Connah's Quay to Bodelwyddan Refurbishment Project

Frequently asked questions

Why is this work needed?

National Grid Electricity Transmission is refurbishing a 30km section of high-voltage overhead electricity lines between our Connah's Quay and Bodelwyddan substations. This is to increase capacity and allow more clean energy projects in Wales and England to connect to the UK electricity network.

The project is among a series of circuit upgrades taking place across the country to ensure the electricity transmission network remains resilient and affordable as we transition to net zero.

This essential refurbishment will ensure long-term energy security on both the high-voltage electricity transmission network, and the local distribution network connecting to homes and businesses.

What permissions do you have to carry out the work?

We are undertaking this work under National Grid's permitted development rights for essential national infrastructure. This means we do not require planning permission to carry out the refurbishment. We are working closely with key organisations such as Natural Resources Wales, to secure separate specific permissions and licences we need to do our work.

Where we need to temporarily close roads, we work with Flintshire and Denbighshire County Councils to organise these and plan diversion routes.

We will need to cross some private land to carry out the work. Where this is the case, we have already been talking with the relevant landowners.

What work have you done to date?

Ahead of our main construction work beginning in July 2025, we carried out several activities to prepare our work areas and make sure the project can happen as safely and as efficiently as possible. This included:

- cutting back trees and other vegetation around pylons and under overhead lines
- widening road entrances at narrow access points
- installing scaffolding and trackways in fields.

We have also conducted a range of surveys and assessments (including ecological and archaeological surveys), to ensure we reduce our impact on the local area and the environment.

When will the work be taking place?

The main construction phase will start in July 2025 and continue until December 2026, when all work will be completed.

What does your work involve?

We are replacing all the wires (or conductors) on the overhead line, which also includes the earth wire that's at the very top of the pylons. Alongside this, we are replacing the insulators and steelwork that connect the wires to the pylons. Where needed, we are also repainting steelwork.

We replace circuits on each side of the overhead line separately. This is so the other side can remain 'live', which means these wires will continue to transmit electricity.

How do you replace the wires?

We use a process called cable pulling, which is undertaken by highly skilled engineers. It's a complex method that must be carefully planned to make sure the new wires are installed safely and correctly.

The wires which carry the electricity are usually installed in sections of about 10 or more pylons at a time. We replace these sections by pulling the new cable up onto the pylons with machinery. We have work sites at each end of a section of pylons called 'pulling sites' and 'tensioning sites'.

Where needed, we also use temporary scaffolding and netting to protect and install cables over obstacles such as roads, railway lines and rivers.

Will the line look any different once refurbished?

The refurbished line will look almost identical to the current line. However, the number of wires the pylons carry will change. Currently, each pylon arm carries four wires. Because of advances in technology, we can reduce this to three wires on each arm while transmitting more power than before.

What work will I see?

During the refurbishment, people can expect to see us creating and working at new temporary construction sites established along the pylon route. Our teams will be travelling to and from these sites, transporting the equipment and machines we need. This includes moving and storing large drums which carry our wires.

What is bellmouth widening and trackway installation?

To prepare for our main works, in some places we have widened existing access roads (also known as bellmouth widening) to ensure vehicles can access the overhead electricity line safely and efficiently. Carrying out this work in advance of the main pylon refurbishment has helped us minimise disruption. We have also installed some temporary trackways to create access routes to the overhead electricity line.

Will there be a lot of construction traffic?

The amount of traffic going to and from the pylons will depend on the location and the nature of our work at each. While you may notice an increase in traffic during some stages of our work, we'll control all movements to limit any disruption on local roads.

Will there be any road closures?

We will need to temporarily close some more roads as part of our work. We try to avoid closures as much as possible, but they are sometimes necessary to keep road users and our teams safe.

When road closures are needed, we will use signs to notify people in advance and send letters to local residents and businesses. We also look to arrange essential access for residents during road closures, if this can be done safely.

Who are you working with to deliver the project?

National Grid works with a number of contract partners to deliver its crucial projects. The preparation activity and main works for this project are being led by MGroup, a service provider that works with national energy networks and publicly owned organisations to repair, renew, refurbish and maintain the country's gas, electricity and green energy infrastructure, with a key focus on decarbonisation to support the transition to a net zero economy.

Will the work affect access to property?

Should our work affect access to properties, we will contact property owners in advance to discuss and make arrangements for access.

Will electricity supplies to homes and businesses be affected?

We are working with the local electricity network operator, SP Energy Networks (SPEN), to minimise the effects on local people and businesses. If electricity does need to be temporarily switched off at any point, local people will be made aware and kept up to date.

Will you need to close any footpaths?

Our overhead line crosses some public rights of way (PRoW) and permissive rights of way. Where necessary, we will temporarily close or divert footpaths for the safety of members of the public as we work overhead. Any footpath closures will be agreed in advance with the local council and, where possible, we will notify local communities ahead of any closures and diversions. We will do all we can to minimise any disruption as we do our work.

What are your working hours?

We typically work weekdays between the hours of 7am and 6pm, and aim to keep any disruption to a minimum. Please be aware that the timings of our work are subject to change.

What steps are you taking to protect the environment?

Before beginning this project, we carried out a range of surveys and assessments of the areas that may be affected by our work. This is to ensure that we understand the environment where our work will take place. We have discussed the findings of the surveys and assessments with relevant organisations including Natural Resources Wales and the local authorities, as well as with landowners to ensure that, where possible, we reduce any potential impact on the environment.

How do I contact you?

If you have any questions about our work, you can contact us by email at **connahsquay@nationalgrid.com** or by phone at **0800 138 5409**.

This phoneline is available from 9am–5:30pm, Monday–Friday. If prompted, please leave a message with your name and contact number and we will get back to you as soon as we can.

nationalgrid