Tunnel boring machine ‘Mary’ bids farewell to the Humber after completing epic first – digging a 5km tunnel beneath the river to house a replacement gas pipeline.

Like the chalk she dug out from beneath the Humber, ‘Mary’ too will be re-used – heading away to be fully refurbished and on to the next tunnelling job.

Completing the tunnel between Goxhill and Paull is the first of a number of fantastic feats of engineering for National Grid and project partners Skanska, PORR and A&Hak.

Next year will see a world record-breaking pipeline push through the newly constructed tunnel.

After completing an incredible first – digging a tunnel 5km from Goxhill in North Lincolnshire to Paull on the north bank of the Humber - National Grid and project partners Skanska, PORR and A&Hak have bid a fond farewell to ‘Mary’, the 160m long tunnel boring machine.

Following her epic breakthrough at Paull on 10 September, she has been carefully dismantled and lifted to the surface ready to be shipped back to Germany to be fully refurbished ready for her next tunnelling challenge.*

For the last 18 months, she has been steadily making her way from Goxhill on the south side of the river to Paull on the north bank, constructing a tunnel nearly 5km** long and a 3.65m diameter, ready to 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, 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.

Now dismantled and on her way to be refurbished, the three largest front sections made their way through Paull village towards King George Dock on Wednesday 9 and Thursday 10 October 2019.

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.

“Mary has completed a fantastic feat of engineering and it’s great to see her on her way 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 River 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 610m long and 850 tonne sections of pipe on rollers into the new...
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 5km 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!


*B roll footage, new interview and pics of Mary being lifted out of the construction shaft are available via link above.

** The tunnel distance is 4.86km.

-Ends-

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.
National Grid undertakes no obligation to update any of the information contained in this release, which speaks only as at the date of this release, unless required by law or regulation.