The Great Grid Upgrade

North Humber to High Marnham

Addendum to Project Background Document

July 2024

nationalgrid

Purpose of this document

This document is an addendum to the North Humber to High Marnham Project Background Document (PBD) originally published in June 2023 as part of our consultation on proposals to reinforce the transmission network in this area.

This Stage 1 consultation took place over an eight-week period between 1 June and 27 July 2023. During this consultation, we introduced the need to build new electricity transmission infrastructure in the area and our early thinking about the proposals.

Since the close of our consultation in July 2023, we have reviewed the consultation feedback received and undertaken a backcheck and review of the Corridor Preliminary Routeing and Siting Study (CPRSS) published in 2023.

Consultation feedback and the backcheck of our previous work has led to the identification of a potential alternative corridor for a section of North Humber to High Marnham between South Wheatley and High Marnham. This potential alternative corridor is referred to as the 'eastern corridor'. To view the map please see Figure 3 on page 19.

Before deciding on an overall preferred corridor and route ahead of Stage 2 (statutory) consultation in 2025, we are seeking people's views about the eastern corridor. As such, the purpose of this addendum is to support a localised non-statutory consultation on the eastern corridor between South Wheatley and High Marnham.

Overview

We are proposing to build a new high voltage electricity transmission line and associated works between a new substation north of Hull at Creyke Beck in the East Riding of Yorkshire and a new substation at High Marnham in Nottinghamshire. This proposed reinforcement is required to increase the capability of the electricity transmission network between the north of England and the Midlands. It is also needed to facilitate the connection of proposed new offshore wind farms that are planned in the area.

This Addendum to the Project Background Document has been prepared to support the localised consultation, which will run from 9 July to 6 August 2024. During this consultation, we are seeking views about the eastern corridor between South Wheatley and High Marnham. Your feedback from this consultation, alongside feedback received during the 2023 consultation, will help inform a decision about the overall preferred corridor within which more detailed proposals will be developed, ahead of a statutory consultation in 2025.

All feedback from consultations will be carefully considered as we further shape our proposals before making an application to the Planning Inspectorate for permission to build, operate and maintain North Humber to High Marnham. For further details on our approach to consultation, please see our Localised Consultation Strategy (2024), which can be found on our website. All documents published as part of this consultation can be found at:

nationalgrid.com/nh-hm or are available upon request by contacting the project team at contact@nh-hm.nationalgrid.com or 0800 051 4430.

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Executive summary

The way we generate electricity in the UK is changing rapidly, and we are transitioning to cheaper, greener and more secure sources of energy like new offshore windfarms.

The UK Government has committed to reaching net zero emissions by 2050. This means achieving a balance between the greenhouse gases put into the atmosphere and those taken out. The energy industry plays a key part in this transition, from developing renewable energy generation to upgrading the existing electricity transmission network to allow communities across the country to benefit from this clean energy.

The North Humber to High Marnham proposals were first published for consultation in the summer of 2023. You can read more about that in the Project Background Document (2023). Following the backcheck of the Corridor Preliminary Routeing and Siting Study (CPRSS) published in 2023 and the feedback received during our Stage 1 consultation (2023), we are now presenting an alternative eastern corridor in your local area. We are now seeking views on this alternative eastern corridor before deciding on a proposed overall preferred corridor and route for the next stage of consultation in 2025. These proposals are part of The Great Grid Upgrade, the largest overhaul of the grid in generations.

Decarbonising the energy system and delivering cheaper and more secure energy supplies is a significant global challenge. At National Grid Electricity Transmission (NGET), we are investing around \pounds 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. We're investing for the future, connecting more and more low carbon electricity to our network and playing a crucial role in turning the UK's net zero ambitions into reality.

In Great Britain, we are in the middle of a transformation, with the energy we use increasingly coming from cleaner, greener sources. In 2019, for the first time since the industrial revolution, most of our electricity came from low carbon sources. NGET is at the heart of that energy transformation – investing around £1.3bn each year to adapt and develop our transmission network to connect new sources of low carbon and green energy to our homes and businesses.

Although it is vital that more of the energy we use comes from low carbon and renewable sources, it is also important to balance the impact on bills, people, communities and our natural environment. NGET is 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 UK already has 13.6 gigawatts (GW) of offshore wind energy in operation¹. The Government's British Energy Security Strategy² outlines the ambition to increase energy from offshore wind to 50 GW by 2030, as well as increasing solar energy capacity to 70 GW by 2035 – more than enough to power every home in the UK. In Powering up Britain³, the Government explains that the grid needs to be expanded at an unprecedented scale and pace to deliver more clean power and increase our energy security.

The UK Government's energy infrastructure policy for the delivery of major energy infrastructure is outlined within a number of National Policy Statements (NPS). NPSs EN-1 (Overarching NPS for Energy) and EN-5 (NPS for Electricity Networks Infrastructure), both published in November 2023 and designated in January 2024, set the regulatory context within which the routeing and siting for electricity infrastructure networks is undertaken.

NPS EN-1 highlights that if energy objectives are to be achieved, there is an urgent need for new electricity network infrastructure to be brought forward at pace.

NPS EN-5 emphasises the recognition by the Government that there is a Critical National Priority for nationally significant low carbon infrastructure, demonstrating the urgent need for new electricity infrastructure.

Delivering the infrastructure needed to achieve this ambition will boost local economies, provide jobs and opportunities to learn new skills, and bring vital investment to towns right across the country. It will allow the UK to decarbonise its energy system in a meaningful way that will not only meet net zero targets but, perhaps more urgently, will deliver a more secure and resilient energy system – one that improves affordability through the connection of renewable energy. Delivering a clean energy transition is the surest way to lower bills in the long term.

North Humber to High Marnham will support the UK's net zero target by reinforcing the electricity transmission network between the north of England and the Midlands and facilitating the connection of planned offshore wind generation and interconnectors (high voltage cables connecting the electricity systems of neighbouring countries) with other countries, allowing clean green energy to be carried on the network.

The reinforcement is needed because our existing power lines do not have sufficient capacity for all the new sources of electricity that we expect to connect to the network over the next ten years and beyond. North Humber to High Marnham, together with other proposals, will help meet this future energy requirement.

This document is supported by a number of technical documents, including:

- **Project Background Document:** explaining the emerging preference for where the new overhead line could be located (published in June 2023);
- Strategic Options Report: providing an overview of the options that NGET identified and evaluated for the connection of North Humber to High Marnham and Grimsby to Walpole (published in June 2023);
- Corridor and Preliminary Routeing and Siting Study: explaining the process and work undertaken to identify an emerging preferred corridor between Creyke Beck and High Marnham within which the proposed infrastructure may be located (published in June 2023); and
- Supplementary Corridor and Routeing Report (2024): explaining the work undertaken to date to identify an emerging eastern corridor between South Wheatley and High Marnham. This identifies where proposed infrastructure may be located subject to an overall decision on the preferred corridor and route.

We recommend that you read these reports in more detail, which will help inform your feedback.

This document has been prepared to provide information on our work carried out to date, and to provide local communities and stakeholders with details of where the overhead line could be located within the eastern corridor.

¹ Wind Energy Statistics, Renewable UK renewableuk.com/general/custom.asp?page=UKwedhome

² Policy paper – British energy security strategy, Department for Business, Energy & Industrial Strategy and Prime Minister's Office, April 2022 gov.uk/government/publications/british-energy-security-strategy/british-energy-security-strategy

³ Powering up Britain, Department for Energy Security and Net Zero, March 2023

assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/1147340/powering-up-britain-joint-overview.pdf

About National Grid

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

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. We believe that by acting now, the UK can become the world's first major clean economy, with net zero carbon emissions by 2050, creating growth and jobs for communities across Britain. 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) owns, builds and maintains the transmission network in England and Wales. It is NGET that is developing the proposals for North Humber to High Marnham. National Grid Electricity Distribution owns and operates the distribution networks for the Midlands, the southwest of England and South Wales.



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National Grid ESO is the Electricity System Operator (ESO) operates the transmission network across Great Britain, including the networks in Scotland owned by Scottish Power Transmission and Scottish and Southern Electricity Networks. National Grid ESO also plans future network requirements, ensuring the right amount of energy is where it is needed. It is entirely separate from NGET. This summer it is set to leave the National Grid Group, becoming the entirely independent National Energy System Operator – a public corporation responsible for planning Britain's electricity and gas networks and operating the electricity system.

National Grid Ventures sits outside the above businesses, investing in technologies and partnerships that help accelerate our move to a clean energy future. That includes interconnectors – connecting the UK with countries across the North Sea, allowing trade between energy markets and the efficient use of renewable energy resources.

When developing transmission network proposals, National Grid ESO and NGET must, under the Electricity Act 1989, do that in an efficient, coordinated and economical way, and in a way which considers people, places and the environment (the desirability of preserving amenity duty). Options to deliver additional network capability and the options we take forward are evaluated against these statutory duties.

Many other organisations also have a key role to play in delivering a cleaner energy future.



The Department for Energy Security and Net Zero (DESNZ) is the ministerial department with primary responsibility for energy.

The Secretary of State for DESNZ is the ultimate decision maker for new electricity transmission network proposals under the Planning Act 2008 (as amended)⁴.

⁴ The Planning Act 2008 legislation.gov.uk/ukpga/2008/29/contents



The Planning Inspectorate is the government agency responsible for examining proposals for Nationally Significant Infrastructure Projects (NSIPs). In energy terms, those include offshore wind farms, new nuclear power stations and new overhead lines greater than 2 km in length. The overhead line infrastructure that we are proposing to build for the North Humber to High Marnham reinforcement would meet the threshold to be an NSIP.

ofgem

Ofgem (the Office of Gas and Electricity Markets) is the government regulator for gas and electricity markets in Great Britain. It is a non-ministerial government department and an independent National Regulatory Authority whose role is to protect existing and future consumers' interests in the transition to more renewable and more secure energy supplies. It does so by regulating network companies through a price controls regime. Ofgem's role in transmission projects is to decide on whether their funding case is efficient and delivers value for the bill payer.

Ofgem does not set energy policy, which is the responsibility of government. Ofgem does not design transmission projects and does not make decisions on whether new transmission proposals are granted planning consents.

Moving towards net zero

The world we live in is changing, and the UK is embracing the enormous opportunities a cleaner, greener future brings.

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

Decarbonising the energy system means replacing – as far as it is possible to do so – fossil fuels with clean and low carbon energy technologies such as from wind turbines and nuclear power for electricity production.

We are transitioning to cleaner technologies like new offshore windfarms. The UK has the largest offshore wind capacity in the world, with some 14.7 GW in operation. That means we need to make changes to the grid so the whole country has access to the clean electricity from these new renewable sources. Growth in energy generated from offshore wind is a key part of achieving net zero.

The Government's Energy White Paper sets out an ambition to deliver 40 GW of offshore wind connected to the network by 2030 – enough to power every home in the UK. The Government raised that ambition to 50 GW of offshore wind by 2030 in the British Energy Security Strategy⁵. Growth in offshore wind also offers significant opportunities for economic growth and job creation. The Committee on Climate Change anticipates that electricity demand will at least double by 2050 as we shift to clean energy to drive electric vehicles, heat our homes and power our industry⁶.

The Committee's Sixth Carbon Budget⁷ published in December 2020 recommends deployment of renewables at scale, including 40 GW of offshore wind by 2030 and sustaining that build rate to support deployment of up to 140 GW of offshore wind by 2050, raising further opportunity for growth and job creation. By 2050, our own analysis indicates that the energy sector needs to fill around 400,000 jobs to build the net zero energy workforce⁸. North Humber to High Marnham

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⁵ British Energy Security Strategy, HM Government, April 2022

gov.uk/government/publications/british-energy-security-strategy/british-energy-security-strategy ⁶ Net Zero – The UK's contribution to stopping global warming, Committee on Climate Change, May 2019

theccc.org.uk/publication/net-zero-the-uks-contribution-to-stopping-global-warming/

⁷The Sixth Carbon Budget – The UK's path to Net Zero, Committee on Climate Change, December 2020 theccc.org.uk/publication/sixth-carbon-budget/

⁸Building the Net Zero energy workforce, National Grid, January 2020 nationalgrid.com/document/126256/download

The need for network reinforcement in the region

The electricity transmission network today in the region

Like much of the high voltage electricity transmission network across the country, the network between the North and the Midlands was largely built in the 1960s, carrying electricity down from Scotland and the North, connecting coal-fired generation in the Aire and Trent valleys with the main centres of population.

The extent of the existing electricity transmission network in the region, the blue 400,000 volts (kV) lines and the red 275 kV lines, is shown on the map on page 11. In the area north of the Humber, the network was initially developed to supply demand in and around Hull and the wider area.

In the Trent Valley, the electricity transmission network was built to connect major coal-fired generation at Keadby, Cottam, Staythorpe, West Burton and High Marnham, carrying electricity on towards major population centres. Electricity still flows primarily from the North to the Midlands through the region today.

Why does the network in the region need reinforcing?

With growing offshore wind and interconnectors, an anticipated tripling of wind generation connected across the Scottish networks by 2030 and the Government's increased ambition to connect 50 GW of offshore wind by 2030, north-south power flows are set to increase. National Grid ESO in the Electricity Ten Year Statement anticipates that the network between the North and Midlands needs to transfer as much as 29 GW of electricity by 2033, compared to 11.6 GW that it can transfer today while remaining compliant with the standards the networkis operated to.

Increasing network boundary capability

Transmission boundary B8 runs east to west, separating the northern generation zones, including Scotland, Northern England and North Wales, from the Midlands and southern demand centres. Across transmission boundary B8, the existing network can currently transport around 11.6 GW⁹ while remaining compliant with the standards to which the network is operated.

The System Operator might pay generators to reduce the energy they produce in one part of the country while paying others elsewhere to generate. These payments are called 'constraint payments'. Balancing the network in this way can temporarily manage power flows where network capability is insufficient, but it increases operation costs, as more expensive generation is brought on. This can be an economic way to manage the network up to a point if constraint costs are not disproportionate. Where constraint costs are substantial, the network becomes uneconomical to operate. It then becomes necessary to invest in increasing network capability.

Existing network capacity and demand in the Creyke Beck area

The existing network serving the Creyke Beck area can export just under 7 GW of electricity while remaining compliant with the Security and Quality of Supply Standards to which the network is operated. Although this has been sufficient until today, it is not sufficient to meet the power carrying capability that is required by the end of this decade and beyond. Peak demand for electricity in the region in 2022 was 526.7 MW¹⁰. Towards the end of the decade, electricity demand in the region is forecast to be higher than it is today, at around 585.7 MW in 2030 and 636.6 MW by 2032.

With up to around 13 GW of contracted generation and interconnector capacity due to be connected by the early 2030s, the network as it is today, notwithstanding local demand, would not have the capacity needed to export all that electricity out of the area across the B8 boundary. We therefore need to reinforce our network to prevent wider system failures and circuit overloads from happening. More information on this can be found in the **Project Background Document (2023)**, the **Strategic Options Report (2023)** and **Supplementary Corridor and Routeing Report (2024)**, which can be found on our website (nationalgrid.com/nh-hm).

Wider reinforcements on the B8 boundary

Work to derive more capability out of the existing network across transmission boundary B8 is planned in the next decade, including replacing the wires (conductors) on overhead lines, allowing more power to be transported or installing new power control devices, allowing more power to be directed to flow along parts of the network that have some additional capacity.

While those works will increase the boundary transfer capability across boundary B8 to around 14 GW, they will not be sufficient to accommodate the north-south power flows that are expected on the network.

Up to around 29 GW of boundary transfer capability is needed by 2033 across the B8 boundary with increasing offshore wind and interconnectors.

Our North Humber to High Marnham proposals will help the transition to clean energy, making sure the grid is ready. This reinforcement is part of The Great Grid Upgrade, the largest overhaul of the grid in generations. It involves making changes and improvements to the existing lines, pylons, cables and other infrastructure that makes up the national grid, so we can make the most of its capability, as well as building some new infrastructure where it's needed.



Figure 1: Map showing the B8 and B9 transmission boundaries

⁹ Electricity Ten Year Statement, North of England boundaries, 2022 nationalgrideso.com/research-publications/etys/electricitytransmission-network-requirements/north-england-boundaries

¹⁰ Forecast peak demand by National Grid ESO from the Future Energy Scenarios 2022, for the Leading the Way scenario for the area that receives electricity supplies via Creyke Beck and Salt End substations.

The North Humber to High Marnham project

NGET introduced the proposals to reinforce the electricity transmission network between a new substation to the north of Hull and a new substation at High Marnham in Nottinghamshire in June 2023.

Our Strategic Options Report, published in 2023, explains in detail how we have considered a range of technical, environmental, socio-economic and cost factors in determining the most suitable strategic option to take forward. This section explains the work done on North Humber to High Marnham before the Stage 1 consultation in summer 2023.

Geographic scope and the preferred strategic option

The geographic scope of each strategic option is a significant factor. Shorter proposals are generally more efficient options and are also usually associated with lower levels of environmental effects, lower capital and lifetime costs. They are also, in general terms, more compliant with relevant policy guidance.

Of the five strategic options considered, a new 400 kV overhead electricity transmission line between a new substation near Creyke Beck and a new substation at High Marnham, approximately 90 km in length, has therefore been taken forward for route corridor identification. This option is preferred because of:

- value to consumers The capital cost estimate for the new transmission circuits, including the overhead line and two required substations, is the lowest overall and the lifetime cost is substantially lower than the subsea option and lower than two of the three other onshore connection options.
- environment and socio-economic factors – Each of the options appraised has its relative advantages and disadvantages, with one of the key differentiators between options relating to overall route length. The current identified route is the second shortest option.

 distance and system benefits – While this option would be approximately 10 km longer than the alternative option to Cottam, routeing the circuit to a new substation at High Marnham, will support future reinforcements and allow system efficiencies, including the other proposed circuit upgrades.

Proposed new overhead line

The proposed reinforcement would involve the construction and operation of approximately 90 km of a new 400 kV overhead electricity transmission line. It currently has an anticipated earliest operational date of 2031. New pylons and conductors (electrical wires) would be located along the overhead line route. We have not decided on exactly what type of pylon we will use, and this will be considered in more detail as we develop our proposals further.

As a starting position, we are considering the use of traditional 400 kV lattice steel pylons. These are typically around 50 metres in height, with approximately three per kilometre on a straight section of the route, slightly more on occasions. In some locations, specific constraints, such as navigable river crossings, can require considerably taller pylons to ensure safe electrical clearance from the electrical conductors (wires).

More information on different technology options can be found in the **Project Background Document (2023)**, available on our website.

Proposed new substations

Two new 400 kV substations need to be in place before North Humber to High Marnham is delivered to ensure that the transmission system continues to meet the relevant technical standards and ensure that customers can connect to our network. Both the Creyke Beck and the High Marnham substations are being developed as separate projects which will require their own planning applications and permissions. During our 2023 consultation, we presented the general search areas for the proposed substations to show the start and end points for the proposed electricity transmission line for North Humber to High Marnham. This consultation relates to the section of North Humber to High Marnham between South Wheatley and High Marnham as such, further detail on the proposed High Marnham substation is set out below.

A consultation on the proposals for the new High Marnham Substation took place in April and May 2024 ahead of the intended submission of a planning application in early 2025. The new 400kV substation at High Marnham is currently being progressed as a separate project, called Brinsworth to High Marnham. The indicative map of where the new High Marnham substation could be located is illustrated in Figure 2. More information on the Brinsworth to High Marnham Project can be found on the relevant project website¹¹.

Other requirements

Additional land will be required to build and reduce the potential impacts of North Humber to High Marnham. 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; and
- land required for mitigation, compensation and enhancement of the environment as a result of the environmental assessment process and delivering Biodiversity Net Gain.

Where the proposed new line would interact with existing lower voltage electricity distribution lines, there will most likely need to be localised diversions and/or short sections of undergrounding of those lower voltage lines. The scope of these is not known at this stage but will be considered in detail as we further develop more detailed proposals.



Figure 2: Indicative map of the new High Marnham substation

¹¹ https://www.nationalgrid.com/electricity-transmission/network-and-infrastructure/infrastructure-projects/brinsworth-highmarnham-uprating

Route corridor options identification and selection process

We have considered where the proposed new line could potentially be located between the Creyke Beck area and High Marnham. The work done up until our Stage 1 consultation held in 2023 is set out in full in our Corridor Preliminary Routeing and Siting Study (CPRSS) report.

The 2023 CPRSS sets out our routeing and siting activities, including the series of corridors (where our overhead line alignment and other infrastructure could be located) that have been considered and our emerging preferences.

The steps taken during this process are described below:

1. Define the study area

For each section of our route, we defined a study area informed by factors including:

- the connection end points identified in the Strategic Proposal
- the location of large towns and other built-up areas
- the location of physical features such as estuaries, or protected sites like Areas of Outstanding Natural Beauty, National Parks or nature conservation areas
- opportunities to utilise established electricity transmission corridors.

2. Constraint mapping

We then map out key features in the landscape that we want to avoid or minimise contact with. These have been informed by planning policy and our professional judgement. These include the built-up areas where people live and other features that may be sensitive in terms of ecology, heritage or landscape, as well as features that may represent planning or technical constraints. The full list is in the CPRSS.

3. Option identification, appraisal and selection

Considering the constraints and opportunities available, using a combination of computer modelling and expert professional judgement, we devise and refine various routes from one connection end to another. These seek to represent different high-level options for making the connection avoiding the identified constraints, for example, routeing on one side of a town or the other.

We then carry out an appraisal of each option with engineers, environmental experts, town planners and other specialists using their professional judgement to consider the implications of each option. This allows us to compare between options on a consistent basis, on topics which are likely to influence the decision. Through this appraisal, we may also identify further options or combinations and do further assessment if needed.

We then consider the relative merits of each option to reach a balanced conclusion on a preferred corridor. The decision is informed by National Grid's statutory duties, the options appraisal and planning policy — including the Holford¹² and Horlock¹³ Rules.

Developing a graduated swathe

Following the selection of a preferred option corridor, we produce a graduated swathe which indicates where the overhead line alignment could be routed. Darker areas of shading show where an alignment is more likely, while lighter or unshaded areas are where it is less likely.

Following feedback received during the Stage 1 consultation in 2023, we carried out additional assessment work and are now presenting an eastern corridor between South Wheatley and High Marnham.

¹² The Holford Rules, National Grid https://www.nationalgrid.com/sites/default/files/documents/13795-The%20Holford%20Rules.pdf ¹³ The Horlock Rules, National Grid https://www.nationalgrid.com/sites/default/files/documents/13796-The%20Horlock%20Rules.pdf





Feedback from Stage 1 consultation (2023)

The Stage 1 consultation was our first stage of non-statutory consultation about our early proposals. It took place over an eight-week period between 1 June 2023 and 27 July 2023, during which we held nine face-to-face public information events and eight online webinar sessions.

The consultation was advertised in five local and national papers and through Facebook social media advertising. We posted the introductory newsletter to just under 12,000 properties in the Primary Consultation Zone (within 1 km of emerging preferred corridor). We emailed a project introduction letter to a number of stakeholders, including those identified as seldom heard and hard to reach. We also held meetings and briefings during and after the consultation period.

This first stage of consultation introduced the need to build new electricity transmission infrastructure in the area and our early stage proposals. Our emerging preferred corridor was split into 11 sections to make it easier for people to give feedback about particular areas.

More information on this can be found in the **Project Background Document** (2023) available on our website (nationalgrid.com/nh-hm).

In a number of sections of the route, we asked respondents to state their preference regarding where we should route the new overhead line. In Section 10 (A620 to Fledborough), a number of respondents suggested that the new overhead line should be routed further to the east, outside of the emerging preferred corridor, closer to the existing overhead lines. Feedback suggested that this would reduce the impact of the new infrastructure in the area, keeping it closer to existing infrastructure and reducing the impact on a number of villages, which would otherwise have the existing infrastructure to the east, and a potential new line to the west.

Potential impacts on a number of unlicensed airstrips was also raised as a consideration, once again, asking for the new overhead line to be routed further to the east, in order to minimise potential safety and operational impacts of the businesses.

Some individuals stated that the line should be routed further away from North Leverton Windmill, a local Grade II* Listed cultural heritage asset, and from the Treswell Woods Site of Special Scientific Interest (SSSI) and Nature Reserve. A number of respondents suggested that minimising impact on both could be done through routeing the new overhead line further east, closer to the existing infrastructure.

Our proposals between South Wheatley and High Marnham

Since the close of Stage 1 consultation in July 2023, we have reviewed all the consultation feedback received and undertaken a backcheck and review of the CPRSS published in 2023.

Consultation feedback and the backcheck and review of our previous work informed the decision to undertake an exercise to identify and consider an eastern corridor option for the section of the North Humber to High Marnham project between South Wheatley and High Marnham. The outcome of this exercise is shown by the use of a 'graduated swathe' with coloured shading of varying intensity to indicate areas more likely (darker colour) or less likely (lighter colour) to be the location of the proposed Project infrastructure.

To identify the eastern corridor, we have had regard to local sites and features, including residential properties, woodlands, areas of ecological importance and existing infrastructure. We have undertaken desk-based environmental and technical assessments of the eastern corridor and information on this can be found in the **Supplementary Corridor and Routeing Report (SCRR) (2024)** available on our website (**nationalgrid.com/nh-hm**).

Before deciding on an overall preferred corridor and route ahead of Stage 2 (statutory) consultation in 2025, we wish to seek feedback on the eastern corridor.

The eastern corridor has been refined from Corridor 3 previously presented in the CPRSS 2023. the SCRR 2024 details the refinement of the corridor. The eastern corridor takes into account the highly constrained areas around West Burton and Cottam Power Stations as well as the challenges to routeing from settlements and scattered residential properties. The SCRR also describes the technical challenges with crossing over to the eastern side of the existing 400 kV overhead lines and why the eastern corridor is located to the west of the existing overhead lines.

For the avoidance of doubt, National Grid has made no decision on the preferred corridor in this most southern section of the route. Feedback from both the non-statutory consultation in 2023 and localised non-statutory consultation in 2024, together with further technical assessments including environmental surveys, will be considered when making a decision on the overall preferred corridor and identification of the route alignment ahead of the subsequent statutory consultation in 2025.

The eastern corridor runs from South Wheatley to the existing High Marnham substation. The graduated swathe within the eastern corridor starts on the southern side of the A620 Gainsborough Road and to the east of North Wheatley and South Wheatley. The swathe passes to the west of the area of woodland adjacent to Wheatley Beck and to the west of St Helen's Church, a Scheduled Monument, continuing past the unlicensed West Burton Airstrip. At this point, the swathe splits into two paths as it approaches its crossing of Wheatley Road, either to the west or to the east to avoid properties on Wheatley Road.

The western path of the swathe here crosses close to an area of traditional orchard adjacent to Wheatley Road and another area of traditional orchard further south adjacent to Wood Lane. Both these areas of orchard are on the periphery of the swathe. We would seek to avoid and mitigate any potential impacts through careful routeing of the line. Where the eastern path of the swathe crosses Wheatley Road, it crosses the Sheffield to Lincoln Railway Line, travelling south adjacent to Sturton Le Steeple.

North Humber to High Marnham

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Figure 3: Eastern Corridor for localised non-statutory consultation

The swathe then comes together as one wide path to the south-east, passing under the southern extent of Sturton Le Steeple. Before the swathe crosses Leverton Road it splits into a northern and southern path to avoid Fenton. Once past Fenton the swathe re-ioins and narrows to travel to the south and pass to the east of North Leverton with Habblesthorpe, following in close parallel to the existing overhead line. This parallel alignment continues as the swathe moves south passing close to Cottam Power Station and moving slightly west to avoid proposed solar developments. The swathe then passes to the east of Sundown Adventure Land and to the east of Rampton.

As the swathe approaches Laneham, it moves to the west to avoid crossing within the village. Moving the swathe to the west means that it crosses four areas of woodland, although with careful routeing we would seek to avoid or mitigate any impacts. The swathe splits into an eastern and western path briefly north of Laneham to avoid properties on Broadings Lane.

The swathe passes to the east of Fox Covert Farm and then continues to travel south crossing Stokeham Road. The swathe then continues to travel south, splitting into two paths as it passes Field House Farm either to the east or west, whilst avoiding the Whimpton Moor Medieval Village and Moated site, a Scheduled Monument to the west of the corridor. It then crosses the A57 Darlton Road continuing south and passing to the west of Ragnall and Ragnall Hall, a Grade II listed building, crossing Farhill Lane and then Fledborough Beck. Next, there are three different paths within the graduated swathe as it approaches the Former High Marnham Power Station site.

Firstly, an option to take a route towards the east of the swathe to pass Fledborough House to the east before re-joining and crossing Crabtree Lane, passing over the National Cycle Network path and Marnham Railway Yard Local Wildlife Site (LWS), as it approaches the proposed location for the new High Marnham Substation.

Secondly, there is a central path which passes to the south of Fledborough House, to then cross Crabtree Lane, passing over the National Cycle Network path and Marnham Railway Yard LWS and the Fledborough to Harby Dismantled Railway LWS as it approaches the proposed location for the new High Marnham Substation. Both approaches to the new High Marnham substation which utilise the eastern side of the swathe are constrained by the existing overhead line to the east.

Thirdly, there is a western path passing to the west of Fledborough house and crossing the National Cycle Network path further north than central and eastern paths.

This continues to cross the edge of the Network Rail High Marnham Test track before passing over the western edge of the Marnham Railway Yard LWS and the Fledborough to Harby Dismantled Railway LWS (at a narrower point than the previous eastern side of the swathe options) as it approaches the proposed location for the new High Marnham Substation.





Our localised consultation

Our commitment to you

We want to ensure that anyone with an interest has the opportunity to help shape the development of our proposals and can comment on the proposals.

Interpreting our eastern corridor and graduated swathe

On our consultation plans, we are showing the following:

- existing overhead lines, shown as dark blue lines.
- a search area and proposed substation location in the High Marnham area, shown by the orange and green areas.

Providing feedback on our plans

Your feedback is important to us in helping to refine our plans. We welcome comments on all aspects of our proposals, including the areas important and relevant to you.

You can use our online interactive map on our project website (**nationalgrid.com/nh-hm**) to input your postcode to determine the location of our plans. If you are unsure about any of the information presented, please get in touch with a member of the Community Relations team. You can reach the team by phone on **0800 051 4430**, or email at **contact@nh-hm.nationalgrid.com**. From 9 July 2023 to 6 August 2024, we are holding our localised consultation to:

- outline the work carried out to identify our eastern corridor between South Wheatley and High Marnham;
- ensure everyone has the opportunity to provide feedback on our work to date on the eastern corridor and hear your views about where within our eastern corridor the exact route could be located, and how we should approach building this vital infrastructure; and
- outline the next steps, and programme and how we will further develop our proposals.

More information on this can be found in the **Supplementary Corridor and Routeing Study Report (2024)** available on our website (**nationalgrid.com/nh-hm**). This document sets out information on our plans in more detail and signposts to where we are publishing more detailed technical information.



Have your say

Who are we consulting and how?

Our consultation is open to anyone who may have an interest in our proposals – residents, communities, landowners, local businesses and interest groups, as well as elected representatives and prescribed consultees such as the Environment Agency, Natural England and Historic England. We are committed to ensuring that our consultation is accessible and inclusive for everyone, with information and opportunities to meet the project team and ask questions, available online and offline.

What information is available?

We have published a number of materials as part of this consultation, as listed in Table 1 below.

Table 1: Information available as part of the consultation

Document	Description	Availability
Addendum to Project Background Document	Providing a summary of our proposals and information on how to get involved.	Can be downloaded for free on the project website and in hard copy at local information events or upon request.
Supplementary Corridor and Routeing Report (2024)	Providing more technical information on the eastern corridor, the routeing and siting options assessed for the eastern corridor and the wider need for the project.	Can be downloaded for free on the project website or sent upon request from the project team.
Map of the eastern corridor	Showing the location of the eastern corridor.	Can be downloaded for free on the project website, with further detail at the local information events.
Consultation newsletter	Summarising our proposals including information about the consultation.	Can be downloaded for free on the project website, in hard copy at the local information events and for collection at the information points (located along the route)
Feedback form	To gather comments and feedback from the public consultation.	Online form available on the project website, in hard copy at the local information events and for collection at the information points (located along the route). Can be requested from the project team.
Project website	Hosting all project information, including downloadable versions of all the above documents.	Access at: nationalgrid.com/nh-hm

In addition, the documents previously consulted on in 2023, including the **Strategic Options Report (2023)** and the **Corridor Preliminary Routeing and Siting Study (2023)**, are available in the document library on the project website.

We are committed to making project information accessible to everyone. If you need any information or documents in an alternative format, such as large print, braille, or audio tape, or if you would like a paper copy of any of our consultation or technical documents, please get in touch using the contact details on page 31 of this document.

Please note there may be a charge for supplying printed copies of technical documents.

What we are asking for feedback on

Throughout this document we have explained the need case for our North Humber to High Marnham proposals, the strategic options considered, our approach to routeing and siting, and our emerging preferred corridor. We have described our proposals for each section of the emerging preferred corridor and we would value your feedback on these areas.

We want to know your views on our approach and our emerging preferred corridor and graduated swathe. We also value your comments on local features and impacts that are important to you, including any relevant mitigation you would like to see. We are asking for your local knowledge on the most appropriate location within the swathe to route the pylons and associated infrastructure and if there is anything we should consider as we develop our proposals further.

The feedback received through this first consultation stage will inform how we further develop our plans for the proposed reinforcement.

Consultation events

We welcome you to visit our face-to-face public information events, which are being held at the following locations across the proposed route. You will have the opportunity to find out more about our proposals, view and take away printed materials, and speak to experts within the team.

Date and time	Venue	Date and time	Venue
Friday 12 July 2024, 2pm–7pm	Dunham On Trent Village Hall, Low Street, Dunham, Newark NG22 0FJ	Saturday 13 July 2024, 10am–3pm	Sturton Hall and Conference Centre, Brickings Way, Sturton Le Steeple DN22 9HY
Tuesday 23 July 2024, 2pm–7pm	Rampton Village Hall, Manor Grounds, Rampton, Retford Nottinghamshire, DN22 0JU		

Table 2: Consultation events

Webinars

We welcome you to attend one of our one-hour online webinar sessions, where we will present details of our proposals followed by an open question and answer (Q&A) session. We are holding a series of general overview and location themed webinars. A recording of a general overview presentation will also be available to view on our website. Details on how to sign-up for a webinar (using the software 'Microsoft Teams') are available on the website or by contacting the community relations team by phone on **0800 051 4430** or by email at **contact@nh-hm.nationalgrid.com**.

Table 3: Consultation webinars

Webinar session		Start time
North Humber to High Marnham localised consultation Our proposals between South Wheatley and High Marnham		9 July 2024 10am
North Humber to High Marnham localised consultation Our proposals between South Wheatley and High Marnham		y 25 July 2024 7pm
Local information points		
Paper copies of the consultation newsletter and feedback form are available to collect from	For the most up-to-date open hours, please check with the relevant venue. Reference	ng Please get in touch with the project team if you would like any additional printed information.

are available to collect from one of the following local information points. These are located within or in close proximity to the preferred corridor and can be collected from the start of and throughout the consultation period. For the most up-to-date opening hours, please check with the relevant venue. Reference copies of the **Strategic Options Report**, **Supplementary Corridor and Routeing Study Report** and **Addendum to Project Background Document** are also available at these locations.

Table 4: Local information points

Public information point	Opening times	
Gainsborough Library Cobden Street, Gainsborough DN21 2NG	Monday to Friday 9am–5pm and Saturday 9am–1pm	
All Saints Parish Church Misterton High Street, Misterton, Doncaster DN10 4AL	Monday to Sunday 10am–4pm	
Retford Leisure Centre Old Hall Drive, Ordsall, Retford DN22 7EA	Monday to Friday, 6am–10pm, Saturday 7am–6pm and Sunday 7am–9pm	
Bassetlaw District Council (Retford office) 17B The Square, Retford DN22 6DB	Monday to Friday 9am–5pm	



How to provide your feedback

You can provide your feedback in the following ways:

Complete a feedback form

We have produced a feedback form for you to fill in and submit. Paper copies are available to pick up from our face-to-face consultation events and the information points listed on page 26 of this document.

You can also download and print a copy of the feedback form from our website and return to us for free by post; alternatively, please get in touch and we will post one to you.

We encourage you to view our proposals online, where you can access our interactive map, view the locations of interest to you and link through to our feedback form, where you can submit your comments digitally.

Send us a letter

You can send a letter/or completed feedback questionnaire to **Freepost NH TO HM** (no stamp or further address details are required).

Email us

If you prefer to send us your comments via email, you can send them to us at **contact@nh-hm.nationalgrid.com**.

Call us

If you have any questions about the Project, or require any assistance with providing feedback, please give us a call on **0800 051 4430**. Lines are open Monday to Friday 9am–5:30pm, with an answerphone facility taking messages outside of these hours.

Other information

If you would prefer to receive any information relating to the consultation through the post, or you need it in another format, please get in touch.

If you have difficulty writing down your feedback, a member of the Community Relations team will be able to take comments over the phone.



Next steps

The feedback received throughout this localised consultation will be considered as we refine our proposals for North Humber to High Marnham further and will influence the next stage in the design of the project.

Following the completion of the localised consultation, National Grid will develop a detailed design for the proposed overhead line within the selected preferred corridor (whether eastern or western). This design proposal will be informed by the feedback received during both Stage 1 (2023) and the localised consultation (2024) along with ongoing survey findings and further technical assessment work.

Preliminary information relating to the potential environmental effects of the detailed design proposal will be collated in a 'Preliminary Environmental Information Report', which will be published at our Stage 2 consultation. You will then be able to have your say on the more refined proposals, with our Stage 2 consultation currently planned for 2025.

Our approach to consultation

Certain types of energy infrastructure, including overhead electricity transmission lines of the type we are considering for North Humber to High Marnham, are nationally significant infrastructure projects under the Planning Act 2008.

This means that we will be preparing and submitting a Development Consent Order (DCO) application to the Planning Inspectorate¹⁴, who will consider our proposals and make a recommendation to the Secretary of State for DESNZ, who will decide on whether development consent should be granted. Local planning authorities, along with others, remain important consultees in the process. To find out more about the DCO process, please see the Planning Inspectorate website.



Indicative timeline

¹⁴ The Planning Act 2008 process, Planning Inspectorate

https://infrastructure.planninginspectorate.gov.uk/application-process/the-process/

As required for DCO applications, a Consultation Report will be prepared and submitted as part of the application, setting out how pre-application consultation has been carried out, the main findings, our response to feedback and how feedback has shaped the proposals that are the subject of the DCO application.

To raise awareness of this consultation, we have:

- sent a copy of our consultation newsletter to all addresses within a 1 km radius of the eastern corridor;
- briefed local elected representatives;
- placed advertisements in the local media, including locally circulating newspapers, online and on social media;
- contacted a number of local interest and environmental groups.

During this consultation and over the coming months we will be:

- continuing our discussions with landowners and people with an interest in land which interacts with the project;
- continuing to refine our proposals in response to your feedback;
- continuing to carry out environmental impact assessment work and undertake surveys along the eastern corridor;
- providing updates to the local community and to those who have asked to be kept updated on our proposals via a community newsletter; and
- continuing to refine our proposals in response to your feedback and presenting our updated plans for the project during our next stage of consultation, now planned for 2025.

Following further development and finalisation of detailed proposals, we will submit our DCO application to the Planning Inspectorate, who will examine our proposals and make a recommendation on the application to the Secretary of State for DESNZ, who will make the final decision on whether or not to grant consent. We will be preparing a Consultation Report alongside our application, which will show how we have taken your views into consideration.

Contact us

Please get in touch if you have any questions about our proposals for North Humber to High Marnham.

Call our Community Helpline: **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, Unit 1, Staplehurst Farm, Weston on the Green OX25 3QU

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nationalgrid.com

July 2024