

# Welcome to the public consultation for the Grain to Tilbury project

**The Grain to Tilbury project is a proposed electricity infrastructure upgrade, involving the replacement of the existing 1960s Thames Cable Tunnel, beneath the Thames, between Tilbury in Thurrock and Gravesend in Gravesham. A headhouse is also needed at both ends of the tunnel.**

We are sharing information about this essential project with you today and we would value your feedback to help inform our proposals.

Please review the exhibition boards and speak with the team if you have any questions. You can provide feedback either by completing a feedback form, by posting one to us later via the **FREEPOST** envelopes provided, or by going online at [nationalgrid.com/graintotilbury](https://nationalgrid.com/graintotilbury)

This project will be a vital upgrade of the electricity transmission system in Kent and Essex and forms part of the Great Grid Upgrade. The Great Grid Upgrade, which is the largest overhaul of the electricity grid in generations, will play a significant part in meeting the UK government's plan to power all homes and businesses with greener energy by 2030, ensuring our electricity network is fit for the future.

**The project consists of the replacement of the existing Thames Cable Tunnel between Tilbury and Gravesend and the construction of two new headhouses – one at either end of the tunnel. Headhouses are needed to connect the tunnel and act as access points. The tunnel and the headhouses will require planning permission under the Town and Country Planning Act.**

An existing overhead line between Tilbury, Kingsnorth, and the Isle of Grain in Kent, will also need refurbishing however, this is not planned until 2028 and does not form part of this consultation.

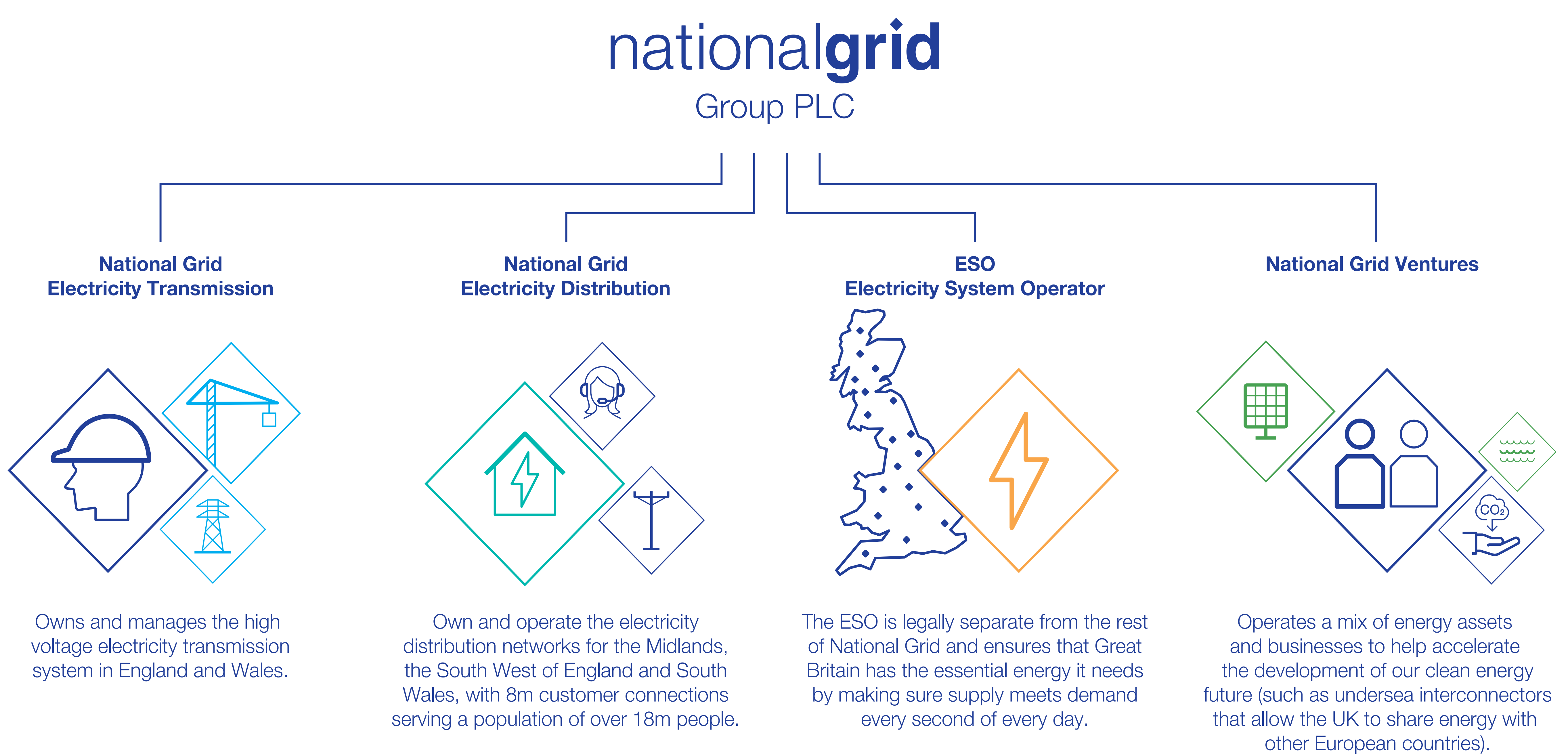
# About National Grid

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

We sit 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.

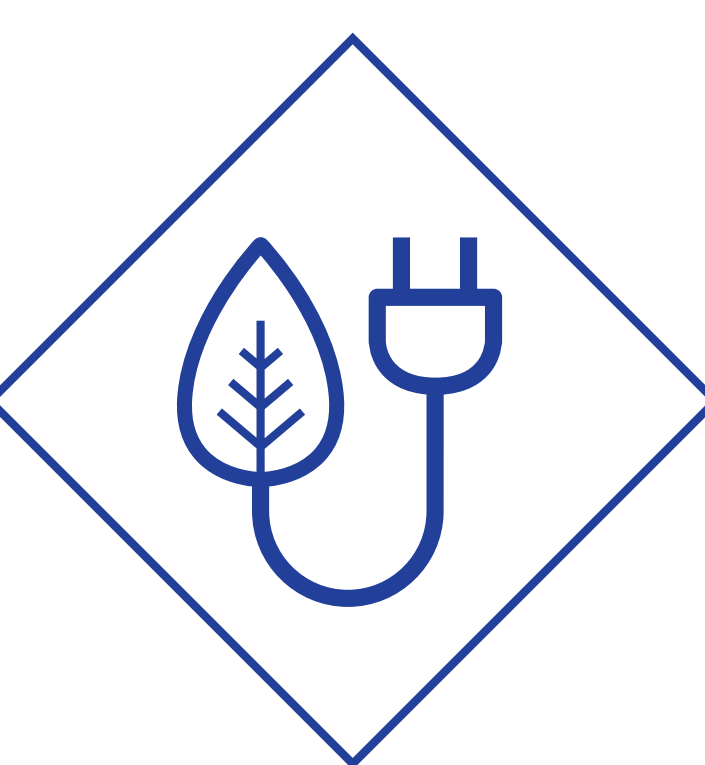
**National Grid Electricity Transmission (NGET)** owns, builds and maintains the electricity transmission network in England and Wales. It is **NGET** that is developing plans for Grain to Tilbury.



# Moving to net zero

**The decisions we take now to make our energy system cleaner, directly impact the future of our planet.**

National Grid has a critical role to play in the acceleration towards a cleaner future. Our businesses lie at the heart of the energy system connecting millions of people to the energy they use.



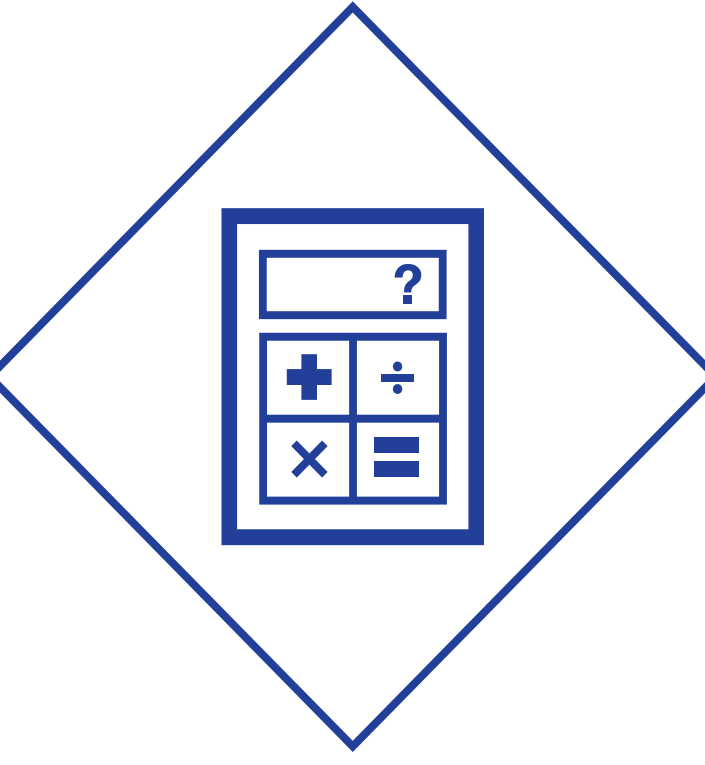
**Cleaner energy**

The UK has set a world-leading target to tackle the defining challenge of this generation: climate change. The UK is aiming to be powered by clean electricity by 2035 and achieve net zero by 2050.



**Energy security**

The Government's British Energy Security Strategy aims to connect up to 50 gigawatts (GW) of homegrown offshore wind by 2030 – enough to power every home in the UK.



**Costs to consumers**

The Office of Gas and Electricity Markets (Ofgem) works with government, industry and consumer groups to deliver a net zero economy, at the lowest cost to consumers.

# The Great Grid Upgrade

**To help achieve net zero National Grid is embarking on The Great Grid Upgrade, which will play a big part in the UK government's plan to boost homegrown power.**

The Great Grid Upgrade is the largest overhaul of the electricity grid in generations. Our infrastructure projects across England and Wales are helping to connect more renewable energy to your homes and businesses.

Grain to Tilbury is one of many projects across the country that will see electricity infrastructure upgraded and will support the low carbon energy needs of tomorrow.



**Find out more about The Great Grid Upgrade here:**



Grain to Tilbury also forms part of the **Accelerated Strategic Transmission Investment**, a programme targeted at unlocking the government's 2030 50 GW offshore wind target.

These are key projects, approved by Ofgem, which have been identified and brought forward to deliver on National Grid's net zero commitments.

# Why we need to upgrade Grain to Tilbury

**The Thames Cable Tunnel is an existing high-voltage electricity cable beneath the Thames between Tilbury and Gravesend.**

It was built in the 1960s and houses 400 kilovolt (kV) transmission cables between Tilbury and Gravesend as part of National Grid's high voltage transmission network.

Therefore, the proposed new tunnel will replace this and help reinforce the network, aiding our transition to net zero.



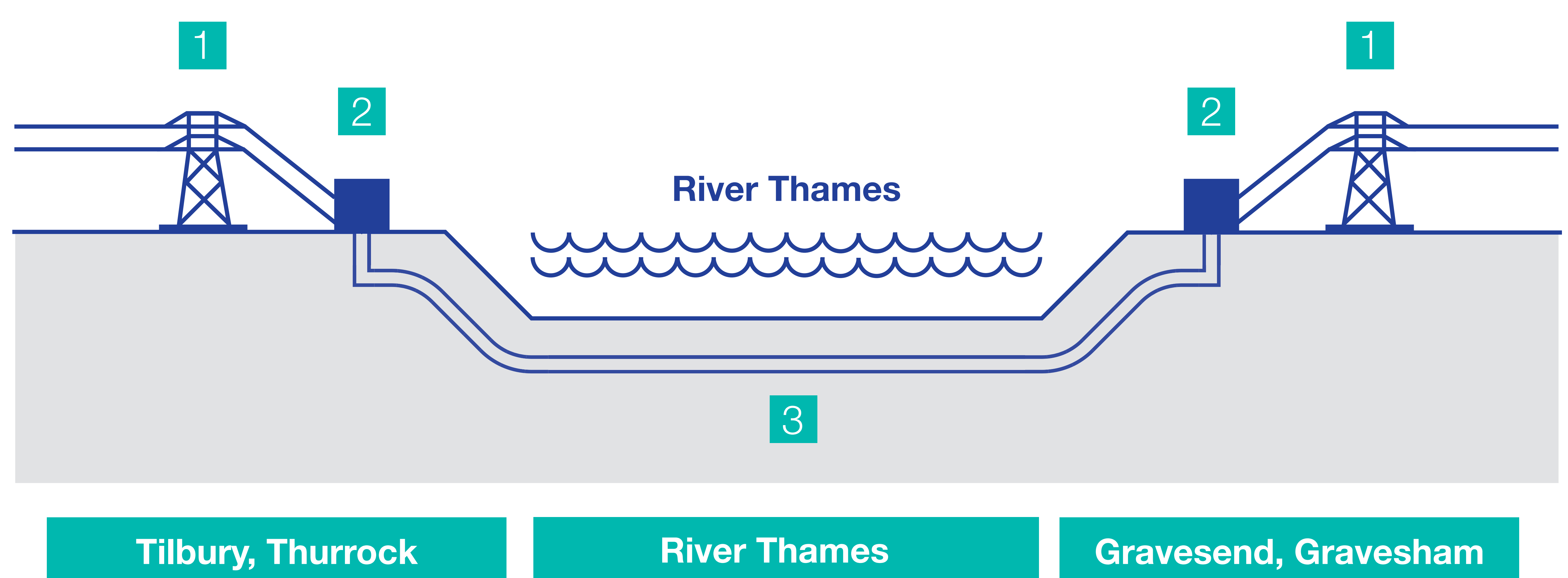
**A new tunnel is the most effective way to deliver a long-term upgrade to the local network.**

A number of options were considered as an alternative to building a new tunnel. These included maintaining the existing tunnel, or replacing it with a crossing tower and overhead line over the Thames.

Both options present challenges, including impacts on important and sensitive bird habitats, and a lengthy consenting process required to secure the works, particularly with the existing overhead line which would require a development consent order (DCO). The outages needed to facilitate the refurbishment of the existing tunnel also mean that it would take a considerable amount of time to deliver.

Therefore, a new tunnel is being developed as this is considered to be the most effective and safest option. The tunnel will help to ensure a continued safe and reliable supply of electricity to the area.

## Grain to Tilbury project: Cross-section



- 1. Existing network
- 2. Headhouses
- 3. New Thames Cable Tunnel

# Our proposals

**Grain to Tilbury involves the replacement of the existing Thames Cable Tunnel between Tilbury, Thurrock, and Gravesend, Gravesham, as well as the delivery of associated infrastructure to support the new connection.**

National Grid will be required to carry out an Environmental Impact Assessment (EIA) to demonstrate the works will not adversely impact the local environment.

### Tunnel replacement

The tunnel will be 2.3 kilometres in length and will run beneath the Thames between Tilbury and Gravesend. This will require planning permission, along with the headhouses and overhead line alterations, to be granted under the Town and Country Planning Act by Gravesend and Thurrock Council.

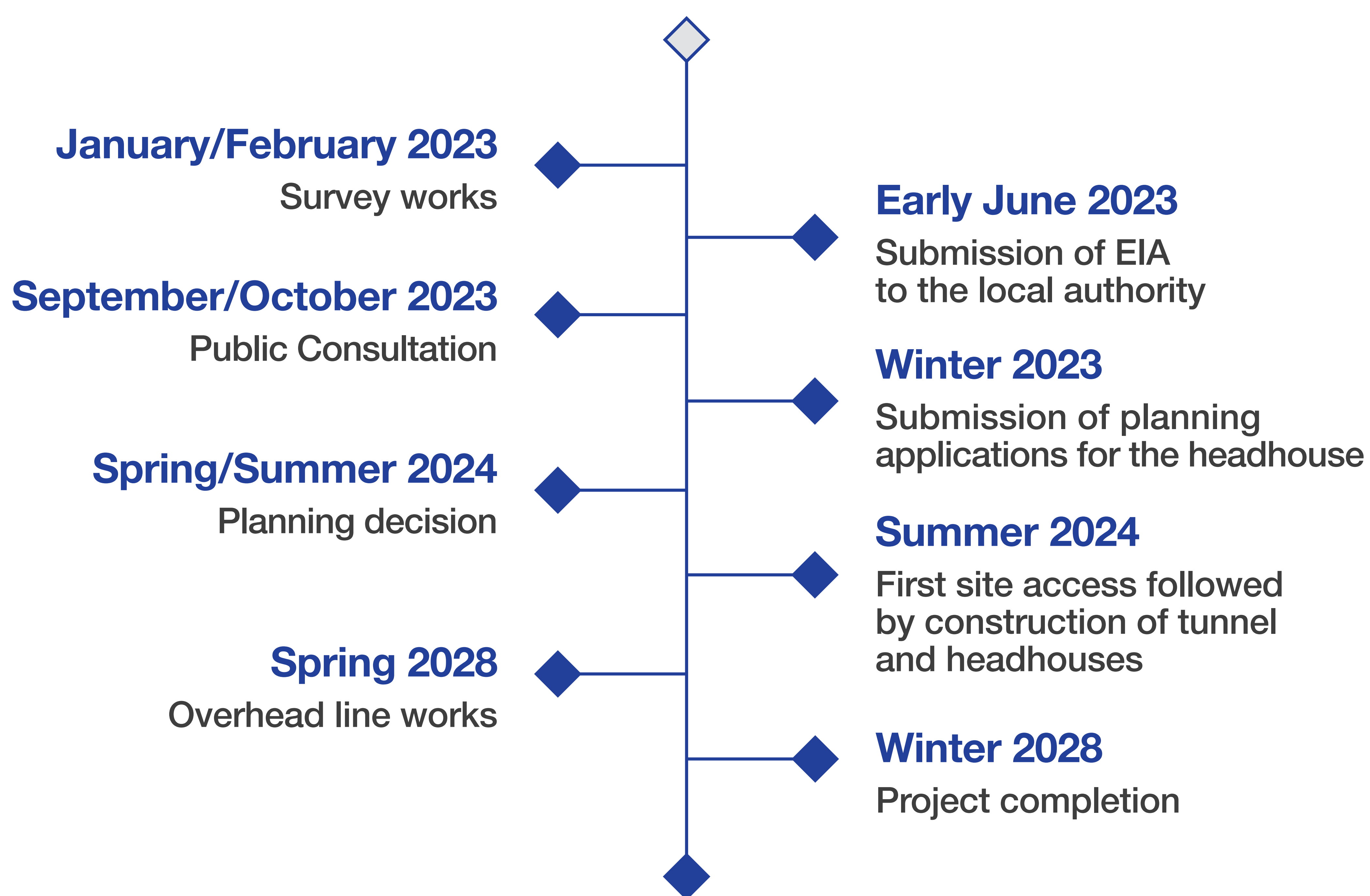
### Headhouses and cable sealing ends

Two headhouses, and sealing end compounds, will be required as part of the development, at either end of the tunnel at Gravesend and Tilbury. This infrastructure is required to connect the existing overhead line route to the new cable in the tunnel, to the rest of the electricity network, and act as access points. It will also be necessary that we later deliver and install a new pylon at both the Gravesend and Tilbury headhouse sites and remove three existing pylons at Tilbury. This is planned for 2027/2028.

### Overhead line refurbishment

The scheme also includes the full refurbishment of the existing overhead line between Tilbury, Kingsnorth, and the Isle of Grain. As this is existing infrastructure, it is not included as part of this Town and Country Planning Act application, and further engagement will take place when this work is being prepared.

## Application timeline



# Our proposals in Tilbury

**The construction site for the Tilbury section of this project is located within an industrial area to the east of the Tilbury2 port.**

The new headhouse building is expected to be a similar size to the existing headhouse to the south of the site and will be eight metres high. This building will connect the cable through the new Thames tunnel to a new pylon which will then connect to the existing electricity network in Essex. The pylon will be of a similar height and scale to the existing overhead pylons in the area and will be 45 metres high.

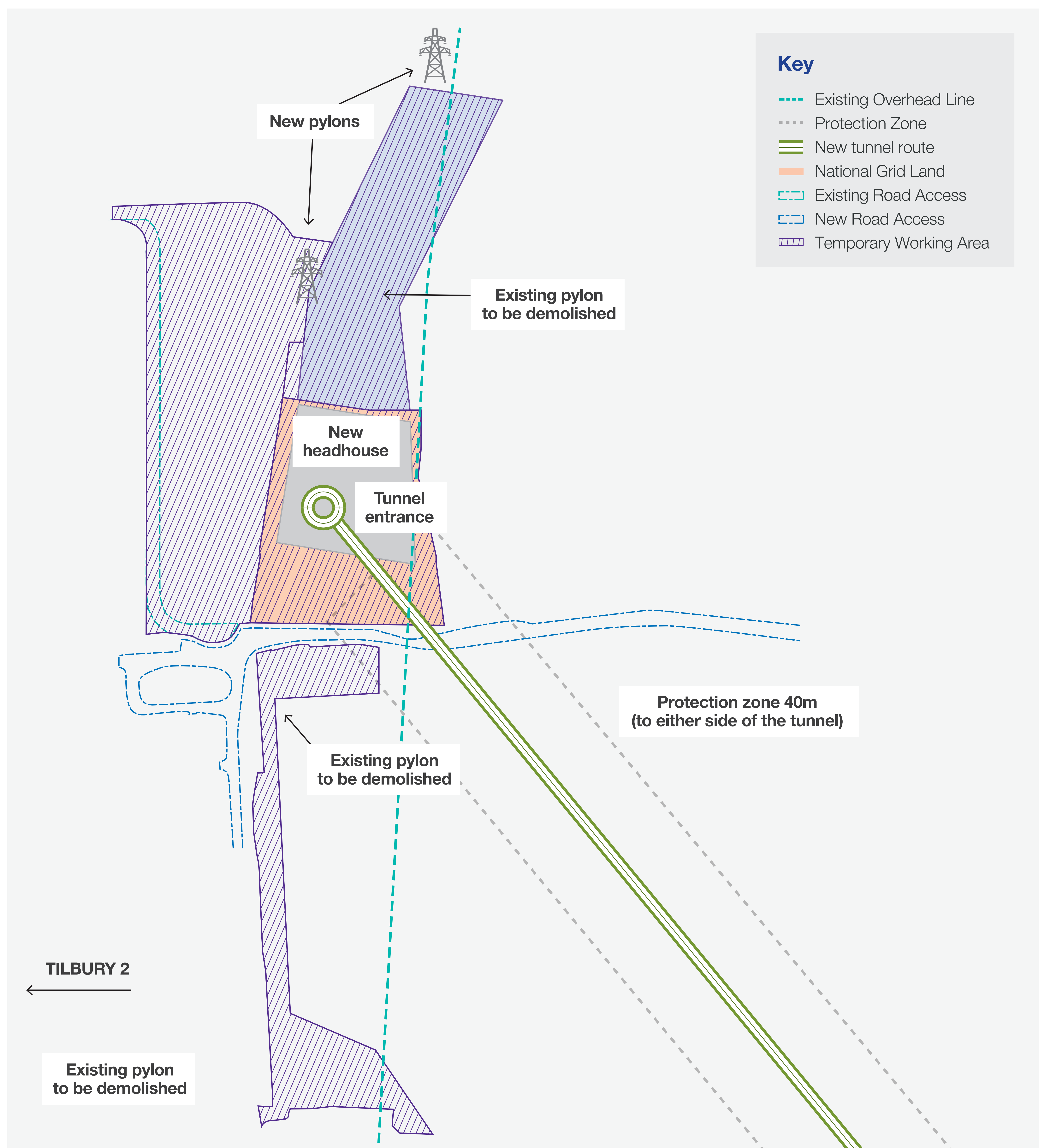
## Construction

The majority of soil, rock and debris during construction of the site will be taken away via barge as set out in more detail on the 'construction' board. A small number of HGVs will be required to transport spoil from the Tilbury site to a jetty to the east of the site, where a conveyor will be used to load the barges to take the spoil away on the Thames.

This will be set out in detail in our planning application documents, but as a rough guide, around three to four daily HGV journeys to each site and a total of around 80 barge movements will be needed over the four-year life of the project to facilitate construction and move this spoil away from the area.

## Next steps

In order to progress our plans we will be submitting a planning application to Thurrock Council. Our application will set out the proposals for these construction works and detail mitigation measures which will reduce the impact of our works on the local area and wildlife.



# Our proposals in Gravesend

**The site for the new Gravesend headhouse is located to the east of the Metropolitan police training building.**

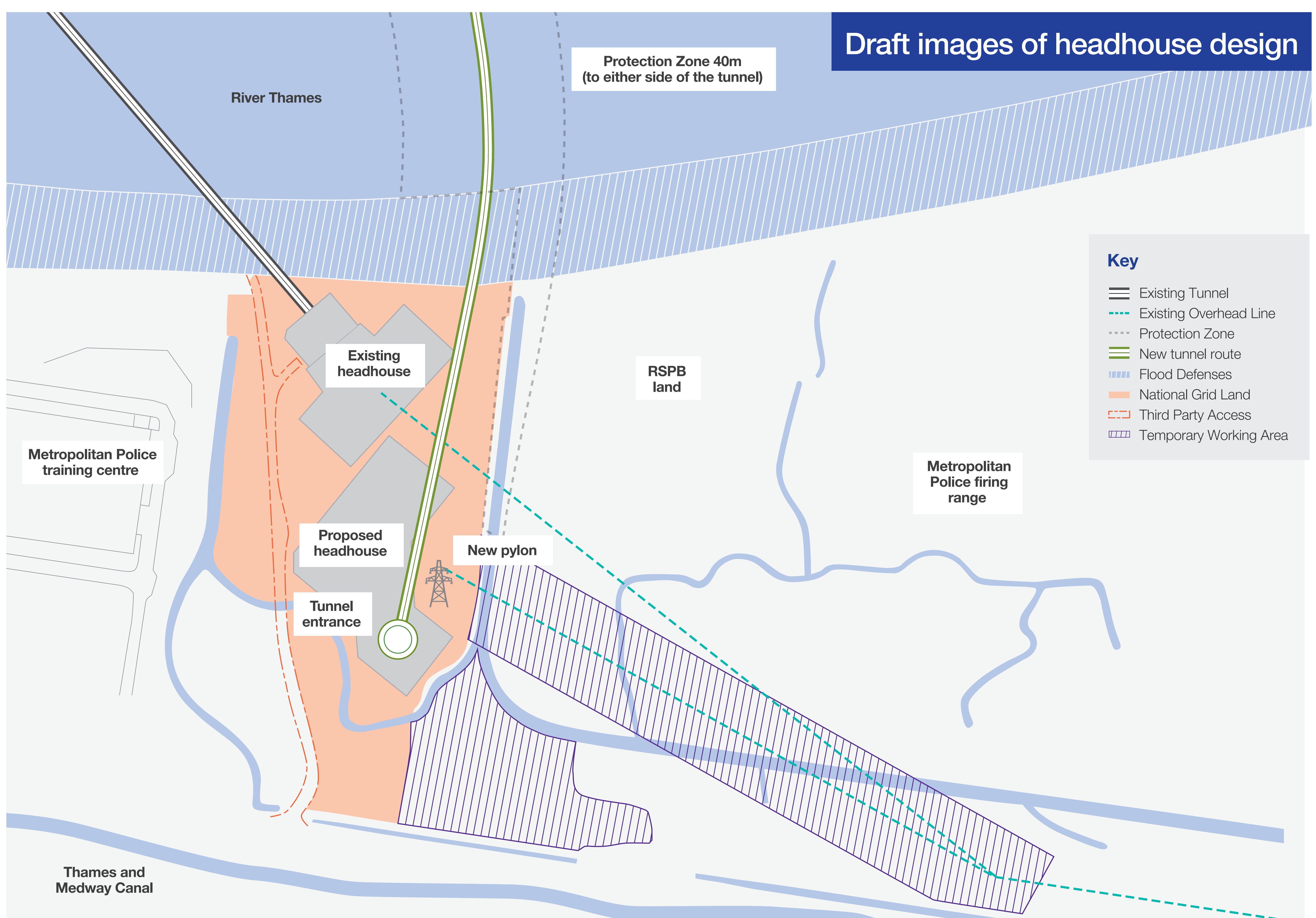
The new headhouse will be 7.8 metres high, so it will be a similar height to the buildings around it. The headhouse will connect the cable through the new Thames tunnel to a new terminal pylon just to the south of the headhouse, which will then connect to the existing electricity network in Kent. This new terminal pylon will be of a similar height and scale to the existing overhead pylons in the area and will be 45 metres high.

## Construction

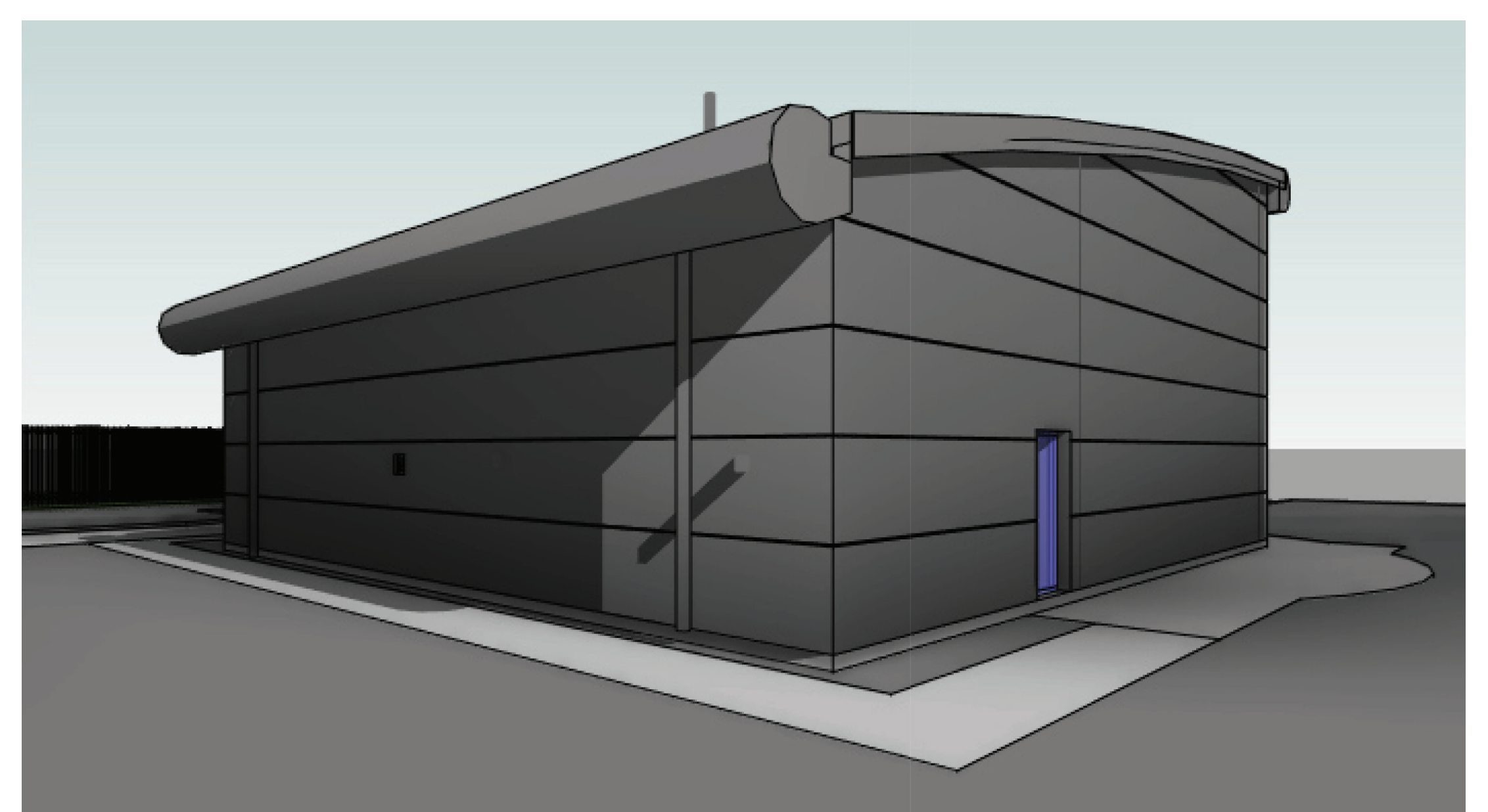
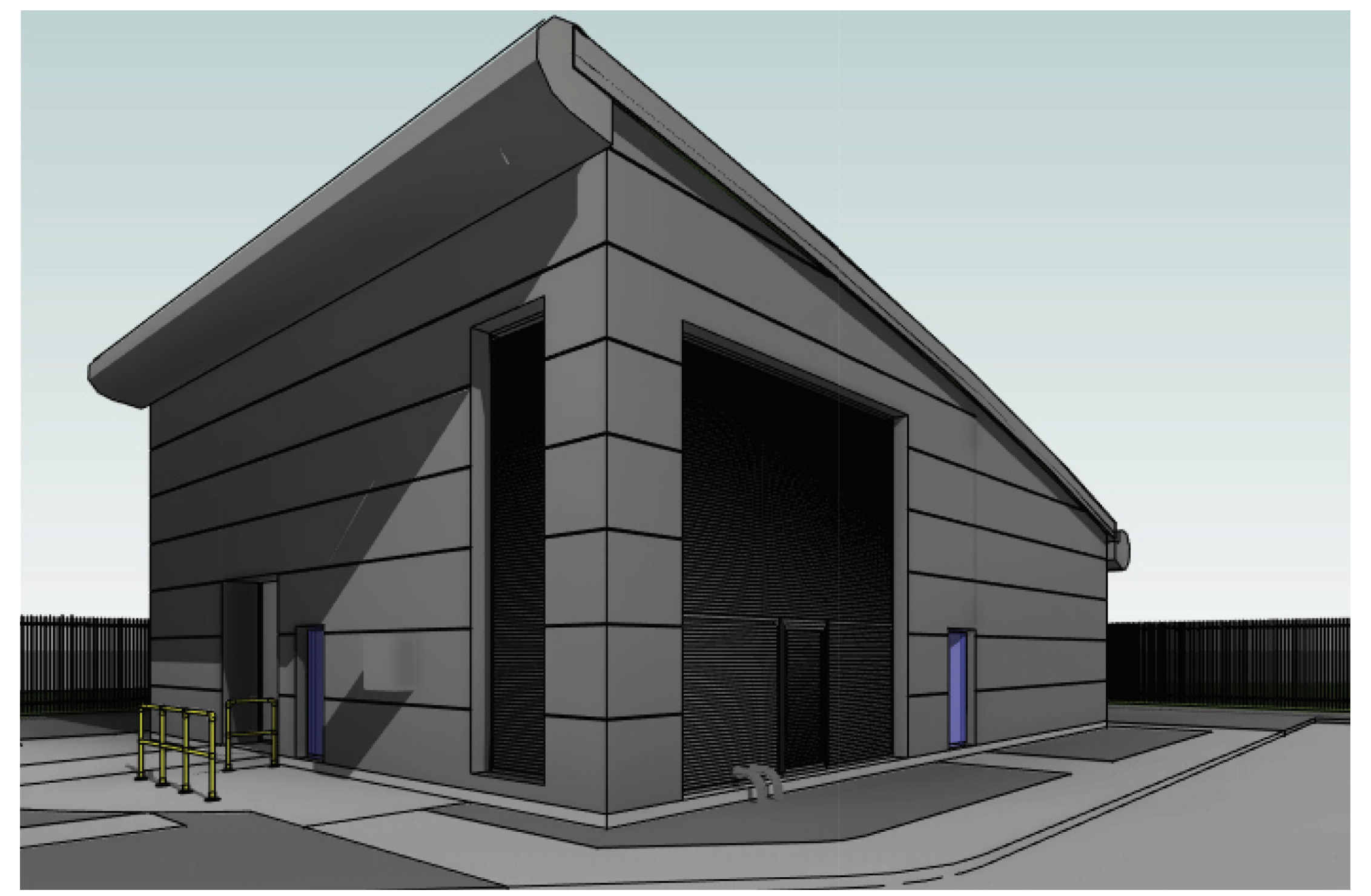
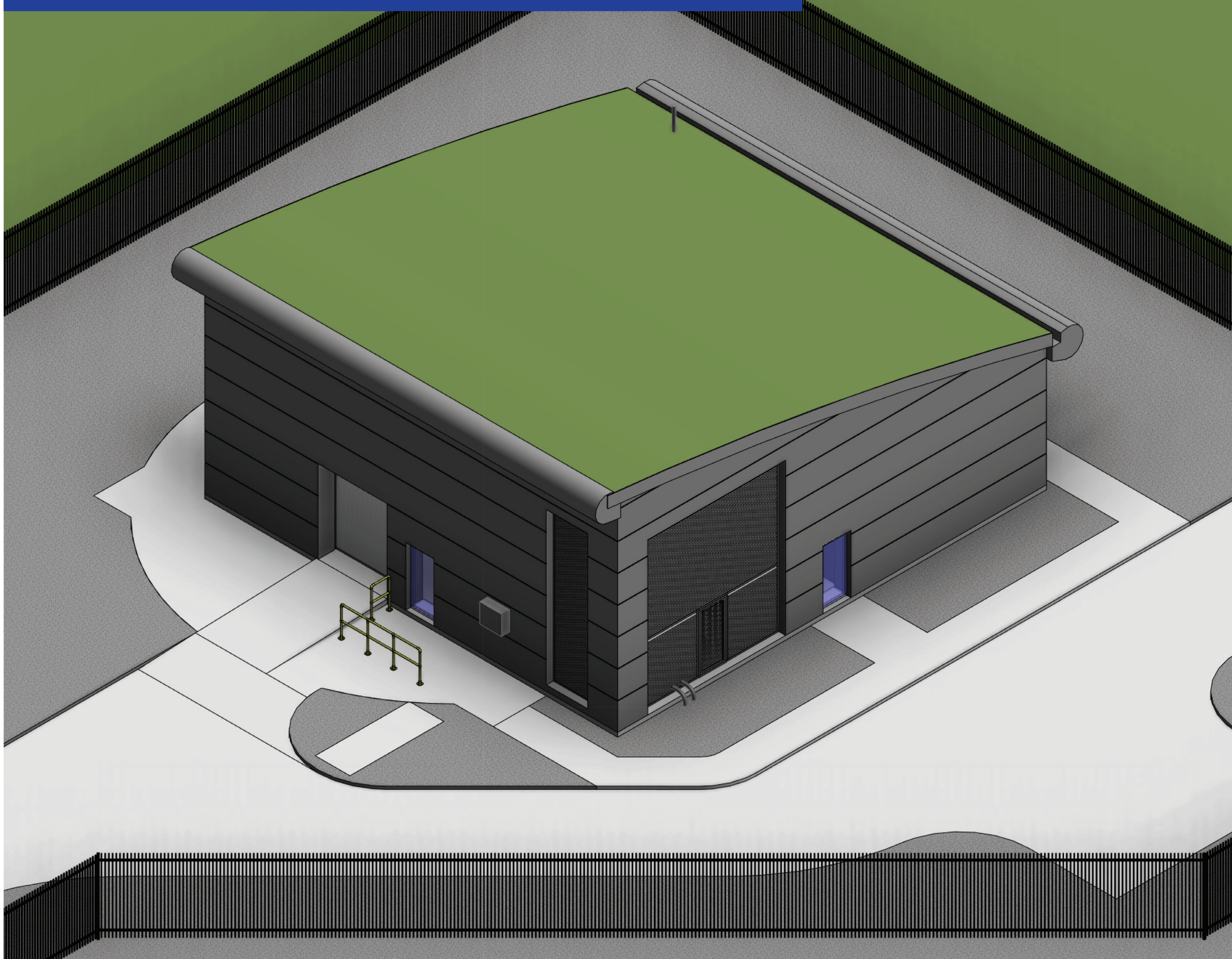
Construction vehicle movements into the site will be safely managed, to take account of the existing towpath and the cycle path.

## Next steps

We are currently undertaking surveys to support the planning application for the site. We will submit the application to Gravesend Council at the same time that we submit an application to Thurrock Council.



A biodiverse roof will be included on the proposed headhouse





# Construction

To support our planning applications, we will prepare a **Construction Traffic Management Plan**. This will set out the good practice measures we propose to carry out in order to minimise, where possible, the impact of our vital works locally.

Our priority is to move spoil from our construction sites via the Thames to reduce our impact on the road network, and plans for this are being progressed. However, please note some construction movements will need to take place via HGV movements.

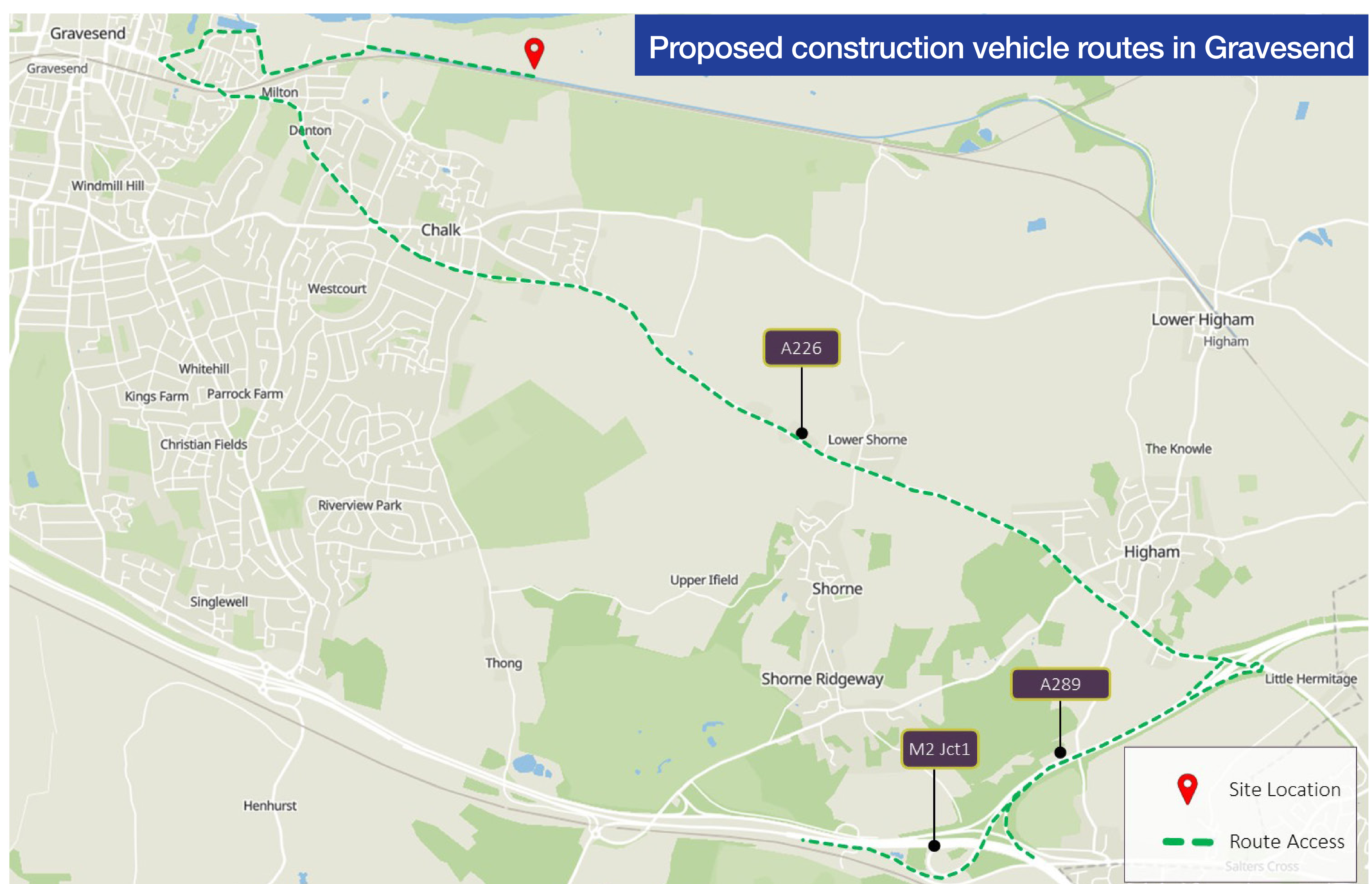
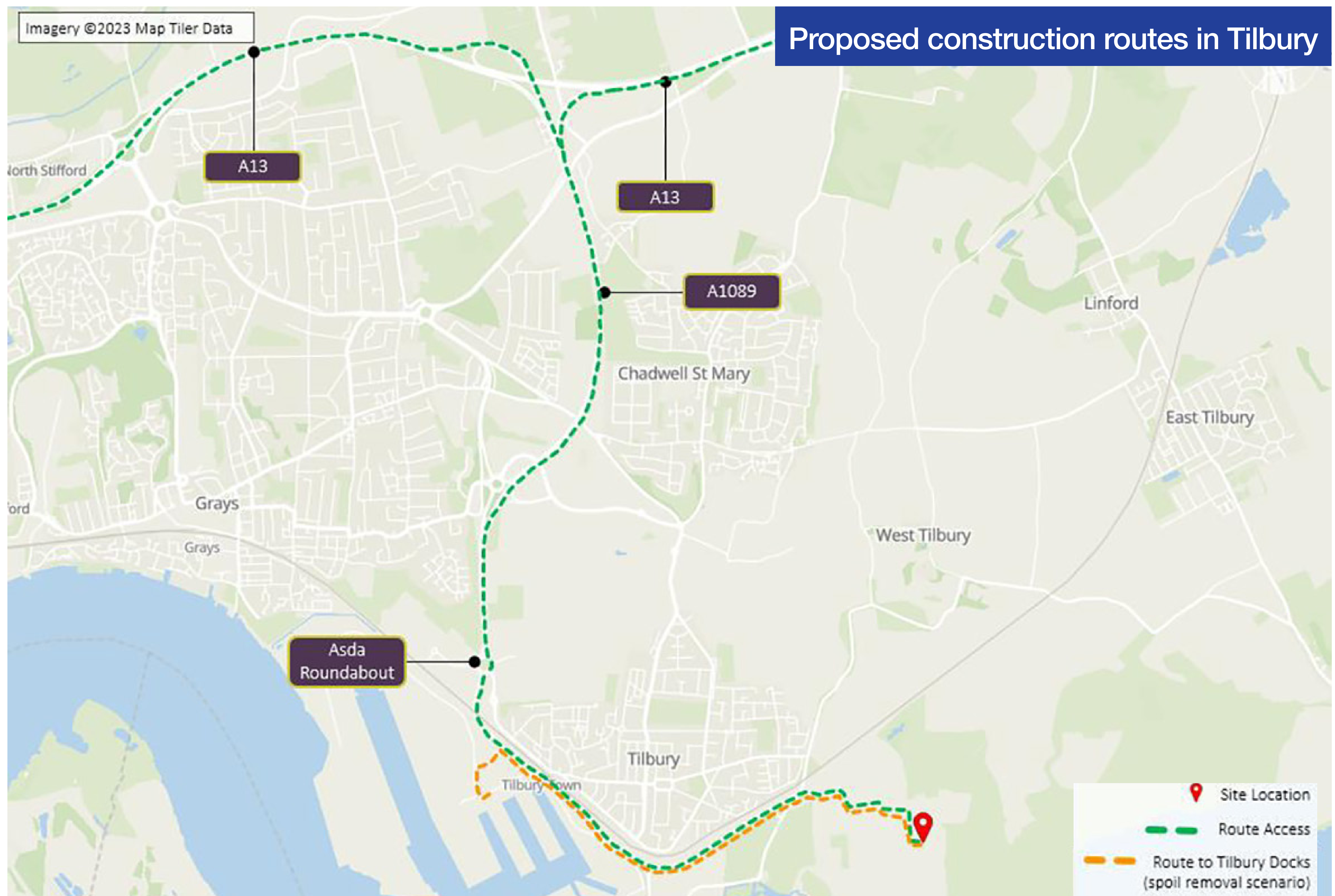
The Construction Traffic Management Plan will include information on signage to make sure our construction traffic uses the agreed routes. Construction workers will also use public transport and car share where practicable to come to and from work. Our workers will also be briefed regularly to make sure they are aware of, and comply with, speed limits on site and locally.

The duration of the entire construction programme is approximately 46 months, commencing in **summer 2024**.

The tunnel construction activities are expected to last approximately 17 months commencing in **spring 2026**, with the tunnel construction works lasting around eight months between **summer 2026** and **spring 2027**.

The below maps set out the routes that we are currently considering for our construction traffic in Tilbury and Gravesend.

We would welcome your feedback on these proposed routes.



# Environmental protection

## We will always consider the potential environmental impacts of our projects.

This section of the Thames is rich in wildlife and biodiversity, and contains a number of protected wildlife areas. This includes the Canal and Grazing Marsh Higham Local Wildlife Site at Gravesend; the nearby Thames Estuary & Marshes Site of Special Scientific Interest (SSI), Special Protection Area (SPA) and Ramsar site; and the Local Nature Reserve on the Tilbury banks of the Thames.

As part of the planning process, we have been carrying out environmental surveys, including a detailed Environmental Impact Assessment (EIA), habitat surveys and protected species surveys. The results of this work will help inform the design and decision-making process as we finalise our plans.

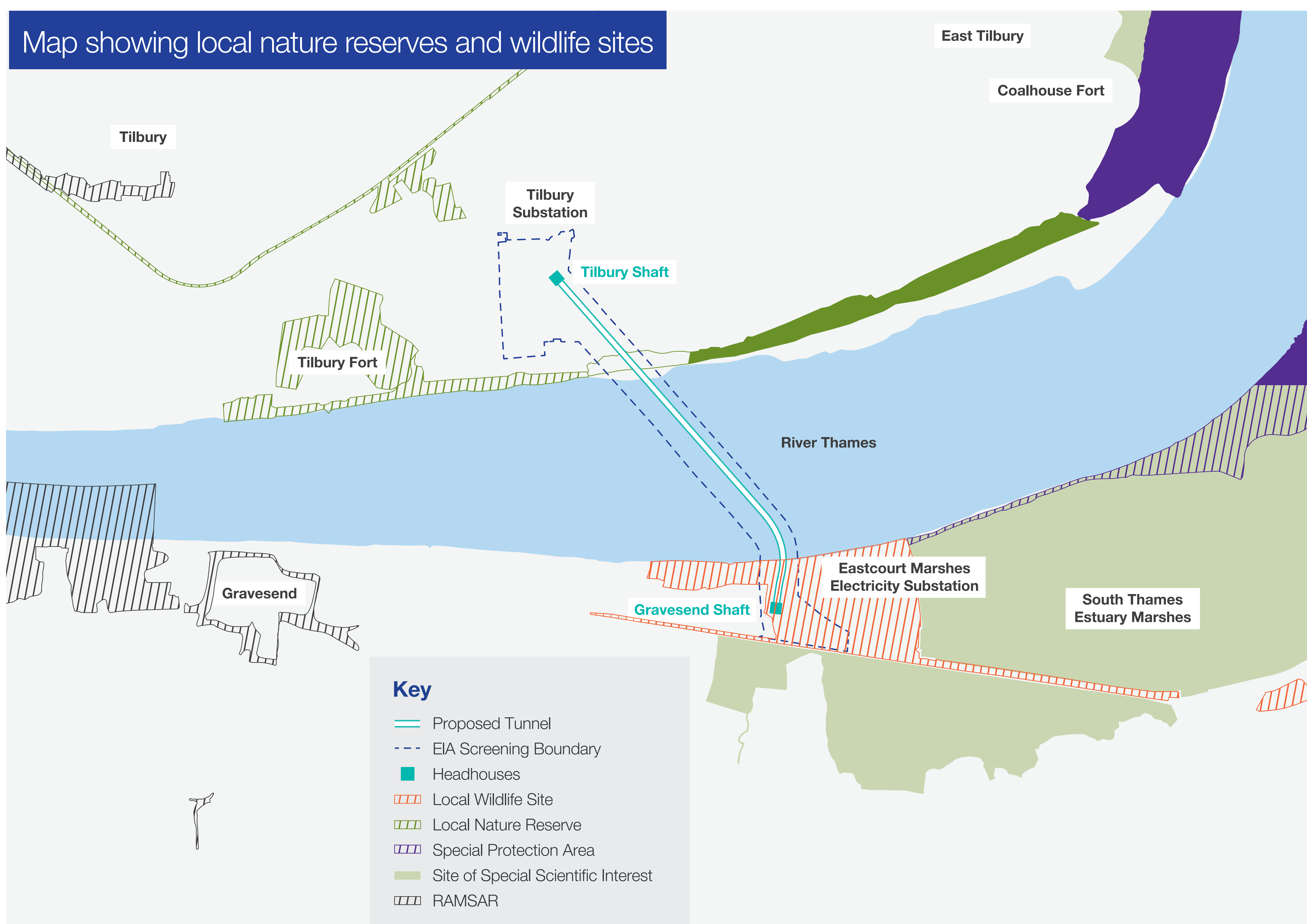
The new headhouses at Tilbury and Gravesend will have biodiverse roofs to support biodiversity net gain and provide a rainwater buffer. We will also be planting native vegetation around both sites to further encourage local wildlife and habitat creation. We are also reaching out to Kent Wildlife Trust, Natural England, and county biodiversity officers to further develop our environment protection measures.

## Extensive surveys are currently being carried out to establish the baseline for the Environmental Statement and ensure we design the most suitable mitigation against any potential impact on local wildlife.

### These surveys include:

- wintering, breeding and intertidal bird surveys
- botanical surveys
- invertebrate surveys
- reptile and great crested newt surveys
- bats, badger and water vole surveys

Our planning applications will include a detailed EIA. This will set out the findings of our survey works and the mitigations we plan to put in place during construction to help minimise the impact of our works. A Construction Environmental Management Plan will also be submitted detailing any mitigation measures required.



# Investing in communities

**We are committed to investing and leaving a positive legacy in areas where we are carrying out essential works to upgrade the network.**

This includes using local suppliers and creating job opportunities where possible. We also work with local schools to promote science, technology, engineering and maths (STEM) and career opportunities in the energy industry.

## Leaving a positive legacy for the community

The new tunnel, headhouses and overhead line are a key part of our nation-wide upgrade of the grid network to meet future demand.

However, we understand the concerns of the local community and are committed to leaving a positive legacy.

### How do we aim to achieve this?

We believe businesses have a duty to contribute to society and the communities they serve and we look to support communities impacted by our vital infrastructure in a variety of ways.

For communities affected by construction works we also run a Community Grant Programme aimed at community organisations and charities.

This supports groups and initiative across a range of areas, from those that provide social, economic and educational benefits, to environmental and conservation projects.

Communities impacted by construction work, such as the proposals for Grain to Tilbury, can apply for grants of up to £20,000. More details on how to apply are available on our website at [nationalgrid.com/responsibility/community/community-grant-programme](https://www.nationalgrid.com/responsibility/community/community-grant-programme), or please speak to a member of our team at a consultation event or via the contact details provided.



# Feedback and next steps

We want to hear the views of local people. Knowing what matters to you, matters to us, so please get in touch and let us know what you think of our proposals.

The deadline for consultation responses is **Sunday 29 October 2023**.

## How do I find out more about your proposals?



Online: view all information  
on our project website:  
**[nationalgrid.com/GrainToTilbury](https://nationalgrid.com/GrainToTilbury)**

## Join us in person:

- **Clarendon Royal Community**  
Royal Pier Road  
Gravesend, DA12 2BE  
Wednesday 11 October 3:00pm-7:00pm
- **Tilbury Community Association**  
Civic Square  
Tilbury, RM18 8AA  
Friday 13 October 3:00pm-7:00pm

## Register online to join one of our webinars:

- **Gravesham webinar** - Wednesday 18 October
- **Thurrock webinar** - Thursday 19 October

## How do I respond to the consultation?

- Completing our online feedback form at:  
[nationalgrid.com/GrainToTilbury](https://nationalgrid.com/GrainToTilbury)
- Sending a completed paper copy of the feedback form  
or a letter to FREEPOST GRAIN TO TILBURY PROJECT
- Emailing your comments to: [contact@graintotilbury.nationalgrid.com](mailto:contact@graintotilbury.nationalgrid.com)
- Calling us on 020 3398 1599

Should you wish to receive hard copies of our materials,  
please contact our project team via phone or email.