

The Great Grid Upgrade

The way we are all powering the things we love is changing. In the years ahead, more of our energy will come from renewables as part of the transition to a cleaner, greener future.

This means we need to build new infrastructure, as well as upgrading the existing grid, to bring this clean, green energy from where it's generated to where it's needed by homes and businesses.

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

More clean energy for all

The Great Grid upgrade will enable the electricity grid to carry more clean energy to communities in every part of England and Wales, helping us all reach net zero faster.

Energy security

The Great Grid Upgrade will connect clean energy that's produced right here in the UK, increasing the self-sufficiency of our energy supplies.

A grid that's fit for the future

As we continue to reduce the reliance on fossil fuels and increase clean energy generation, we'll be using more electricity than ever. That means we'll need a grid that's able to carry all of this extra electricity to wherever we might need it.

Investment close to home

As well as helping to reach net zero, the UK government suggests that investment in offshore network infrastructure could support up to 130,000 jobs and contribute an estimate £4-11bn of GVA (gross value added) to Great Britain's economy in 2050.



About National Grid Electricity Transmission

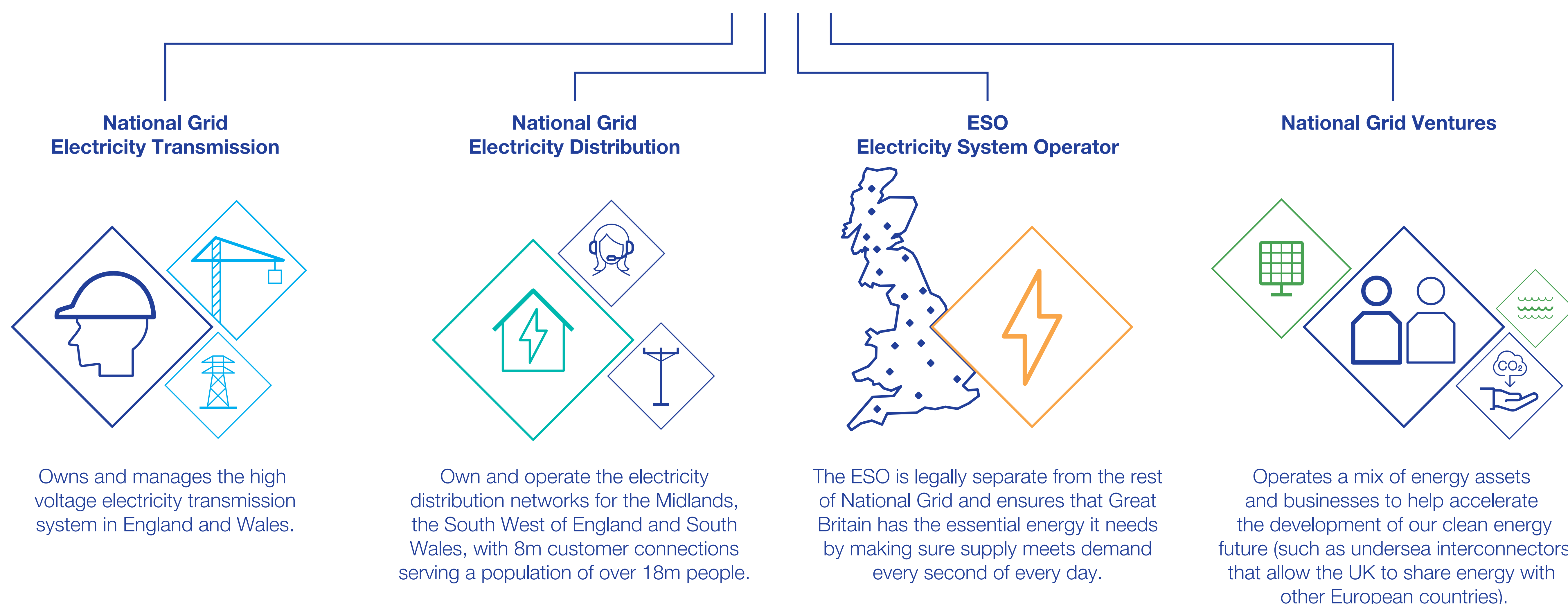
National Grid Electricity Transmission is working to build a cleaner, fairer and more affordable energy system that serves everyone, powering the future of our homes, transport and industry.

National Grid Electricity Transmission sits at the heart of Britain's energy system, connecting millions of people and businesses to the energy they use every day. We bring energy to life – in the heat, light and power we bring to our customers' homes and businesses; in the way that we support our communities and help them to grow; and in the way we show up in the world. It is our vision to be at the heart of a clean, fair and affordable energy future.

Within the National Grid Group there are four distinctly separate legal entities, each with their individual responsibilities and roles. It is National Grid Electricity Transmission that is developing plans for North Humber to High Marnham.

nationalgrid

Group PLC



The Great Grid Upgrade

North Humber to High Marnham

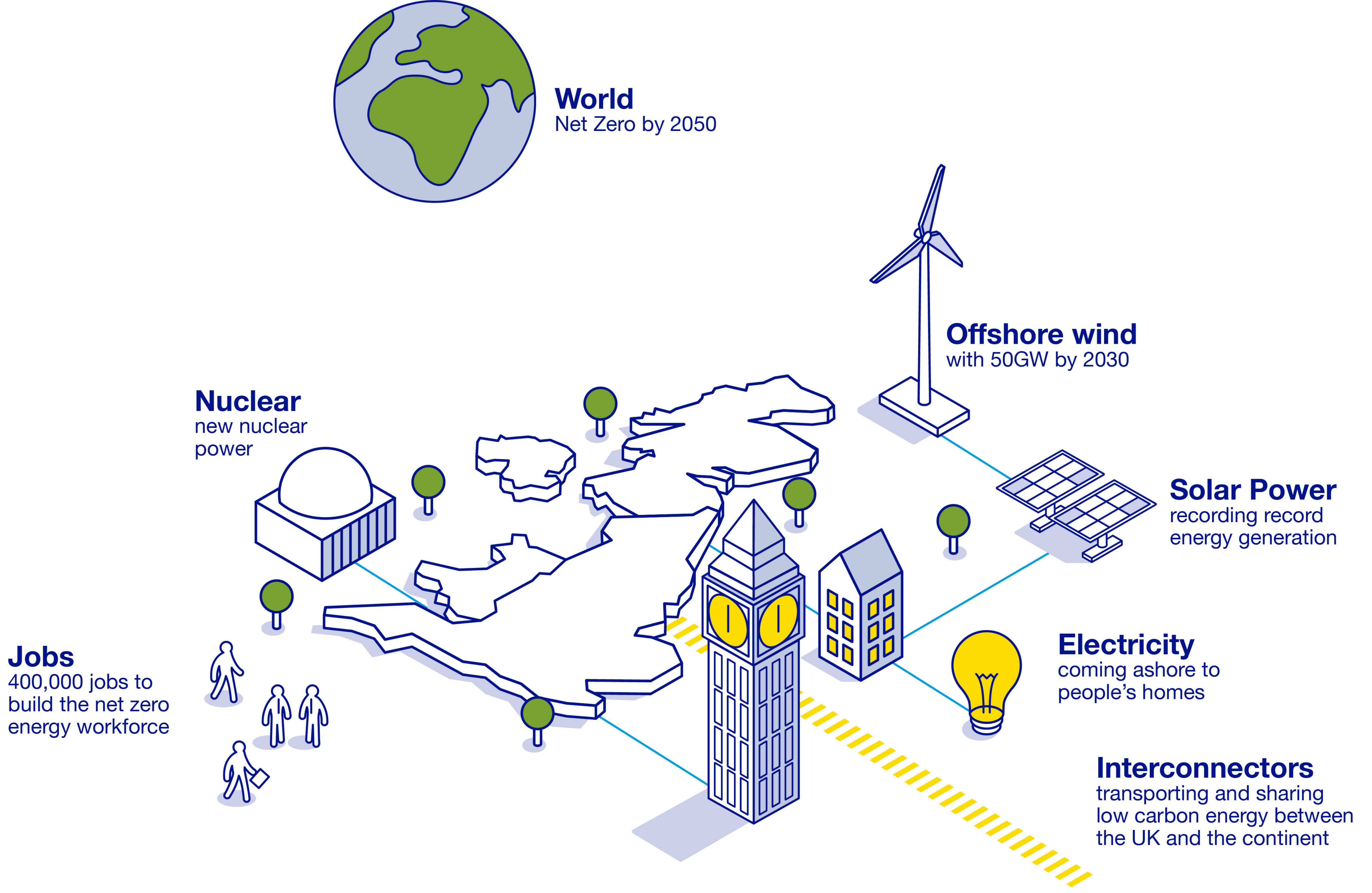
Moving to Net Zero

The world we live in is changing, and the UK is at a turning point as we embrace the enormous opportunities a cleaner, greener future brings.

The UK has set a world-leading target to tackle climate change, which is to achieve net zero by 2050. Put simply, this means that we will remove the same amount of greenhouse gases from the atmosphere as we produce.

The North Humber to High Marnham upgrade will help the transition to clean energy, making sure the grid is ready. Our proposals are part of The Great Grid Upgrade – the largest overhaul of the grid in generations.

As a country we are already making progress. But more needs to be done. A healthier, greener future for Britain requires significant upgrades to our energy infrastructure to deliver clean green energy from where it is produced to where it is needed.



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North Humber to High Marnham

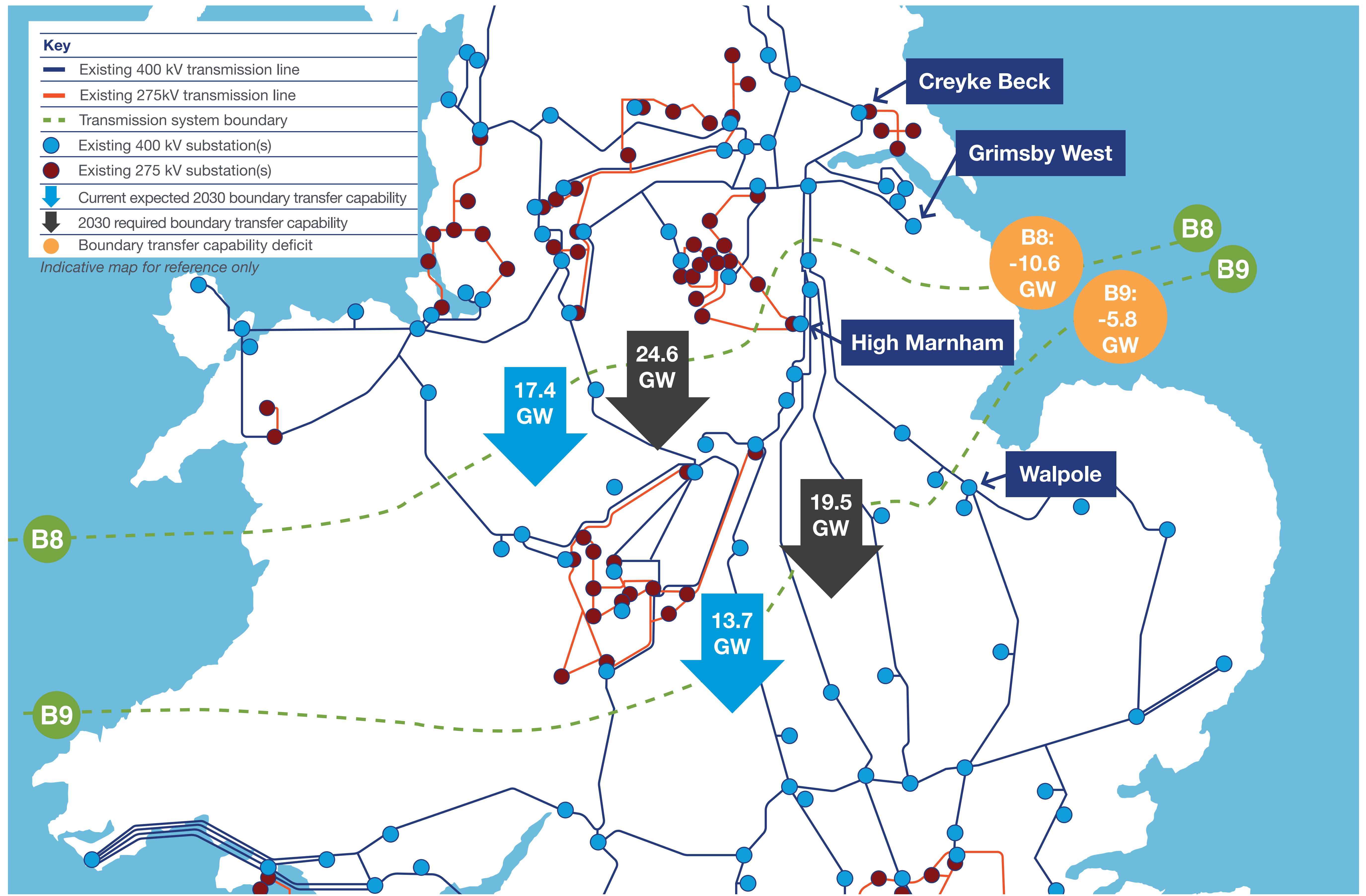
Why we need to build North Humber to High Marnham

The electricity transmission network between the North and the Midlands was largely developed in the 1960s, carrying electricity from Scotland and the North, connecting coal fired generation in the Aire and Trent valleys with main centres of population.

With growing offshore wind and interconnectors, an anticipated tripling of wind generation connected across the Scottish networks by 2030 and Government's increased ambition to connect 50 GW of offshore wind by 2030, north-south power flows are set to increase.

By the early 2030s, the capability of the network to transport electricity between the North and Midlands needs to be nearly trebled, from 11.6 GW today, to around 29 GW.

Before building new lines, we first carry out works to get more capability where we can from the existing network. In the first part of the next decade we are doing just that, but those works only increase network transfer capability to around 14 GW between the North and the Midlands.

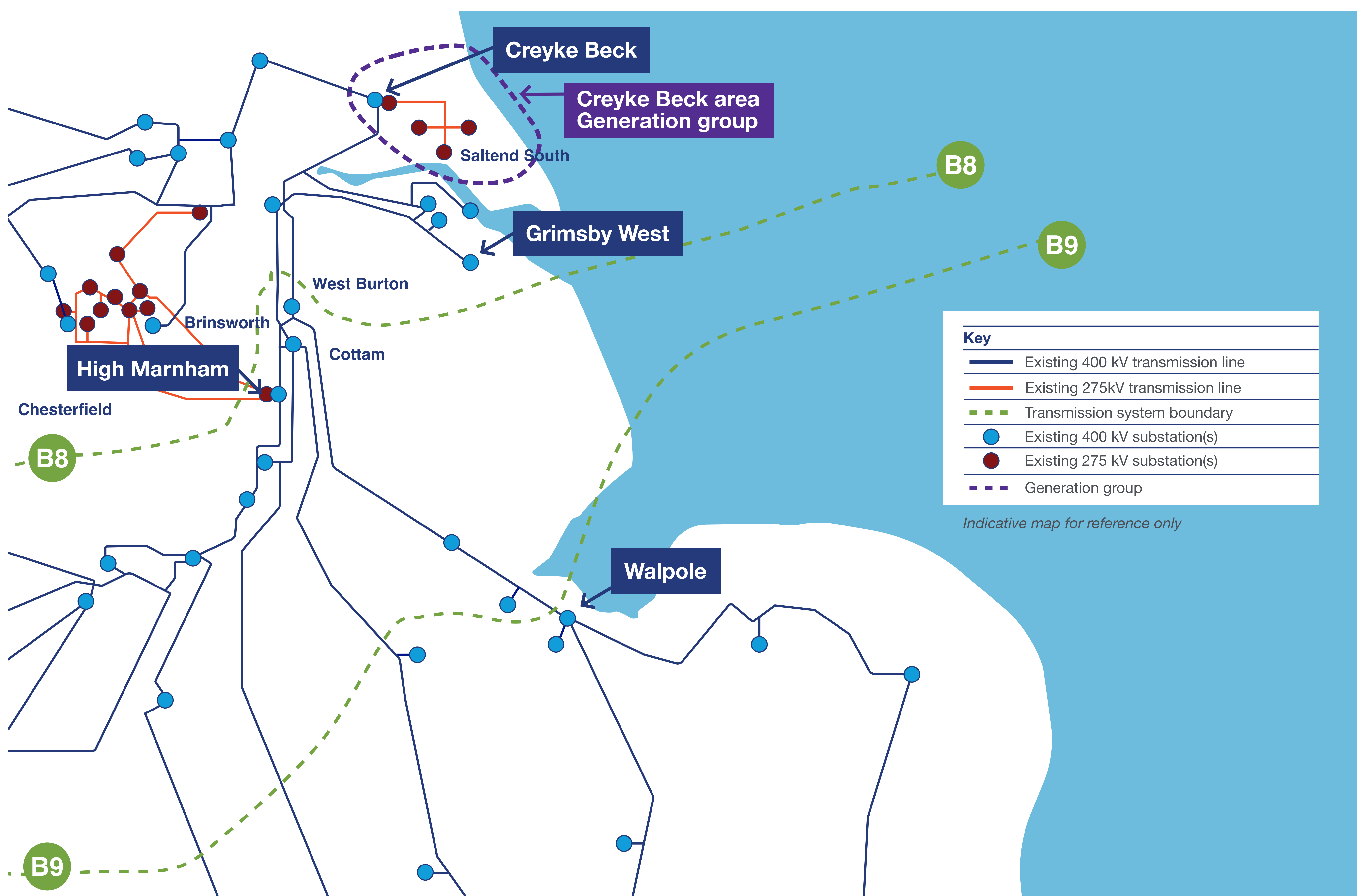


Why we need to build North Humber to High Marnham

The existing network serving the Creyke Beck area can export just under 7 GW of electricity whilst remaining compliant with the standards the network is operated to.

Proposed new offshore wind, interconnectors and renewable energy battery storage are expected to connect in the Creyke Beck area by the early 2030's, totalling around 13 GW when combined with existing generation.

We therefore need to build a new electricity transmission line which adds capability between the North and the Midlands and facilitates the connection of clean, green energy in the Creyke Beck area.



Our proposals

Our proposals include building a new 400,000 volt (400 kV) electricity transmission line over a distance of approximately 90 km.

The reinforcement would run from a new substation near the existing Creyke Beck substation north of Hull, and a new substation located at High Marnham in Nottinghamshire.

Short sections of undergrounding of existing overhead lines may also be needed in areas where the new reinforcement interacts with those.

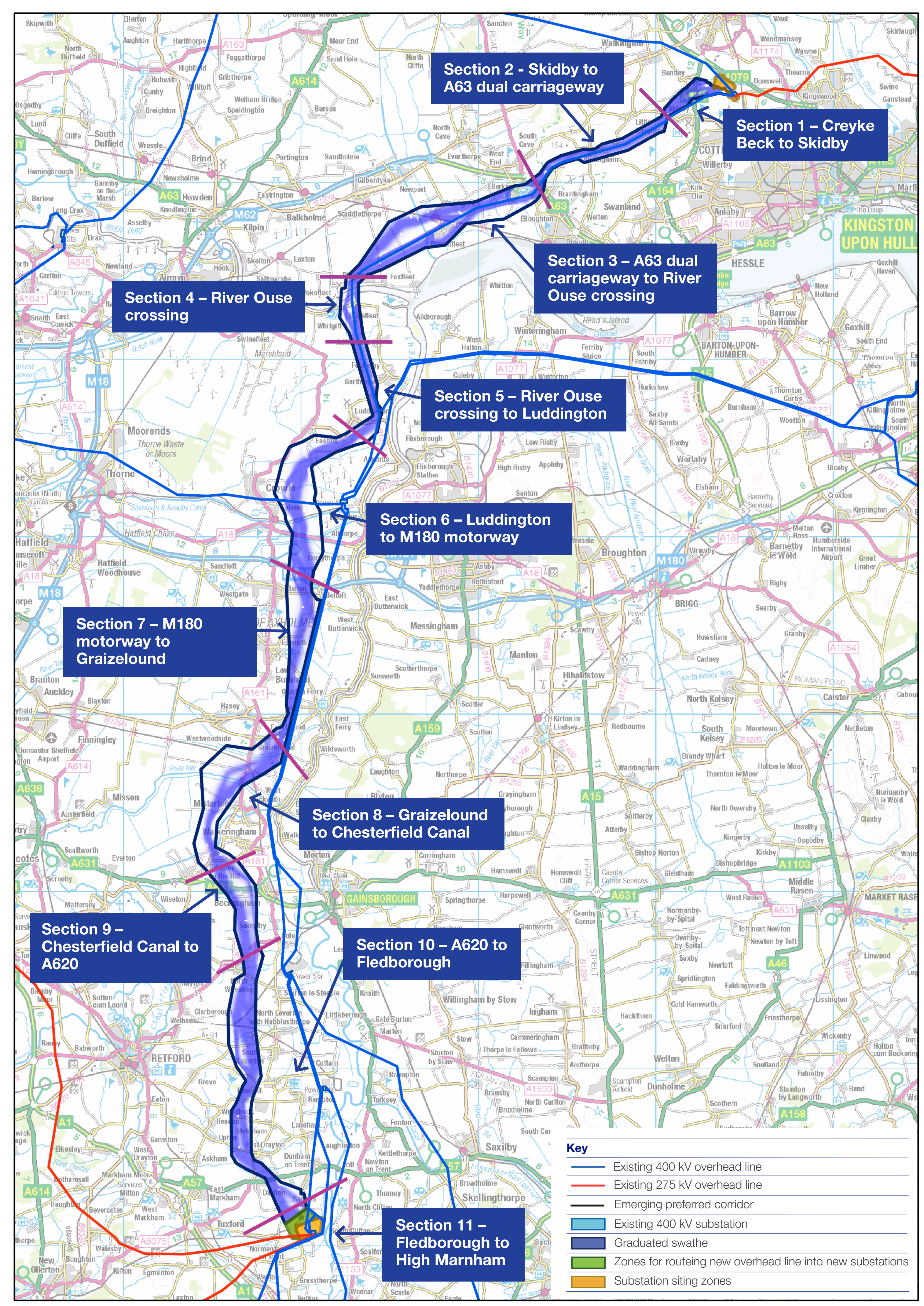
The two 400 kV substations need to be in place before North Humber to High Marnham is delivered and are being developed as separate planning applications.

Our emerging preferred corridor has been split into 11 sections, covering three local authority areas. Please speak with a member of the team if you are unsure which section is most relevant to you.

We have also developed a graduated swathe to highlight where we think it is more appropriate (shown by the darker areas) or less appropriate (shown by the lighter areas) to route the new overhead line within the corridor.

From our engineering and environmental assessments, we have identified an emerging preferred corridor for the new reinforcement.

New pylons and conductors (electrical wires) would be located along the overhead line route. Traditional 400 kV lattice steel pylons, typically around 50 metres in height, are being considered as a starting position.



Shaping our proposals

This is our first stage of consultation – about our early proposals. Your views will help shape our plans as we consider the feedback from this consultation and develop more detailed proposals.

A further stage of consultation will be held in 2024. We will consider all the feedback we receive as we continue to shape our plans.

North Humber to High Marnham is a Nationally Significant Infrastructure Project which means an application for a Development Consent Order will need to be prepared and submitted to the Planning Inspectorate. Ultimately the Secretary of State will be responsible for making the final decision on the application.

As we develop our plans, we carry out environmental surveys. We report on these when we apply for consent. We use best practice environmental impact assessment techniques to assess possible effects of our works on the environment and identify opportunities for mitigation measures.

We also liaise closely with other major infrastructure projects in the area to understand how our proposals interact. We are committed to exploring opportunities to coordinate and minimise potential impacts on local communities and the environment.

Working with local stakeholders, we will develop and deliver landscaping and biodiversity net gain proposals, construction and environmental management plans and a social value strategy which ensures we leave a lasting positive legacy and delivers community benefits in the areas that host our infrastructure. We will outline more about that at the next stage of consultation.



Our proposals in East Riding of Yorkshire

The proposed reinforcement starts with a new overhead line routed from a new substation near the existing Creyke Beck substation.

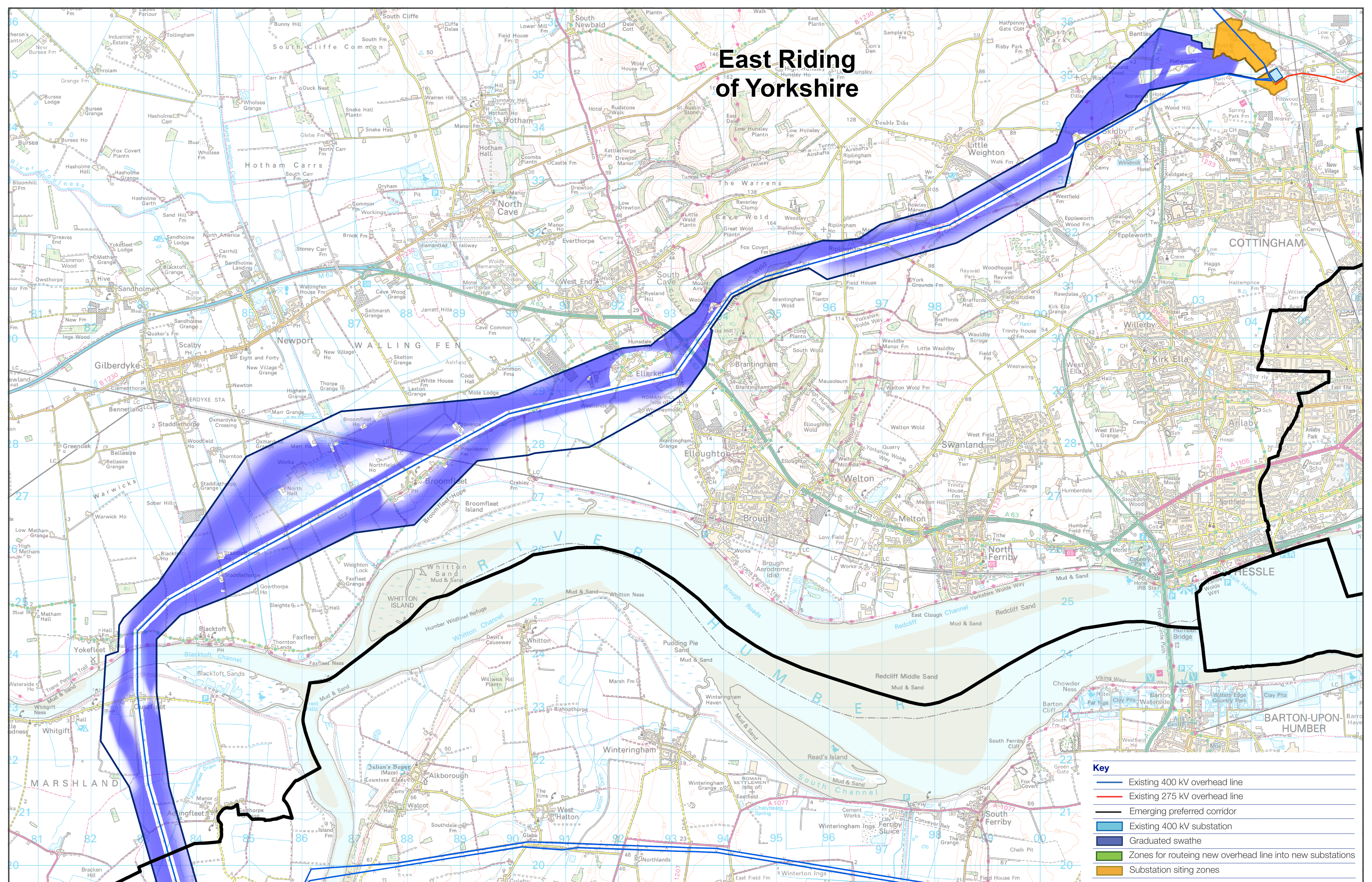
This new substation, which is needed before the new overhead line, is shown as an indicative zone at this stage. The final location of the substation will influence the position of the overhead line in this area, and vice versa. A separate planning application will be submitted to East Riding of Yorkshire Council for the new substation required near Creyke Beck.

We expect the reinforcement in these sections to consist of new overhead line supported by steel lattice pylons.

This includes crossing the River Ouse by an overhead line, which will be informed by the results of site surveys and consultation feedback and engagement with key stakeholders.

Four sections of the emerging preferred corridor lie within East Riding of Yorkshire, including:

- **Section 1:** from a new substation near Creyke Beck to a point immediately north of Skidby.
- **Section 2:** from the north of Skidby to the A63 dual carriageway, located on the western edge of the Yorkshire Wolds.
- **Section 3:** from the A63 dual carriageway to Blacktoft Lane, on the northern bank of the River Ouse.
- **Section 4:** a short 2.5 kilometre section crossing the River Ouse.



Our proposals in North Lincolnshire

Following the crossing of the River Ouse, the emerging preferred corridor runs south from the north of Adlingfleet.

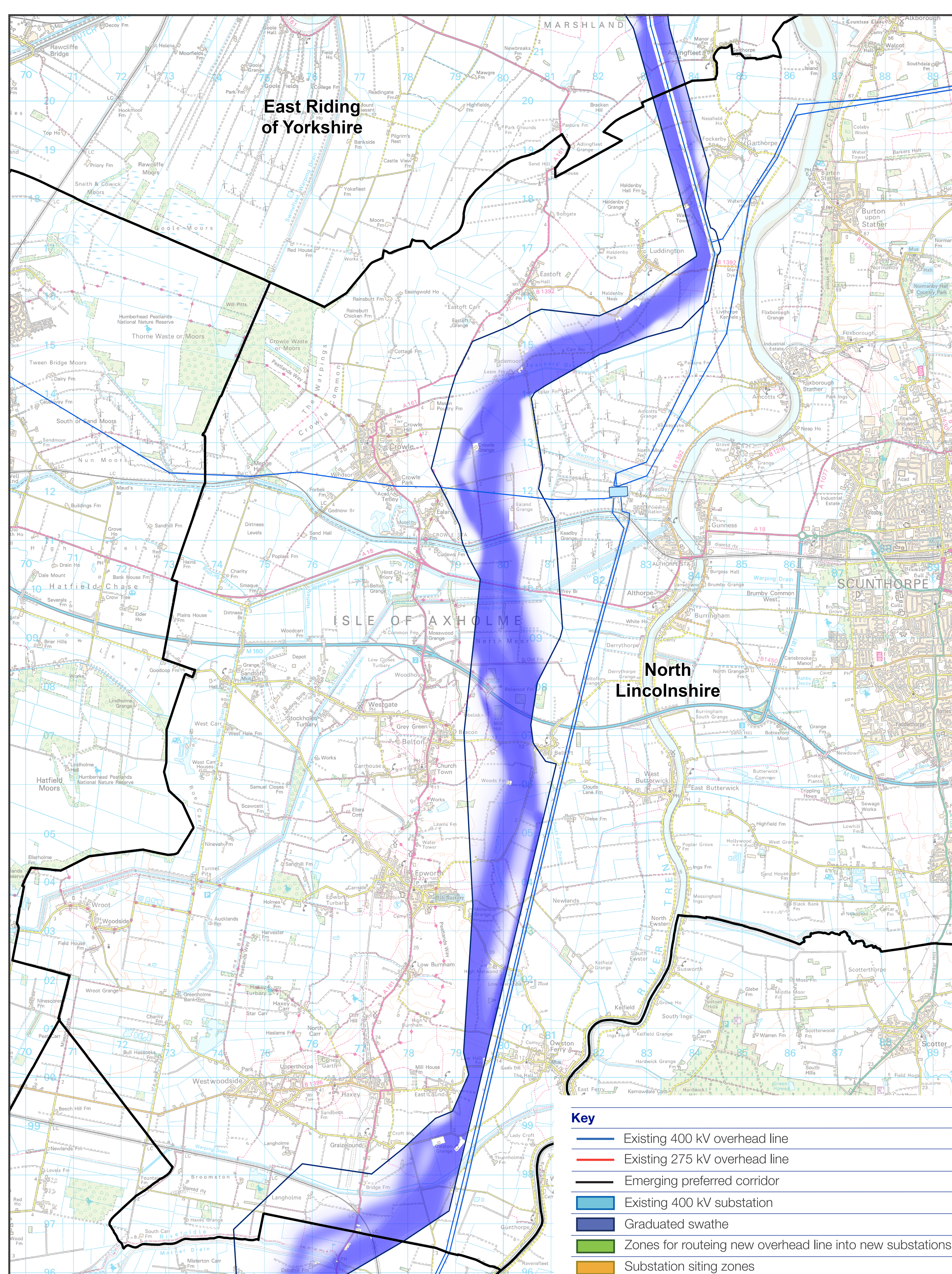
Five sections of the emerging preferred corridor lie within North Lincolnshire, including:

- **Section 4:** a short 2.5 km section crossing the River Ouse.
- **Section 5:** extending from the south of Adlingfleet to the B1392 Meredyke Lane, which runs between the village of Luddington and the River Trent.
- **Section 6:** between the B1392 Meredyke Lane and the M180 motorway, moving away from the east of Luddington.
- **Section 7:** between the M180 motorway and Stockwith Road/Owston Road between the villages of Graizelound and West Stockwith.

- **Section 8:** running south from Stockwith Road/Owston Road and into Nottinghamshire.

We expect the reinforcement in these sections to consist of new overhead lines supported by steel lattice pylons.

One span of an existing 400 kV overhead line, approximately 1 km south of Crowle, would need to be placed below ground to allow the proposed new line to cross. That would require two cable sealing end compounds to transition from overhead line to underground cable.



Our proposals in Nottinghamshire

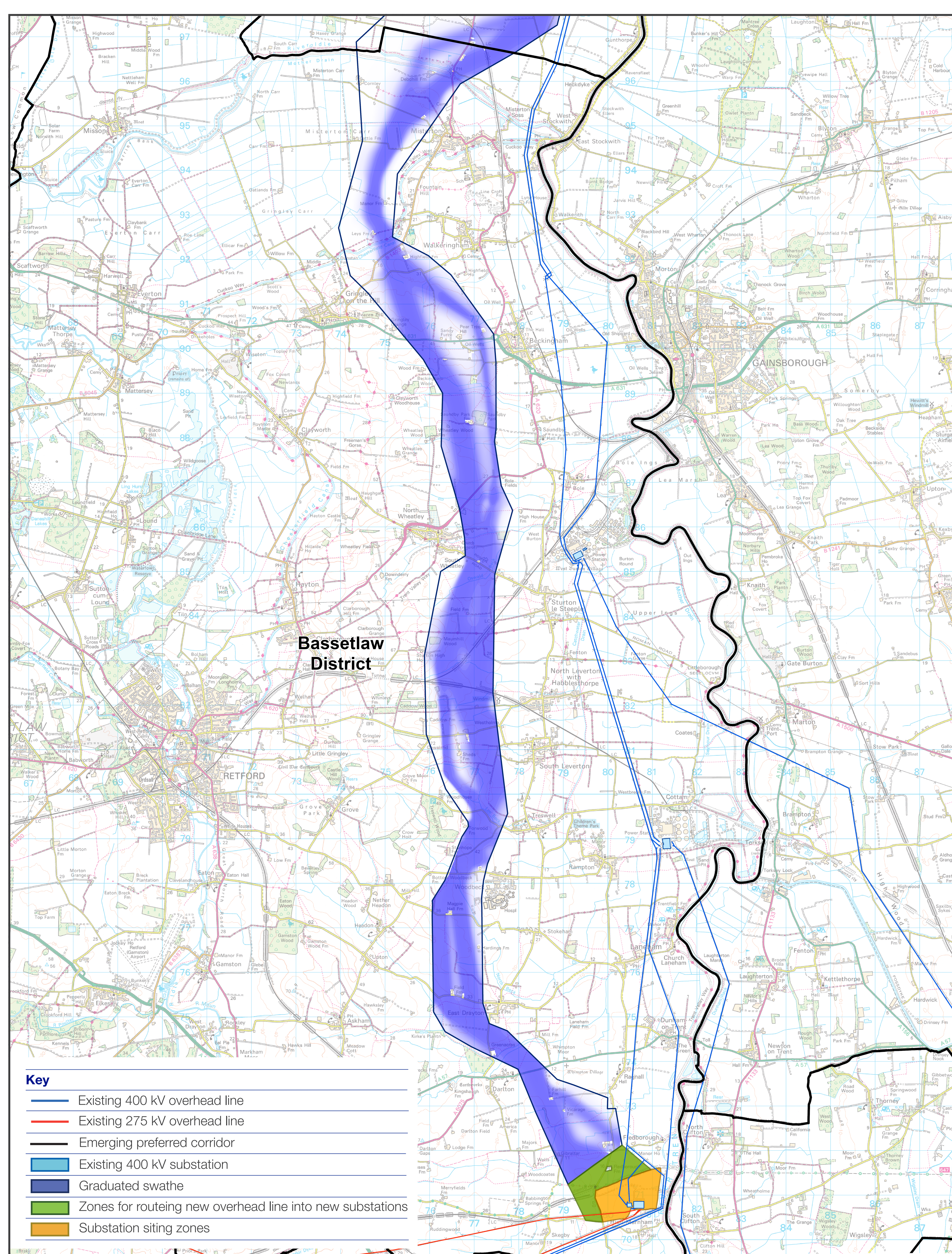
The final part of the emerging preferred option corridor runs from Chesterfield Canal to High Marnham in Nottinghamshire, where the new substation would be located.

Four sections of the emerging preferred corridor lie within Bassetlaw, Nottinghamshire, including:

- **Section 8:** continuing south from the north of Misterton to Chesterfield Canal.
- **Section 9:** between Chesterfield Canal and the A620 Gainsborough Road, northeast of the village of North Wheatley.
- **Section 10:** from the A620 south to a point approximately 1 km from the existing High Marnham 400 kV substation.
- **Section 11:** from approximately 1 km northwest of the existing High Marnham substation.

An indicative zone is shown to represent where the new substation at High Marnham could be located. Work is ongoing to identify the best location for the new substation and this will influence the final route of the new overhead line. A separate planning application for the new substation will be submitted to Bassetlaw District Council.

We expect the reinforcement in these sections to consist of new overhead lines supported by steel lattice pylons.



Have your say

We want to hear the views of local people. Knowing what matters to you, matters to us, so please get in touch and provide your feedback.

We will carefully consider all feedback and we will respond to it as part of our application for development consent.

How do I find out more about your proposals?

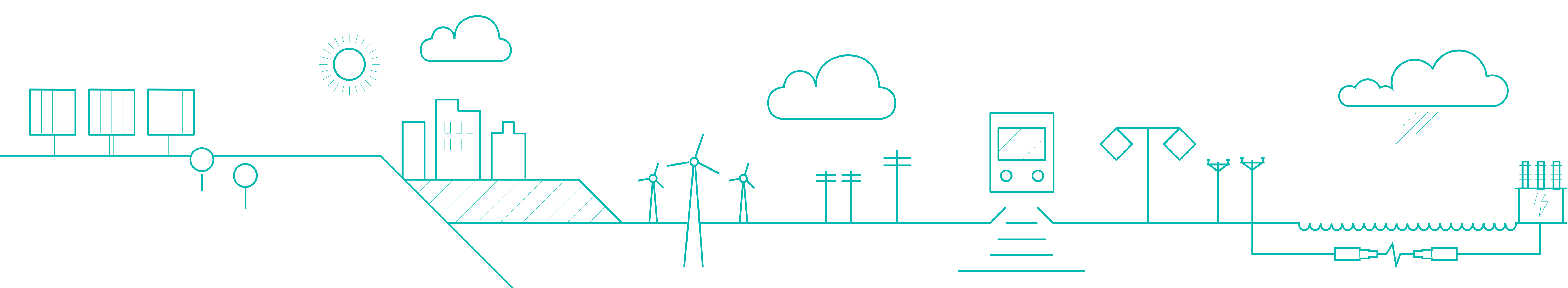
You can find out more about our plans in a number of ways:

- viewing all information and interactive map on our project website nationalgrid.com/hm-hm
- reading our **Project Background Document, Strategic Options Report** and **Corridor Preliminary Routeing and Siting Study**
- attending one of our public exhibitions
- visiting an information point to collect a feedback form and view the Project Background Document
- requesting a call back from a member of the team - book by calling or emailing us
- attending one of our online webinars.

To respond to the stage 1 consultation

Please provide your feedback by 27 July 2023.

- complete our online feedback form at nationalgrid.com/nh-hm
- complete a feedback form or providing your written response to **Freepost NH to HM** (no stamp or further address needed)
- email your comments to contact@nh-hm.nationalgrid.com
- call us with your comments **0800 051 4430**.



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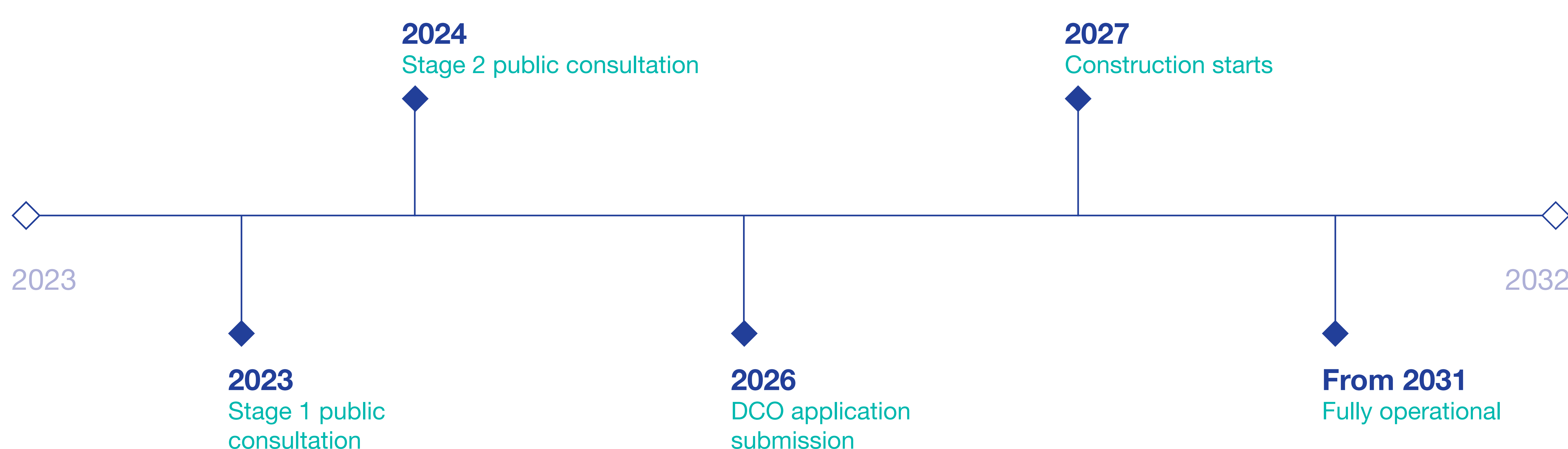
Next steps

The feedback received throughout the first stage of consultation will inform how our plans for North Humber to High Marnham are developed further and will influence the next stage in the design of the project.

Following this consultation, we will review all the responses as we continue to develop the designs.

Our stage 2 consultation is planned for autumn 2024, when we will present more detailed proposals and the findings from this consultation. At that point people will be able to see how we have taken their views into account, and provide further feedback on the project, which will help us further refine the project design.

Following further project design, the North Humber to High Marnham Development Consent Order (DCO) application, including a Consultation Report to show how we have taken your views into consideration, would be submitted and examined by the Planning Inspectorate who would make a recommendation on the application to the Secretary of State for Energy Security and Net Zero. The Secretary of State makes the final decision on a DCO application.



Contact us

Please get in touch if you have any questions on North Humber to High Marnham.

Call our community relations line:
0800 051 4430 (Lines are open Monday to Friday 9:00am – 5:30pm)

Email us:
contact@nh-hm.nationalgrid.com

Write to us:
Freepost NH to HM
(No stamp or further address details are required)

If you feel your land may be affected by these proposals, please contact the North Humber to High Marnham Land Team at Dalcour Maclaren by calling **0333 188 3511** or by emailing **NH-HM@dalcourmaclaren.com**.

Alternatively, you can write to North Humber to High Marnham Lands Team at **Dalcour Maclaren, 1 Staplehurst Farm, Weston on the Green, Oxfordshire OX25 3QU**.

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