

'Mary' the tunnel boring machine completes epic journey under the River Humber

12 Sep 2019

- **National Grid and project partners achieve major feat of engineering tunnelling under the River Humber.**
- **Tunnel boring machine 'Mary' completes her journey connecting Goxhill on the south bank to Paull on the north bank of the river.**
- **Project now preparing for world record-breaking pipeline push through the tunnel early next year.**

'Mary' our 160-metre long tunnel boring machine digging the tunnel to house a replacement gas pipeline 30 metres beneath the River Humber, completed her epic journey on Tuesday 10th September, 2019 at 12.08pm.

The breakthrough, into the specially constructed shaft at Paull on the north bank of the river, marks the end of her 18-month journey from Goxhill on the south side and the start of the next phase of this world record breaking feat of engineering.

The tunnel distance of nearly 5km* and a 3.65 metre diameter tunnel will carry a vital pipeline which can provide up to a quarter of Britain's gas supplies.

During her journey under the Humber, 'Mary', the size of approximately 11 double decker buses in length, has excavated approximately 160,000 tonnes of material – mostly chalk, which has been carefully transported back to the surface, graded and re-processed at the Goxhill slurry treatment plant. The excavated material is being used to help restore a former quarry nearby.

Steve Ellison, Lead Project Manager, Capital Delivery, for National Grid, said: "Completing the tunnel beneath the Humber is a major milestone for the project team and our project partners. It's the first time a tunnel has been constructed beneath the River Humber and a fantastic achievement for everyone involved.

"Over the next few weeks we'll be dismantling the tunnel boring machine and lifting her out of the ground in sections, ready to be transported back to Germany, where as much as possible will be refurbished and renewed to get her ready for her next tunnelling job.

"The next steps for us here under the Humber involve clearing the pipes, cables and ancillary equipment that has been servicing the tunnel boring machine and preparing for the world record breaking pipeline installation early next year."

In Spring 2020, two hydraulic thrust machines will start the epic task of carefully pushing eight huge 610-metre long and 850 tonne sections of pipe on rollers into the new tunnel from the Goxhill side. The pipes will be pushed at about one metre per minute into the tunnel which will have been flooded with water to aid installation.

When one pipe section has been installed, the next will be moved into position, welded to the one in front, and the push will continue until all five kilometres of pipeline

is installed beneath the river. When complete it will be the longest hydraulically inserted pipe in the world – a truly incredible feat of engineering for National Grid and its project partners!

For videos and images, of the River Humber Pipeline Replacement Project, please click on the link. <http://riverhumberpipeline.com/resource-centre/> (view in google chrome).

* The tunnel distance is 4.86km.

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Notes for editors

If local residents have any further questions about the project, they can contact National Grid's Community Relations team on 0800 988 9144 (lines open 9.00am – 5.00pm Monday – Friday), by email at nationalgrid@riverhumberpipeline.com or by free post at FREEPOST NATIONAL GRID, RH PIPELINE PROJECT.



Notes to Editors:

National Grid is pivotal to the energy systems in the UK and the north eastern United States. We aim to serve customers well and efficiently, supporting the communities in which we operate and making possible the energy systems of the future.

National Grid in the UK:

- We own and operate the electricity transmission network in England and Wales, with day-to-day responsibility for balancing supply and demand. We also operate, but do not own, the Scottish networks. Our networks comprise approximately 7,200 kilometres (4,474 miles) of overhead line, 1,500

kilometres (932 miles) of underground cable and 342 substations.

- We own and operate the gas National Transmission System in Great Britain, with day-to-day responsibility for balancing supply and demand. Our network comprises approximately 7,660 kilometres (4,760 miles) of high-pressure pipe and 618 above-ground installations.
- As Great Britain's System Operator (SO) we make sure gas and electricity is transported safely and efficiently from where it is produced to where it is consumed. From April 2019, Electricity System Operator (ESO) is a new standalone business within National Grid, legally separate from all other parts of the National Grid Group. This will provide the right environment to deliver a balanced and impartial ESO that can realise real benefits for consumers as we transition to a more decentralised, decarbonised electricity system.
- Other UK activities mainly relate to businesses operating in competitive markets outside of our core regulated businesses; including interconnectors, gas metering activities and a liquefied natural gas (LNG) importation terminal – all of which are now part of National Grid Ventures. National Grid Property is responsible for the management, clean-up and disposal of surplus sites in the UK. Most of these are former gas works.

Find out more about the energy challenge and how National Grid is helping find solutions to some of the challenges we face at <https://www.nationalgrid.com/group/news>

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