

South Shields

Newsletter 2

December 2025

Welcome to our second South Shields project newsletter. This update includes the latest news on the project as we install new Power Flow Control (PFC) equipment at South Shields substation.

Over recent months, we've been preparing the foundations to the north of the existing substation so that new equipment can be installed.

In this issue we'll provide details of the work we've completed so far and our plans for the coming months, including how we're supporting the local community whilst we're on site.

We also wanted to say thank you for your patience over the summer whilst there was a large amount of vehicle movements in and out of the site. We really appreciate your understanding and feedback during this phase of the project.



Aerial photograph of the site



Opening the site up to the community

The project

Work to install new PFC equipment at South Shields substation has been progressing with ground remediation work taking place over the summer months. Technologies like PFCs can help to make the existing network more efficient, intelligently pushing and pulling power across circuits and routing it to where capacity is available, freeing up electricity flow.

It forms part of National Grid's continued investment in its network across the North East, with £8.6 bn of investment planned between 2026 and 2031 to maintain, upgrade and develop our network. The new technology at South Shields substation will ensure that the site continues to play a key role in supplying electricity to homes and businesses in the area.

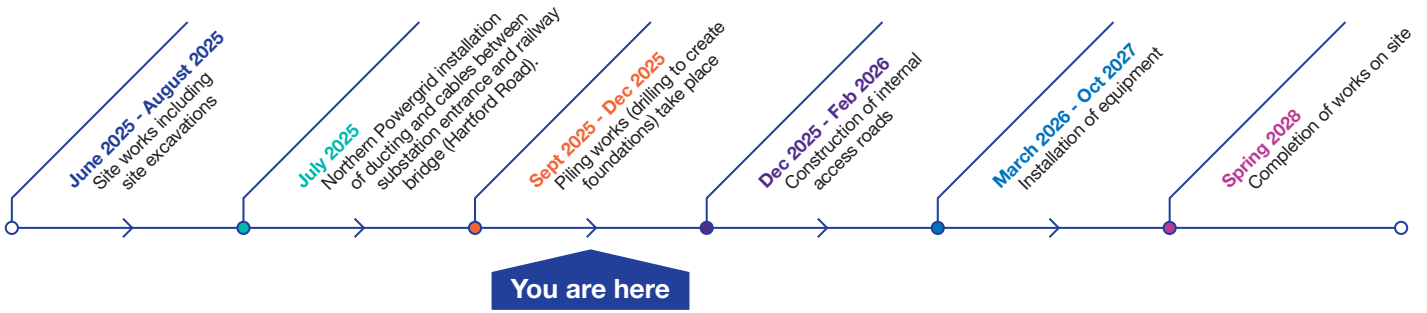
We completed ground remediation work that included creating foundations for the new equipment to be built on. We've used the screw pile method to build the foundations, which is less disruptive than other piling methods, as this creates a hole by twisting, rather than pounding, a pole into the ground.

We have also been constructing new internal roads within the new part of the substation compound.

In September we opened the site up to our neighbours to share more about our work to date and to answer questions about the project.

The drop-in event was well attended, with positive and useful feedback provided to the project team. We're working closely with our contractors to ensure that we continue to minimise the impact our works have on the local community. We plan to hold further drop-in sessions next year.

Timeline



Coming up

In the coming months, work on site will focus on preparing for the installation of the PFC, which will be installed from Spring 2026. Following the construction of new internal roads, ducting works will take place. The ducting works including digging trenches for the cables, which will connect the new infrastructure into the existing substation, to be installed.

This work will be contained within the existing site perimeter and should not be disruptive to local residents.

We'll continue to update you as the project progresses.



Aerial photograph of the site

Profile

Each issue we'll introduce you to a member of our project team as you can get to know the people behind the site works:

Lee Stansfield

Role in the project? Project Manager – Ensuring works are carried out safely, correctly and to the correct specifications. Overseeing the technical design aspect of the project and a lot of the third party interactions.

How did you become a Project Manager? I started my career as an Apprentice Electrician and slowly progressed my way into Telecoms industry. Within this industry I developed my way from Survey and Design to managing my own Engineering teams to carry out various telecoms projects across the UK.

What are your hobbies? Anything outdoors... Mountain Biking, Hiking, Running and spending time with my children. Big fan of boxing and other combat sports.

What have you done to become greener? Helping explore innovative methods of construction which can be more environmentally friendly, such as utilising Screw Piles on site rather than traditional piling methods which negates the use of concrete.



Powering the site

On site, we've been using a hydrogen-powered welfare unit to help cut emissions and improve working conditions.

As part of our commitment to reduce carbon emissions and improve sustainability across construction sites, the project team opted to power its welfare cabins with hydrogen from day one - avoiding the use of a diesel generator entirely. The unit is cleaner and quieter than other traditional generators.

Delivered in collaboration with our contractor, Omexom, the Hydrogen Power Unit (HPU), developed by GeoPura, supplies zero-emission electricity to run kitchen facilities, heating, lighting, changing areas and EV charging infrastructure.

Diesel generators remain common across construction sites, but they bring significant drawbacks, from high carbon emissions and local air pollution to noise and maintenance challenges. At South Shields, the team saw an opportunity to start using hydrogen to deliver power with none of the usual downsides.

The hydrogen unit is quiet, reliable, and produces no fumes - a major benefit for teams working close to residential areas. The fuel cell emits only water vapour, and the integrated battery system provides smooth, consistent power even during peak demand. On site teams have already noted the improvement, particularly in air quality, noise levels and the simplicity of the refuelling process.

From 16 October 2024 to 1 June 2025, the hydrogen system has displaced 65 tonnes of CO2 emissions compared with a diesel generator of equivalent output. The contract has now been extended, allowing the team to continue benefiting from the emissions savings, improved air quality, and quieter operation.

John Revell, Project Supervisor, National Grid said: "This project is a strong example of how we can reduce emissions without compromising on performance. The team have shown that clean power can be integrated into a live construction site safely and successfully.

"Omexom has maintained its commitments in reducing the direct impact on the environment by using an onsite hydrogen fuel cell instead of the conventional diesel generator for delivery of the South Shields Project. The system provides zero emission electricity, it's quiet, reliable and supports predictable project delivery whilst supporting both the Omexom and National Grid's carbon footprint reduction targets."

Paul O'Hara, Senior Project Manager, Omexom said: "We've worked closely with the site team to make sure the system met operational and safety requirements. It's great to see the positive impact it's had and to demonstrate that hydrogen technology is already delivering real benefits on the ground."



Powering the site



Aerial photo of the site



Working with the community

Community Grant Programme

Our Community Grant Programme is aimed at organisations and charities in areas where National Grid's work impacts local people through our operations and site activities.

We provide grants for community-based initiatives run by charities and community groups that meet local community needs by providing a range of social, economic and environmental benefits.

If your project meets our criteria, you can apply for a grant of up to £10,000.

To find out more about how to apply please visit our website:

www.nationalgrid.com/south-shields-substation

Your questions answered

What are your working hours?

7am–6pm, Monday to Friday.
Occasionally, essential work may happen outside these hours—we'll let you know if it does.

How long will the work take?

Main construction completes in 2028, followed by connection works later that year.

How will these works affect me?

You may notice some extra traffic near the substation, but we don't expect significant disruption. Noise will be kept to a minimum.



Contact us

Our dedicated community relations team works with local residents, businesses and community groups to ensure our work causes as little disruption as possible. They are also on hand to answer any questions you may have about past, current or future activity. Please do not hesitate to contact a member of the team on:

0800 319 6183
(Monday to Friday, 9am – 5pm)

email southshields@nationalgrid.com
website: www.nationalgrid.com/south-shields-substation

You can also write to us using our freepost address:

Freepost FEEDBACK
(no stamp or further address required)

For out of hours concerns, please call the 24-hour electricity emergency helpline 0800 40 40 90.

Over the Christmas period the site will be closed between Friday 19 December 2025 and Monday 5 January 2026. Security will remain on site but if you have any concerns over this period, please contact 016044 98849. We wish everyone a safe and Merry Christmas and a Happy New Year!

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