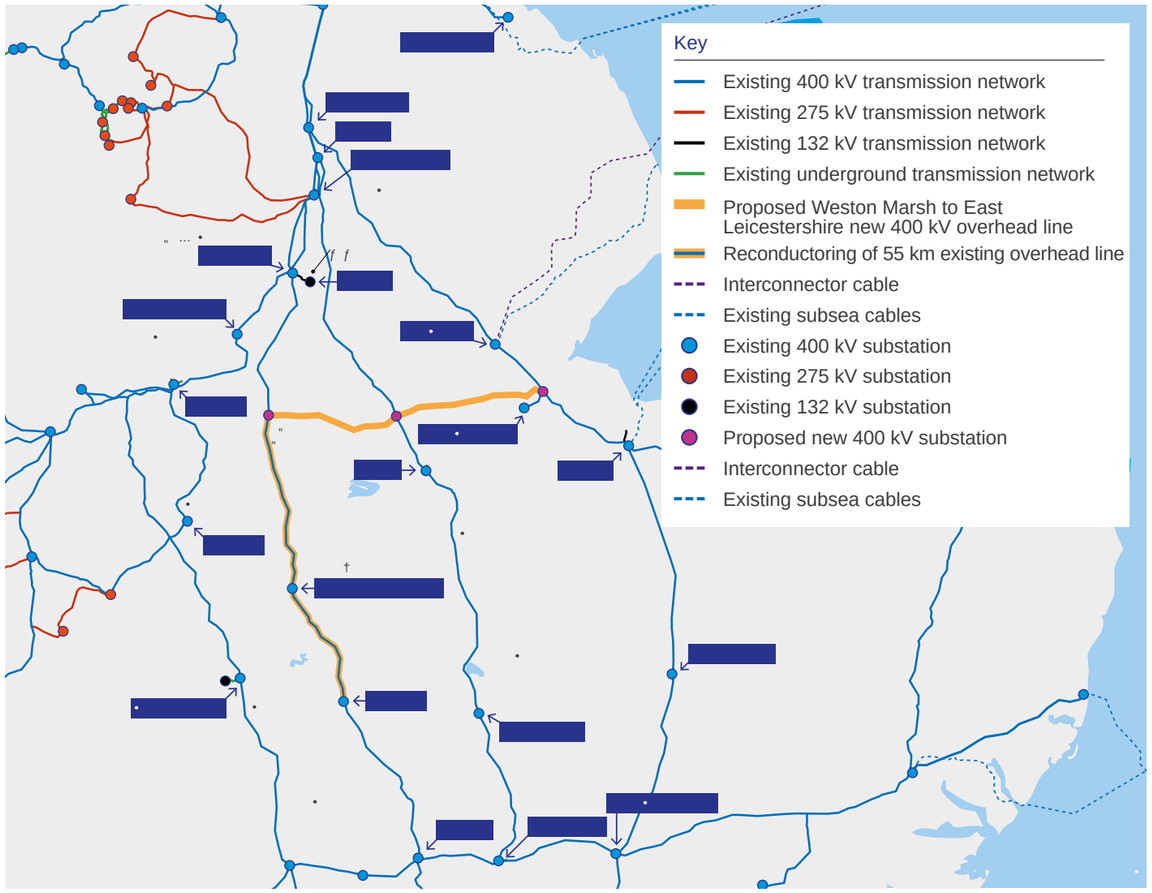


Figure 6: Location of proposals

Identifying the location and developing our proposals

When a need to upgrade the transmission system is established by NESO, we then study and evaluate 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.

Having identified the need for increased capacity through a new overhead line and substations, we explored options for their locations by identifying a 'study area' informed by the locations of built–up areas, natural features, protected sites and existing transmission corridors – and mapped key environmental features within it.

This is the broad area where the new overhead line and substations will be located, between the start point at Weston Marsh substation(s) in Lincolnshire, and end point at the existing overhead line in Leicestershire.

Factors informing this study area include:

- the location of large towns and other built–up areas;
- the location of physical features such as estuaries, or protected sites like National Landscapes, National Parks or nature conservation areas; and
- opportunities to use existing overhead line corridors and to connect to the existing network.

We then carried out environmental and technical assessments to identify areas that may be sensitive to the introduction of new infrastructure within our initial study area. This allowed us to identify several preliminary corridors in which the new overhead line and substations could be located.



We then further refined these to choose an 'emerging preferred corridor' and preferred substation locations. For all of the elements of our proposals, we have sought to minimise potential impacts on residential properties, landowners, the environment and communities.

More detail on this process is available in the Corridor Preliminary Routeing and Siting Study (CPRSS) on our project website (nationalgrid.com/wmel).

While we are still at an early stage of the proposed project, we have started to develop an emerging preferred corridor.

What is an emerging preferred corridor?

The emerging preferred corridor is the area we have identified following initial technical and environmental assessments where the new overhead line and substations could be located.

Key

- Initial study area
- Emerging preferred corridor

Figure 7: Shows the initial study area and the emerging preferred corridor for the proposed new overhead line.

Map data © OpenStreetMap contributors, Microsoft, Facebook, Google, Esri Community Maps contributors, Map layer by Esri

Overhead lines

We are proposing a new 400 kV electricity overhead line of approximately 60 km from the Weston Marsh substation(s) in Lincolnshire (part of the separate Grimsby to Walpole project[6]) to East Leicestershire via two new substations: one near Corby Glen in Lincolnshire (known as WMEL–A) and one near Wartnaby in Leicestershire (known as WMEL–B).

New pylons and conductors (electrical wires) would be located along the overhead line route. The route is proposed to be within our 'emerging preferred corridor' – a broad area within which the new transmission infrastructure could be routed.

We are still considering the exact location of the overhead line and individual pylons within this corridor and would welcome your feedback on it.

Our proposals for the new overhead line are divided into five route sections. These are based on areas of the emerging preferred corridor and nearby geographical locations:

- **Route section 1**: Weston Marsh – South Forty Foot Drain
- **Route section 2**: South Forty Foot Drain – Irnham
- **Route section 3**: Irnham – North and South Witham
- **Route section 4**: North and South Witham – A607
- **Route section 5**: A607 – WMEL–B.

Information about the proposals within each route section can be found on pages 26-35.

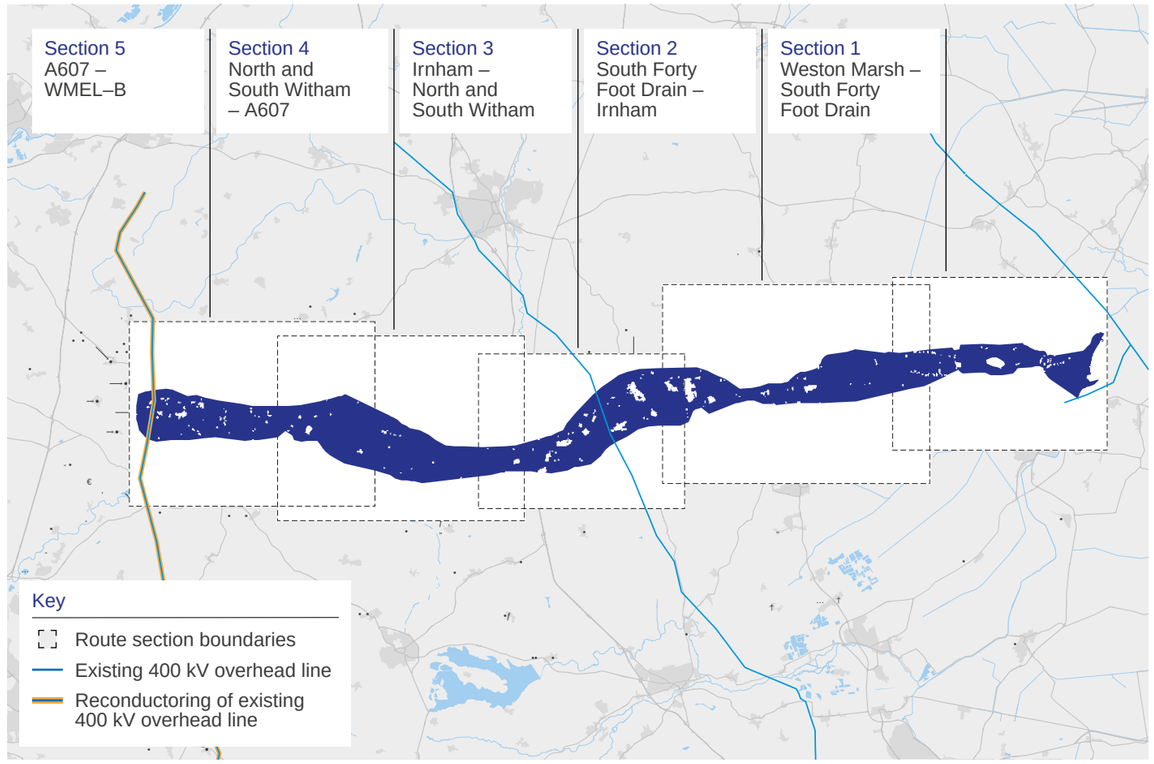


Figure 8: Map of new overhead line and route sections 1–5

Map data © OpenStreetMap contributors, Microsoft, Facebook, Google, Esri Community Maps contributors, Map layer by Esri

[6] Grimsby to Walpole, National Grid, nationalgrid.com/g-w

Pylon design

We will be carrying out assessments – visual impact as well as environmental and ecological considerations, along with construction and lifetime maintenance effects – to help determine the most appropriate pylon design.

At this early stage, we are considering the use of traditional steel lattice pylons. A typical pylon operating at 400 kV is approximately 50 metres in height. A typical span distance between pylons is approximately 350 m, resulting in around three pylons for every kilometre of overhead line. Where the route of the overhead line changes direction, the use of larger angle pylons is required to accommodate the additional sideways strains.

The use of other pylon designs, such as low height steel lattice and T-pylon, remain under consideration. Consultation feedback, along with information from our assessments will help to determine the type of pylons that will be included in our DCO application.

More information about pylon types is available in our Corridor Preliminary Routeing and Siting Study (CPRSS) on our project website.



Figure 9: Example of 400 kV overhead line and traditional steel lattice pylon for illustrative purposes only

Substations

We are proposing two new substations along the new overhead line route: near Corby Glen in Lincolnshire (WMEL–A) and Wartnaby in Leicestershire (WMEL–B).

Substations are an essential component in the energy network, connecting sources of electricity generation, such as windfarms and power stations, to the network and managing the flow of electricity.

Substations are critical in maintaining an efficient and healthy energy network and are vital in getting energy to homes and businesses where it is needed. They monitor and report back to operators on statistics and events to provide live information on the network.

National Grid takes safety extremely seriously and our priority is to keep the public, our contractors and employees safe. All substations are fenced off from the public with appropriate warning signage where necessary. All substations are designed to limit electromagnetic fields (EMFs) in line with independent safety guidelines, set to protect us all against exposure. After decades of research, the weight of evidence is against there being any health risks of EMFs below the guideline limits.

You can read more about substations at nationalgrid.com/stories/energy-explained/what-is-a-substation



Figure 10: Example of a 400 kV substation for illustrative purposes only

WMEL–A substation in Lincolnshire

We are proposing to locate the new WMEL–A substation to the north of the A151, west of the East Coast Mainline and alongside the existing overhead line near Corby Glen in Lincolnshire. The new substation will allow connection to new renewable energy generation sources and help transport power along the new overhead line.

The emerging preferred site has been identified due to its proximity to the existing 400 kV overhead line and therefore the minimisation of system outages required to facilitate construction. The emerging preferred site also means the new overhead line could enter and exit WMEL–A from the north or south, with the alignment avoiding homes and woodland in the area.

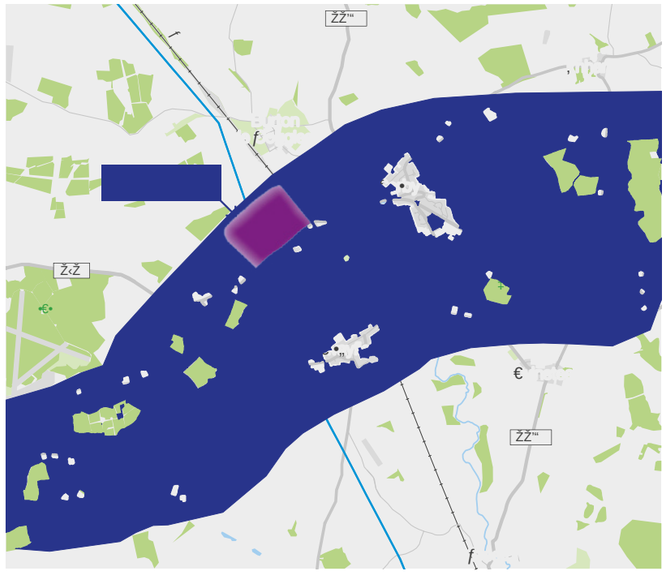


Figure 11: Emerging preferred location of WMEL–A substation

WMEL–B substation in Leicestershire

We are proposing to locate the new WMEL–B substation where the new overhead line from Weston Marsh would reach the existing 400 kV line, southwest of Wartnaby in Leicestershire.

The emerging preferred site has been identified because it largely avoids key environmental constraints.

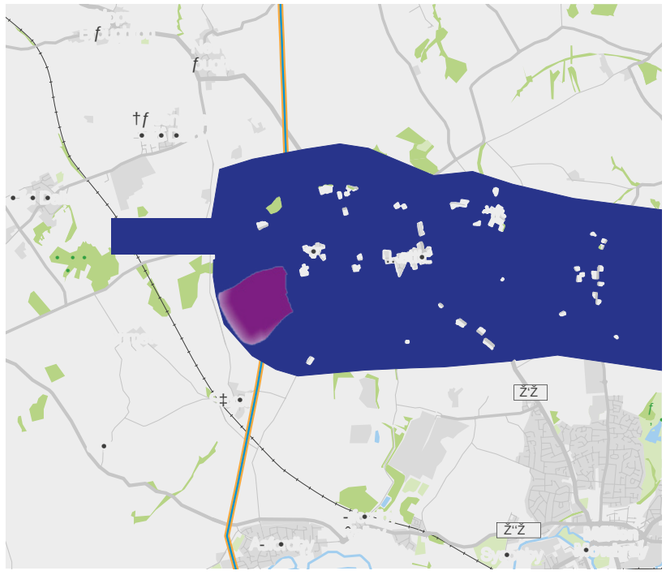


Figure 12: Emerging preferred location of new WMEL–B substation

Reconductoring

The Weston Marsh to East Leicestershire proposals also include the upgrade (reconductoring) of approximately 55 km of existing 400 kV overhead transmission line from the new WMEL–B substation in Leicestershire to the existing Grendon substation, east of Northampton.

Reconductoring involves both the replacement of pylon fittings and replacing and upgrading the conductors – these are the wires strung between the pylons on the overhead line, along which the electricity is transmitted. Reconductoring increases the amount of electricity that can be transmitted over existing lines by using efficient conductors that generally operate at higher temperatures and carry more power.

Crucially, reconductoring means there is less need for new overhead line infrastructure. Any replacement pylons would be in close proximity to existing pylons and of similar heights and appearance to the pylons that they would replace.

This essential upgrade will ensure long–term energy security between Lincolnshire and the East Midlands on both the high–voltage electricity transmission network, and the local distribution network which supplies electricity to homes and businesses.

Our proposals for the reconductoring of the existing overhead line are also divided into five route sections. These are based on areas of the proposed corridor and nearby geographical locations:

- **Route section 6**: WMEL–B – Ashby Folville
- **Route section 7**: Ashby Folville – Goadby
- **Route section 8**: Goadby – Market Harborough
- **Route section 9**: Market Harborough – Orlingbury
- **Route section 10**: Orlingbury – Grendon substation.

Other requirements

We may use additional land to support the construction or upgrading of overhead lines or protect the natural environment. This includes, but is not limited to, the following:

- temporary land for construction activities including working areas for construction equipment and machinery, site offices, welfare, storage and access
- land for mitigation, compensation and enhancement of the environment as a result of the environmental assessment process and delivering Biodiversity Net Gain.

Biodiversity Net Gain (BNG)

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

From mid 2026, it is due to be made mandatory for Nationally Significant Infrastructure Projects like Weston Marsh to East Leicestershire to achieve 10% BNG, this means the project would result in more or better quality natural habitat than there was before development. National Grid will also provide wider environmental and social benefits. This may be achieved through habitat creation and/or enhancement.

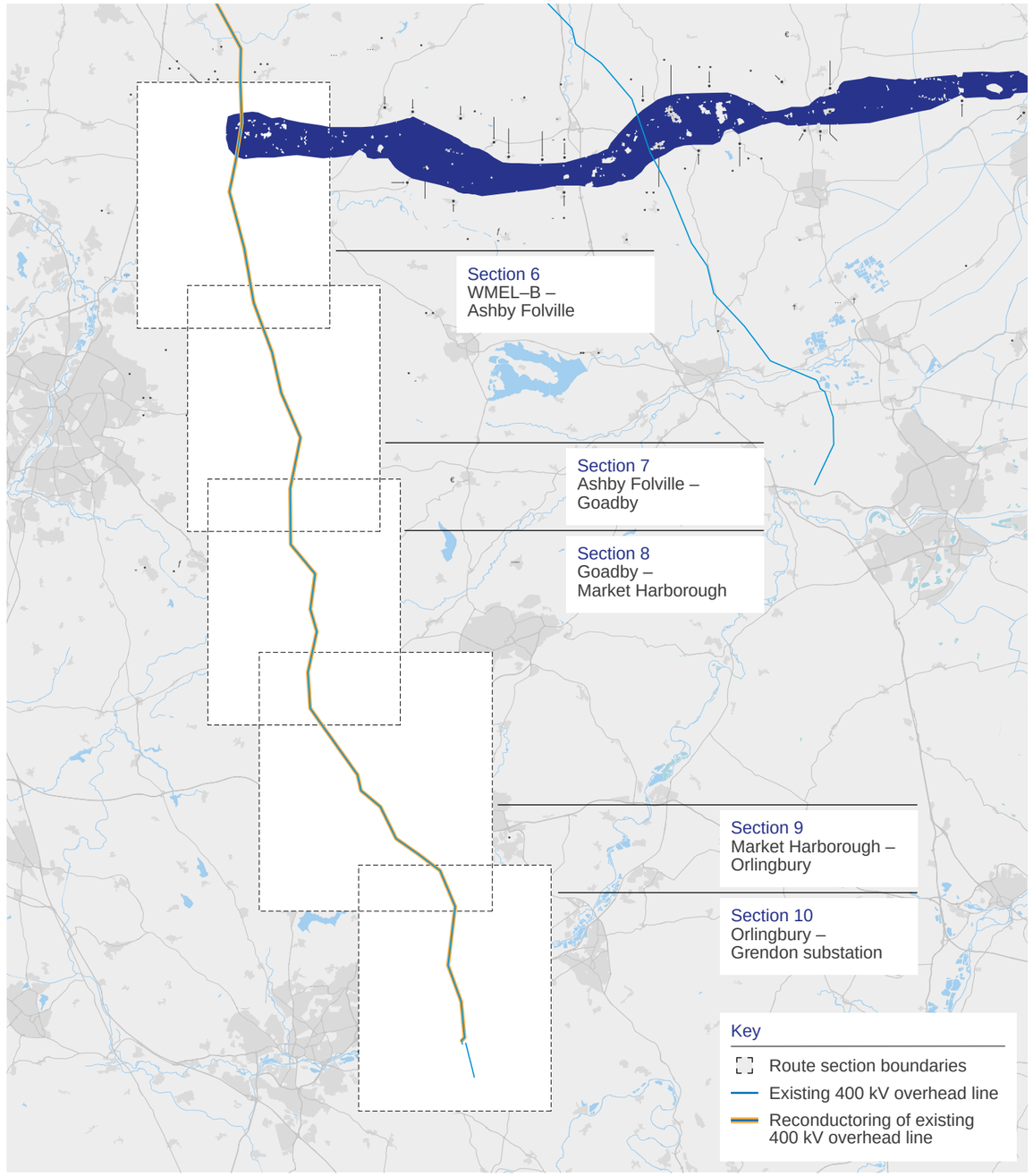


Figure 13: Proposed area of reconductoring and route sections 6–10

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Route section 1
Weston Marsh – South Forty Foot Drain

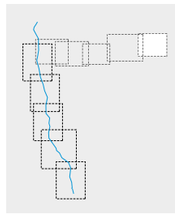
This section of the emerging preferred corridor runs from the connection point at the Weston Marsh substation(s) (part of the separate Grimsby to Walpole project[7]) to a point immediately west of South Forty Foot Drain, as shown in Figure 14.

The new overhead line would route west out of Weston Marsh substation(s) crossing the River Welland and the A16. The line would then continue to the west and need to pass through the narrow area between Pinchbeck and Surfleet. We are considering two options for the alignment – either to the north or the south of the homes in the area – and welcome feedback on this.

The overhead line would then route directly west, crossing a rail line, avoiding farms to the north and south before passing north of the moated site of Newhall Grange scheduled monument. It would then travel onward to South Forty Foot Drain, passing between properties located along Parsons Drove and Starlode Drove.

The emerging preferred corridor is the area of land we have identified following initial technical and environmental assessments where the new overhead line and substations could be located.

Within the emerging preferred corridor shown in the maps we are presenting a ‘graduated swathe’. The shaded area of land is darker where we feel it is more likely for physical infrastructure such as the overhead line or substations to be located and lighter where it is less likely. This is due to consideration of environmental factors and identified constraints.



Route section 1 represents the start of the proposed new overhead line

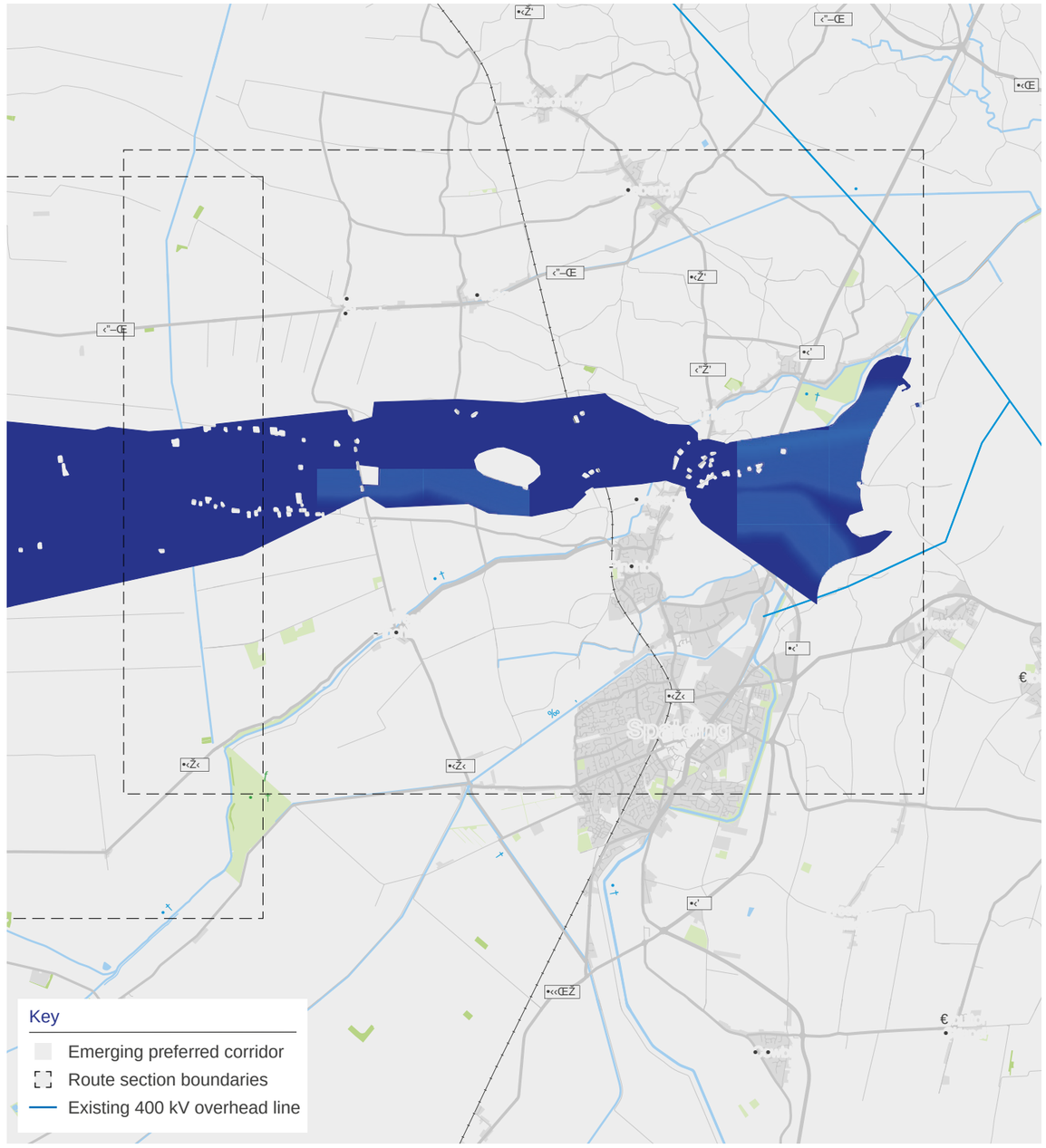


Figure 14: Route section 1

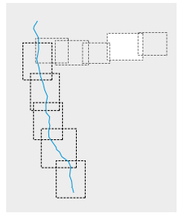
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[7] Grimsby to Walpole, National Grid, nationalgrid.com/g-w

Route section 2
South Forty Foot Drain – Irnham

This section of emerging preferred corridor runs from the area immediately west of South Forty Foot Drain to a point south of Irnham and north of Grimsthorpe Castle, as shown in Figure 15.

The overhead line would need to pass through a narrow gap to the west of Stainfield, between two wooded areas. To the east of this, the alignment could pass to the north or south of Haconby and Stainfield, crossing the A15 in both options. These alignment approach options are reflected in the preferred corridor. From here the overhead line is constrained by ancient woodland to the north and Grimsthorpe Castle to the south. There are then two options for the overhead line – either to the north or south of Haconby and Stainfield – to reduce potential impacts on the setting of the castle and to avoid the ancient woodland.



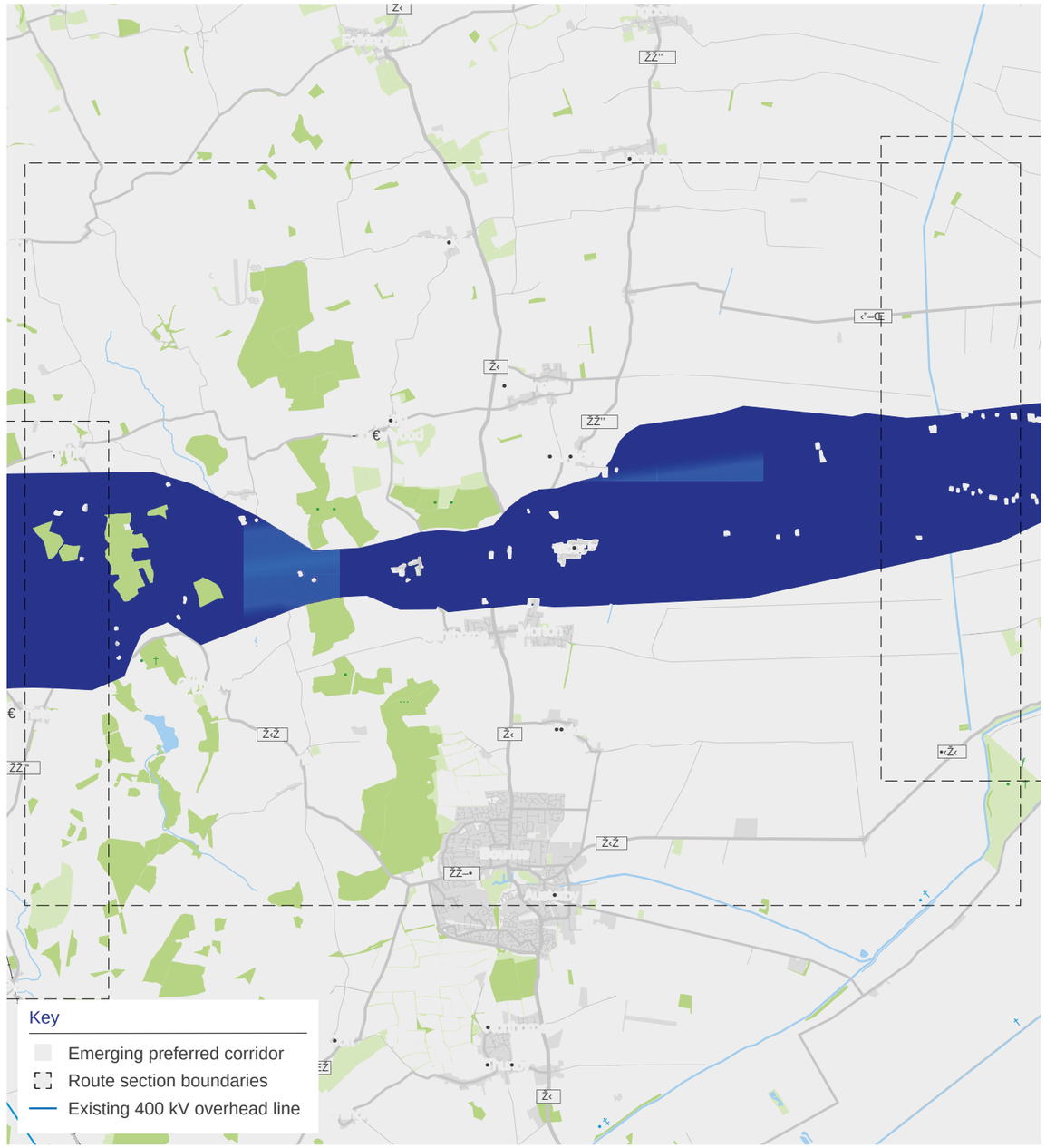


Figure 15: Route section 2

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Route section 3
Irnham – North and South Witham

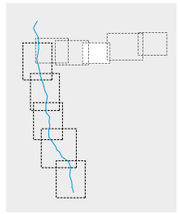
This section of the emerging preferred corridor runs from the area immediately west of a point between Irnham and Grimsthorpe Castle to a point between North and South Witham, as shown in Figure 16.

Routeing directly west, the overhead line would likely pass to the south of Corby Glen, crossing the East Coast Main Line railway north of Swayfield before crossing the existing 400 kV overhead line. This is the area where we are proposing to situate the new WMEL–A substation.

There are several potential overhead lines routes into the proposed WMEL–A substation near Corby Glen. We will further develop our plans following feedback and technical assessments.

With the current preferred substation location to the west of Corby Glen (see page 25 for more information on the location of WMEL–A), the new overhead line could enter and exit the proposed substation using a north or south arrangement. The emerging preferred corridor remains wide to allow for flexibility regarding how the new overhead line will connect into the substation.

The new overhead line would continue west from between North and South Witham to either the north or south of scheduled monument, the remains of a Knights Templar preceptory, with route options converging to the single line north of Wymondham.



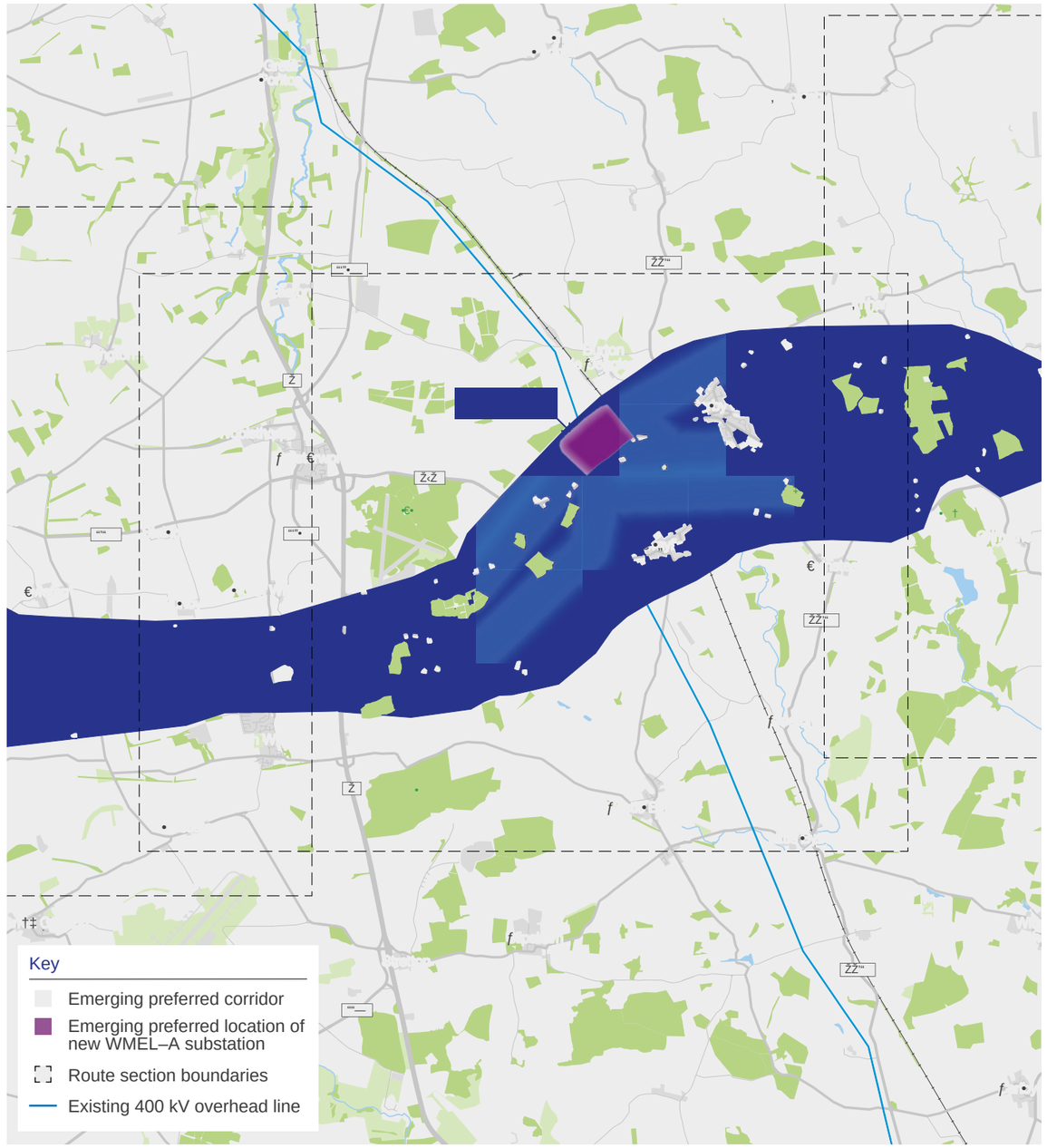


Figure 16: Route section 3

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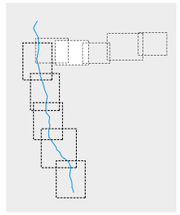
Route section 4
North and South Witham – A607

This section of the emerging preferred corridor runs from a point between North and South Witham to the A607, south of Waltham on the Wolds, as shown in Figure 17.

The new overhead line would continue west from between North and South Witham to either the north or south of the scheduled monument (remains of a Knights Templar preceptory) through a relatively unconstrained area with route options converging to the single line north of Wymondham.

Then routeing northwest, the overhead line would pass either north or south of Garthorpe and cross the B676.

The route would then continue west, crossing the A607 at one of two possible locations south of Waltham on the Wolds and north of Melton Mowbray Golf Club, subject to feedback, design development and further technical assessment to confirm the preferred approach to Ab Kettleby.



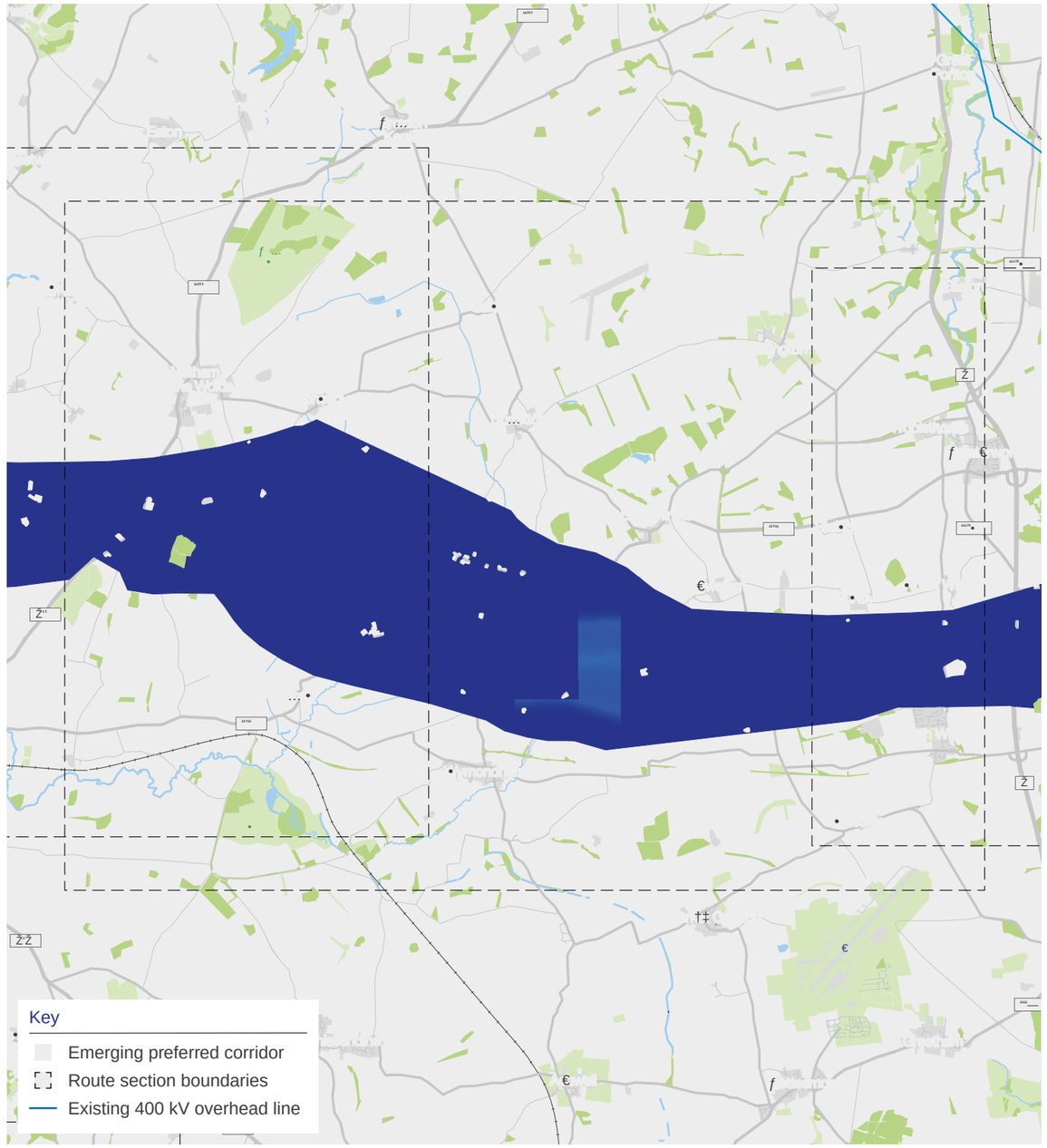


Figure 17: Route section 4

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Route section 5
A607 – WMEL–B

This section of the emerging preferred corridor continues west from the potential crossing locations of the A607 south of Waltham on the Wolds to the new WMEL–B substation at the existing 400 kV overhead line, as shown in Figure 18.

From the crossing of the A607, the overhead line would continue west, crossing the existing 132 kV overhead line and avoiding homes before running between Melton Spinney Road and Scalford Road.

From here it would cross Scalford Road to the south of the properties along that road, and north of properties in the north of Melton Mowbray.

There are two potential alignment options – to the north or to the south of Ab Kettleby and Wartnaby – that would avoid or minimise impacts on nearby homes and woodland and allow a connection to the proposed WMEL–B substation and the existing 400 kV overhead line.