

Mary, National Grid's tunnel boring machine, reached halfway point on River Humber project

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• Mary, National Grid's 510 tonne tunnel boring machine, is now halfway through her 5km journey under the River Humber

- Over 12,000 concrete segments have been fitted into place during 200,000 hours of work
- The 3.65 metre diameter tunnel will house a vital replacement gas pipeline which will carry around 20% of the gas Britain needs, supplying homes and business across the east of England and beyond

National Grid's 510 tonne tunnel boring machine is now halfway through her epic 5km journey under the River Humber, major milestone in the project to secure 20% of Britain's gas supplies

The 160-metre-long machine, named Mary after Mary Fergusson, the first female fellow of the Institution of Civil Engineers, reached the halfway point on her journey from Goxhill to Paull at 2.30am on Tuesday 8 January, giving National Grid and their joint venture contractors Skanska, PORR Bau GmbH and A. Hak cause for celebration.

It has taken 200,000 man hours to get the tunnel to this stage, with a total of 2,023 concrete rings, each consisting of six segments, being put in place behind the machine as she tunnels 35 metres below the bed of the river.

The name of the tunnel boring machine, which was built especially for this project in Germany, was chosen by Kasey Doney, aged 8, a pupil at Paull Primary School near Hull.

Steve Ellison, Project Manager said: "Mary has done a brilliant job to date and we and our contractors are delighted to have reached the halfway point on the tunnel. There is still a lot more work to do but I would like to say a big thank-you to the 40-strong team of engineers who have worked around the clock in very challenging conditions to get us to this important milestone.

"The machine has pretty much been operating 24 hours a day with the odd shut-down for repair or maintenance since the tunnelling work started on 6 April 2018. There are 20 engineers manning her on every shift and they work in very cramped and warm conditions, far below the river bed.

"All the engineers working on Mary have to undergo specialist training. There is only one emergency exit from the machine and that is back along the tunnel, which will be nearly a 5km journey once she gets towards the opposite bank of the river.

"As you would expect, safety is our prime concern. All plant has a fire suppressant system, conditions in the tunnel are monitored along its entire length and we have regular emergency exercises and employ an on-site emergency team."

And, once the tunnel is finished, and Mary is removed from the tunnel via a shaft on the opposite bank of the river at Paull, the work on the next phase of the project will begin.

A new 42inch diameter gas pipeline will be laid inside the tunnel. This will replace the existing gas pipeline which currently crosses the river and is laid in a trench just below the river bed.

This pipe at risk of being exposed by shifting tides. Work has been carried out to keep it buried but the Humber Pipeline Replacement project offers a long-term solution.

Already, the eight 'strings' or sections of gas pipe which will be pushed into the tunnel have been laid out and welded on a vast pipe 'field' on the Goxhill site. Work to install them in the tunnel will take around a year to complete.

People with questions about the project can contact National Grid via email at nationalgrid@riverhumberpipeline.com or by telephone on 0800 988 9144. There is also a project website: www.riverhumberpipeline.com.

National Grid in the US:

- National Grid delivers electricity to approximately 3.5 million customers in New England and upstate New York
- We own 3.8 gigawatts of contracted electricity generation, providing power to over one million LIPA customers
- We are the largest distributor of natural gas in northeastern U.S., serving approximately 3.6 million customers in New York, Massachusetts and Rhode Island.

Find out more about the energy challenge and how National Grid is helping find solutions to some of the challenges we face at www.nationalgridconnecting.com

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.

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Notes for editors

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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