HISTORY EXPLORER

The rise of the canals

Nige Tassell and Professor Emma Griffin visit **The Canal Museum** in rural Northamptonshire to assess how crucial Britain's canals were to laying the foundations of the industrial revolution

Aside from the odd small aircraft buzzing across the clear blue sky, there are few pointers to 21st-century life as you amble along the towpath of the Grand Union Canal in deepest Northamptonshire. You're strolling through a seemingly timeless landscape. Well, at the very least it could be any point in the 200-year existence of this particular stretch of water. It's only when you arrive at the tiny village of Stoke Bruerne that this feeling evaporates. There weren't too many quayside Indian restaurants in Victorian times.

A few doors along, located in an old corn mill, is The Canal Museum, a three-storey celebration of Britain's extensive canal system. The ground floor houses a café and shop, while the other two floors are home to some fascinating displays – scale models, information boards, films, costumes, tools and even the front half of an old coal barge. These all emphasise the importance of canals during the 18th and 19th centuries.

The first 'proper' canal was completed in 1761. By 1840, the country had been carved up by a full 4,500 miles of man-made waterways. But to what extent were they the building blocks of industrial Britain?

"The way to think about canals is that they were pre-industrial revolution," explains historian and author Emma Griffin. "The railways were really what the industrial revolution was all about. They moved things around at speed. But although the canals weren't fast, they did have the capacity to transport particularly heavy things. And they definitely accelerated the national economy, reducing the cost of transport, which meant reducing the price of what was ultimately being sold."

In the pre-canal days, the options for industrialists to move their goods around the country – especially if these cargoes were of a heavy, bulky nature – were few and far between. The use of horse-drawn carriages on bumpy, pre-Macadam roads came with obvious limitations, while the alternative was using Britain's rivers, which was also frustratingly restrictive, as Griffin notes. "Using existing water channels meant you were at the whim of nature. The great innovation with canals was that channels could be cut where the canal-builders wanted to go. Canals gave them the power to set their transport where they needed it to be."

James Brindley created what is widely believed to be England's first 'true' canal

The godfather

'They' are the industrialists, those whose prosperity relied on transporting heavy goods to markets elsewhere. Initially this was invariably coal, "the driver of the canals", as Griffin refers to it. One such coalmine owner has been anointed as the godfather of the canal network. The Duke of Bridgewater needed to get coal from the coalfields on his estate in Worsley in Lancashire to the huge population of Manchester. In something of a visionary moment, in 1759 he commissioned an engineer by the name of James Brindley to construct a canal linking the

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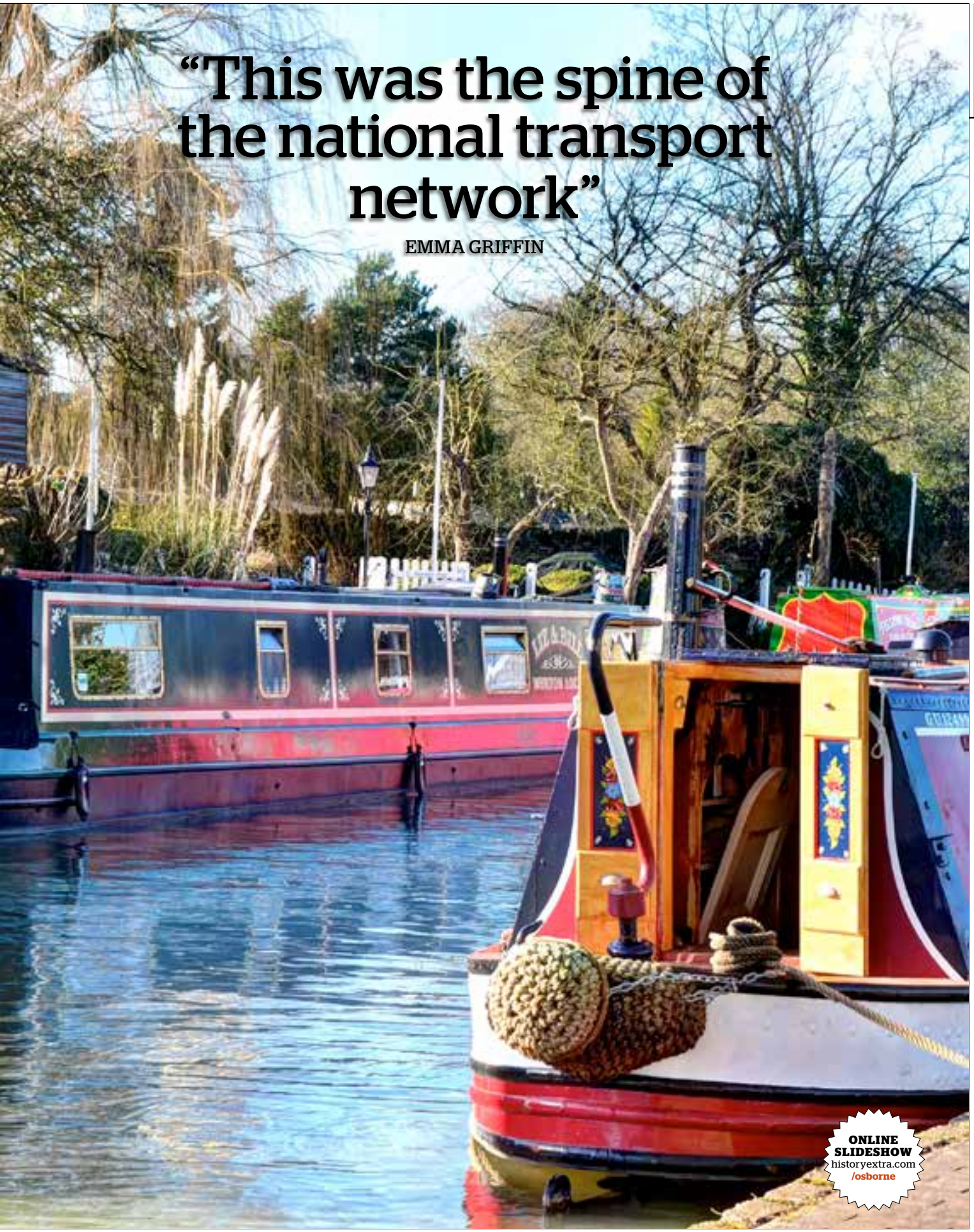
Boats sit moored at idyllic Stoke Bruerne, which two centuries ago sat at the centre of a network of canals that linked London with the industrial powerhouses of the North



“This was the spine of the national transport network”

EMMA GRIFFIN

ONLINE SLIDESHOW
historyextra.com
/osborne

Stoke Bruerne hasn't always been as tranquil as this: 14 construction workers died when a nearby tunnel collapsed in the 1790s

two locations. Just two years later, the six-mile Bridgewater Canal opened, complete with tunnels and an aqueduct over the river Irwell. It was a thoroughly impressive feat – and one carried out by a relatively inexperienced engineer. As a result, Brindley was in high demand for his engineering skills on other canal projects, his great dream being to link the Thames with the Trent.

The success of the Bridgewater Canal led to a rush of other industrialists wishing to do likewise. Indeed, the proliferation of canals over the following decades might have suggested the country now boasted a planned, consciously inter-linked network. No so, cautions Griffin. "There was certainly no grand, centralised design. All of the construction was privately funded and it was driven by land-owners and industrialists who had their own local needs. They provided the funding, they found the engineers, they made it happen. As such, it was a patchwork and not always awfully efficient. On some small stretches, canals competed against each other. But this was the way of all infrastructure projects in the 18th and 19th centuries. It was exactly what happened later with the railways.

"If you could build a profitable canal, there was a lot of money to be made charging people to use it. But it wasn't easy. First, you needed to get an act of parliament. Getting the permissions to start digging was a timely and costly process. You needed to get into some serious bargaining with landowners."

Negotiating the contours and gradients of the British landscape also required engineering of the highest accord. Stoke Bruerne, book-ended by Blisworth Tunnel a few hundred yards to the north and a series of seven locks immediately to the south, offers plenty of examples of the geographical barriers needed to be surmounted. More than 2,000 metres in length, the tunnel is the third longest in the country. Opened in 1805, it was the second attempt at traversing the hill; the first tunnel collapsed during its construction, claiming the lives of 14 men. That episode is a reminder of the harshness of life on the canals. "It was hard, physical work with no protection from the elements," says Griffin. "It was a difficult living."

Uniting the nation

However idyllic Stoke Bruerne appears on this warm late-spring morning, it's important to understand the gritty historical importance of the canal that dissects and defines the village. Today it's also the gentle playground of retired folk who've swapped careers for leisurely lives on the water in well-appointed narrowboats. A couple of hundred years ago, though, this was the spine of the national transport network, uniting the Midlands (and the industrial powerhouses of northern England beyond) with the huge market that was London and south-east England.

So is it appropriate to think of it as the M1 of its day? "That's the right way to see it," nods Griffin. "London had been connected to Newcastle by the coast, but other parts of the North, particularly the North West, were very difficult to reach. This canal connected the country and meant that, for example, cotton could be produced and transported to London for a fraction of the cost of going by road."

And settlements like Stoke Bruerne popped up along the canal's length, catering to the needs of those operating on the canal – the motorway services of yesteryear. "All

"THE CANAL MEANT THAT COTTON COULD BE PRODUCED AND TRANSPORTED TO LONDON FOR A FRACTION OF THE COST OF GOING BY ROAD"

A horse boat pictured at Stoke Bruerne top lock in c1913. The corn mill to the right now houses The Canal Museum

sorts of facilities needed to be provided along the towpath," explains Griffin. "For rest, for food, for the horses pulling the barges. An infrastructure was needed and all sorts of unintended, unexpected things started to happen. It's a classic example of a rural society suddenly having people passing through who can be sold goods. Canals promoted economic growth in all sorts of ways."

Smooth and safe

This was far from the only economic by-product of a transport network established to benefit the coal industry. The canals began to be used for other purposes. For instance, passenger barges started using these man-made waterways, increasing the mobility of people, whether socially or for employment. Other industries benefited, too, especially the pottery trade which, sandwiched between the North West and the Midlands, found itself very well served by the network. "The Potteries previously found it very expensive to transport such delicate goods to other parts of Britain and the ports," Griffin explains, "but the barges offered smooth, safe transport. It was a great advantage.

"Although the canals weren't built to transport agricultural goods, potatoes, wheat and grain could all be moved around. What weren't so effective going by canal were goods that were perishable. The canals were too slow for butter and fish and meat. Those had to wait for the railways."

Ah, the railways. Everyone knows how their arrival in the early 19th century turbo-charged Britain's industrialisation. But did these beasts of steel and steam really condemn the canals to a rapid redundancy? Griffin offers reassurance that it wasn't such a brutal overthrow. "The canals didn't just disappear. They didn't die overnight. People were still using the canal network to move coal around well into the 20th century. As what happens whenever you have new transport, there were lots of new use. The railways just found a new market that no one knew existed. We saw this in the 20th century with aviation. It wasn't that we simply switched our mode of transport. It's that we weren't flying before..." H

Words: Nige Tassell. Historical advisor: Emma Griffin, professor of modern British history at the University of East Anglia

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VISIT

The Canal Museum

Stoke Bruerne, Northants, NN12 7SE

● *canalrivertrust.org.uk*

CANAL NETWORK: FIVE MORE PLACES TO EXPLORE

1 Bridgewater Canal, Manchester

Where the blueprint was forged

Often regarded as Britain's first 'true' canal, this was built by the Duke of Bridgewater to transport coal from his collieries into industrial Manchester. Opening in 1761 and featuring tunnels and an aqueduct, it took just two years to complete. *bridgewatercanal.co.uk*

2 Bingley Five-Rise Locks, West Yorkshire

Where an uphill struggle is avoided

Located on the Leeds and Liverpool Canal at Bingley near Bradford – and completed in 1774 – these five interconnected locks represent the steepest flight in Britain. Boats using this staircase lock rise 18 metres over less than 100 metres, a gradient of 1:5. *canalrivertrust.org.uk/bingley-five-rise-locks*

3 Gas Street Basin, Birmingham

Where two significant canals meet

Located in the heart of the city, this is a hub of the Black Country canals and is where the Worcester & Birmingham Canal meets the Birmingham Canal Main Line. For many years until 1815, the two waterways were separated by a barrier called the Worcester Bar; cargoes had to be manually transferred between vessels on each canal. *secondcityboats.co.uk*

4 Pontcysyllte Aqueduct, near Wrexham

Where a wide valley is traversed

This 38-metre-high aqueduct carries the Llangollen Canal over the river Dee. When it was completed by Thomas Telford in 1805, it was the highest canal aqueduct in the world. It remains Britain's tallest – and longest (300 metres). It also now enjoys Unesco World Heritage status. *pontcysyllte-aqueduct.co.uk*

5 Anderton Boat Lift, Northwich, Cheshire

Where boats reach for the skies

This engineering marvel links the Weaver Navigation to the Trent and Mersey Canal, overcoming a 15-metre drop in the process. In the 1870s, the canal's owners linked the waterways so that barges could travel seamlessly across them via this visionary hydraulic lift system. *canalrivertrust.org.uk/Anderton-boat-lift*