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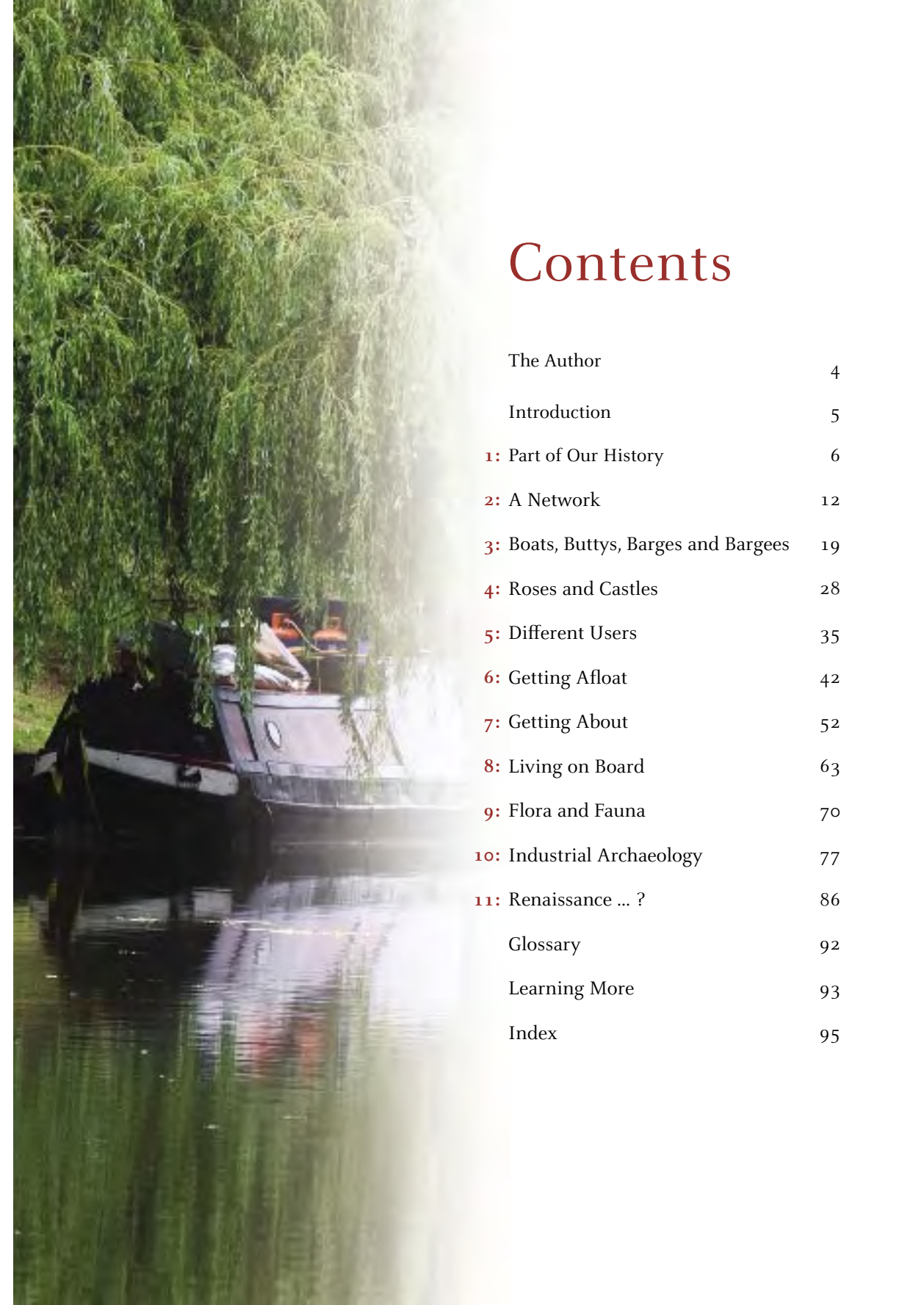
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*Boaters tend to be social types and enjoy a get-together, such as this gathering at Banbury. (Courtesy Allan Ford)*

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# The Author

Nick Corble announced himself as a canal writer with his first book, *Walking on Water* (Belmont Press), which described a trip down the spine of the waterways system on the eve of the Millennium. He followed this up four years later with *James Brindley: The First Canal Builder* (Tempus Publishing).

Subsequent works have included a series of canal-specific guides as well as contributions to canal and other consumer magazines. Not just a canal writer, Nick has also published a number of walking books and co-authored two histories of the fairground attraction the 'Wall of Death',

including *You Can't Wear Out an Indian Scout*, also published by Amberley.

Nick's style is always to make his subject accessible, avoiding jargon and introducing the off-beat to stimulate interest. He is constantly on the lookout for stories of ordinary people who have done extraordinary things. For more on his work, visit his website: [www.nickcorble.co.uk](http://www.nickcorble.co.uk).

\* All photographs are by the author unless otherwise stated.

# Introduction

The waterways are a modern success story, an iconic example of the great British talent for reinventing our past and making it relevant to the present. Who amongst us has not yearned at some point for the chance to indulge in a little bit of 'messaging about on the river'? Perhaps being a maritime nation means some kind of affinity with water is in our genes, and as most of us do not live by the sea, then the inland waterways are a pretty good substitute.

This book, therefore, is meant for all of us. It celebrates our inland waterways heritage and places it into a modern context. It combines background on how this heritage came about with 'nuts and bolts' information on how to get the best out of it.

In practical terms, this means hard facts and softer guidance on the 'who, what, where, why and how' of the waterways system. It tells you how to get afloat and stay there, as well as where you can go, what to look out for on the way in terms of wildlife, engineering, and architecture, how to recognise different types of craft, and even, should the fancy take you, how to buy a boat. If you want to go the whole hog, there are even tips on living aboard.

It is, in short, an inland waterways primer. Don't make the mistake, however, of thinking it's aimed solely at those who want to experience our canals and rivers by being on them. This book is aimed squarely at the full spectrum of waterways users, from those who may simply walk the towpath with their dog, through to anglers, cyclists, horse-riders, or the half the population who live within five miles of an inland waterway.

It would be impossible to put everything there is to know about the waterways between the covers of a single volume, and different readers will require information at different levels. As such, this particular book has been designed to be easy to dip in and out of, to read a chapter at a time or to use as a reference guide with further sources of information well signposted. Alternatively, you can simply look at the pictures, of which there are many.

So, whether you are already a regular visitor to our inland waterways or intend to become one, whether your acquaintance is long or short-lived, or your interest is active or passive, this is the book for you. I hope it manages in its quest to inform, amaze and entertain, and make the world of the waterways accessible to all.

Nick Corble



*President and Kildare, two magnificently restored old working boats.*

# 1. Part of Our History

Today, we associate canals with calm and tranquillity, a break from the stresses of modern living, a traditional part of the fabric of our country. It is not easy, therefore, to imagine them as something radical and quite literally groundbreaking: a source of noise and activity, a threat and, at the same time, a catalyst for one of the greatest socio-economic changes this country has ever experienced.

After the canals, Britain was never the same again. Whilst canals cannot claim all the credit for this, if indeed credit is due, they can claim a major role. To truly understand our inland waterways, it is necessary to gain an appreciation of their roots.

There is no shortage of sources providing a detailed rundown of that history and 'Learning More' provides a list of some of these. In the spirit of being a primer, this book opens with a light skim across the surface of that history until the Second World War: the rise and fall of the canals. The final chapter provides an assessment of what happened next and where the inland waterways stand today. As will become clear, our rivers and canals are literally awash with history, but as also will become clear, they remain a work in progress.



Worsley on the Bridgewater Canal, Britain's first inland 'port'.

The first period was a time when heroes stepped out of the shadows, monumental structures were conceived and built, and even God was challenged. It also covers disappointment and decline, competition in the face of superior technologies, corporate takeovers and the rise of a colourful subculture. Let us begin.

An important but easily forgotten fact is that our waterways system is about more than the canals. For centuries, rivers had been used to transport people and goods about the country, with the mouths of different rivers linked by craft capable of passing along the coast. By 1660, there were 685 miles of navigable river in the UK. Later improvements to other rivers, including the Aire in Yorkshire and the Avon, Kennet and Wey in the south, which even had early pound locks built on the same principle that we recognise today, meant that nearly 500 additional miles had been added by 1724.

Where rivers were straightened or their sides cut, they became known as 'navigations', and although they could be seen as precursors to the canals, they remained rivers. Elsewhere, channels were cut to bring a river to a particular spot, and these might be seen as closer to a modern canal.

The nearest to what we now regard as an artificial waterway was probably the Exeter Canal, a 2-mile stretch alongside the River Exe cut in the sixteenth century. Votes are also cast for the Sankey Brook from St Helens to the Mersey, cut in 1757 (later known as the St Helen's Canal). Neither of these, however, were entirely independent of rivers.

Rivers had their limitations. They were subject to the vagaries of both current and floods, whilst most navigable rivers required dangerous flash locks to allow boats to pass natural weirs. Bridges were another hazard. The narrow spans necessary for construction made for significant hazards for any boats passing below.

By the mid-eighteenth century, the first rumblings of industrialisation could be heard in the belly of the British economy. People were moving to the towns, and the first concentrations of industry were appearing in early factories producing goods such as textiles and silk. However, growth was being stifled through want of a decent transport infrastructure, notably to allow the movement of bulky raw materials and finished products.

The rivers could be made to work but were only any good if one was convenient. The roads were almost as bad, largely because of the lack of a decent means of surfacing them. Muddy, narrow, and often rutted, most roads were unreliable and haunted by thieves, who were attracted by the slow traffic, and vermin, which fed off the food dropped at their sides.

The turnpike system helped but represented an extra cost and could not overcome the basic problem of road transport at the time, namely that loads were limited to the breadth of a mule's back or the size of a cart. Moving coal was a particular problem. Dirty, heavy, awkward, and rarely convenient, roads didn't suit the transport of coal, and even where there was a river, loads had to be broken down and transferred to get them to their final destination.

One town in particular, Manchester, was desperate for a steady supply of the black stuff. Good supplies were available nearby; the challenge was finding a way of transporting it into the heart of the growing metropolis. It was at this point that the fates of three extraordinary characters came together.

One was Francis Egerton, third Duke of Bridgewater, an aristocratic playboy spurned in love who had retreated from London to his estates in Worsley, 20 miles west of Manchester, in the late 1750s. These lands sat on a coal mine, which was difficult to exploit, partly because the mines kept



James Brindley, canal mastermind.

flooding. Furthermore, whatever they did manage to extract was difficult to transport. The most obvious route into nearby Manchester involved travelling part of the way along the Mersey & Irwell Navigation, one of the country's navigable rivers, the owners of which were happy to take the loads, but at a cost.

Two other men now entered the equation. The first was John Gilbert, the duke's often-underrated land agent, who in turn had heard of a man called James Brindley, who had gained a reputation for himself in mine drainage. Together (it is unclear who had the idea first), these two men came up with the elegant solution of draining the mine into an artificial waterway that would carry the coal into Manchester – thus solving one problem with another. What made this solution unique was that this waterway would be entirely independent of any river.

Gilbert took control of the mine side of the operation and Brindley the waterway, or canal. The idea of a canal was deemed by many to be preposterous (surely it would leak?), or if not, then scandalous (it meant carving through other people's land), and if not this, then blasphemous (who had the right to destroy the divinely inspired landscape?).

The story of how the canal got built, the struggles to gain Parliamentary approval, to raise the necessary finance and to build the first aqueduct since Roman times is recounted in my earlier book *James Brindley: The First Canal Builder* (Tempus Publishing). This records the formative role played by Brindley, not only in the building of the Bridgewater Canal, as the new waterway became known, but also the much longer Trent & Mersey, and how he became the driving force behind the first wave of canal building in this country.

The Trent & Mersey, Brindley's second big canal project, was an altogether different proposition. Tellingly, as its name suggests, it was built to link together two of the country's main navigable natural waterways. Most importantly, it meant carrying a level surface of water up and over the spine of the country. This required not only locks, a device the Bridgewater notably lacked, but also the determination not to let anything get in the way, necessitating what was probably Brindley's finest achievement – the 2-mile-long Harecastle Tunnel, another first for this remarkable man.

If Brindley engineered the canal, the driving force this time was Josiah Wedgwood, whose story epitomised the economic forces around at the time.



*The potters around Stoke were early advocates for the canals as they made it much easier to transport raw materials in and their delicate finished goods out.*

Like his fellow potters, Wedgwood was based in the area around Stoke-on-Trent. Whilst there was plenty of demand for their wares from the fledgling middle classes, the landlocked potters could not grow their businesses due to the difficulties of bringing china clay in from Cornwall and getting their finished goods out – the backs of donkeys and rutted roads not being conducive to breakage-free transit.

The Trent & Mersey was the solution, but unlike the Bridgewater, no single man had pockets deep enough to finance it. The idea emerged of individuals coming together to fund the project through shares, with 505 shares at £200 each sold to provide the initial working capital, with no individual allowed to own more than twenty shares. A model for funding a renewal of the country's transport infrastructure was born.

Brindley's genius has only recently been given the recognition it deserves. Those close to him when he was alive appreciated his works, but perhaps his great friend and colleague Josiah Wedgwood summed up the view of many when he suggested shortly after Brindley died that he was 'one of the great geniuses who seldom live to see justice done to their singular abilities'.

His skills were manifold. He combined practicality with vision, inventing devices to build his waterways as he went along, and in so doing, effectively creating a whole branch of civil engineering from scratch. Whilst it is technically true to say he was not the first canal builder, he was first amongst his breed.

Brindley's vision was evident, not only with the Bridgewater and Trent & Mersey canals, but extending beyond these to a whole system linked together by what he called the Grand Cross. In essence, this was a scheme to link the four great seaports of the day (London, Bristol, Hull and Liverpool) with inland waterways forming a giant 'X', from which branches could be built and the centre of which would lie conveniently close to the coalfields and industry of the Midlands.

Brindley found himself in demand, but his days were numbered, as he was harbouring an undiagnosed form of diabetes. In a dozen short years, he acted as either the chief engineer or a consultant on any new canal scheme going – enough to get things moving but not enough to see them through. The one exception was the Staffordshire & Worcester Canal, opened in 1772, and this, along with a section of the Trent & Mersey connecting Stoke with the Trent, meant he saw one

arm of his Grand Cross completed before he died. The other arm followed in time with the Oxford and Coventry Canals offering a route to London via the Thames.

Perhaps Brindley's greatest legacy was that he was free with his knowledge and the art of canal building did not die with him. Some of the frenzy did go out of it though, largely as a result of economic difficulties related to the American War of Independence, but things picked up again in the 1790s.

The era known as 'Canal Mania' now ensued, when almost any scheme could get funding. A period of 'irrational exuberance' followed, not unlike the 'dot com' boom at the end of the last century. During 1793, proposals peaked at twenty-four new schemes, not all of which were built. The economic background remained poor, however, with the fight against Napoleon now proving a drain on both money and the men needed to build the canals.

Despite this, the demand remained. The period from Brindley's first canal to the defeat of Napoleon in 1815 saw a massive shift of the population into the towns and the rise of factories. It also saw continued inventiveness, and in 1825, the world's first commercial railway linking Stockton and Darlington was opened – ironically a route originally considered for a canal.



*As this mural outside Rickmansworth remembers, living horse power was used for over a century to provide propulsion.*

Those with foresight could see that railways represented a threat, although such was the dominance of the canals that it would have been hard to appreciate their strength at the time. The canals continued to thrive in the opening decades of the 1800s, with most companies still

## TEN CANAL HEROES

James Brindley	Pioneer and inventor of modern canal building. Built the first canal and led the way on the building of aqueducts and digging of tunnels, notably the Harecastle near Stoke. Laid down the basis of the waterways system before his early death.
Francis Egerton	Third Duke of Bridgewater, instigated the Bridgewater Canal and, by so doing, earned the nickname 'the Father of the Canals'.
John Gilbert	Unsung hero behind the Bridgewater Canal; the Duke of Bridgewater's land agent who worked alongside Brindley in the cutting of the first canal.
William Jessop	Pupil of John Smeaton, perhaps best known for his work on the Grand Junction Canal.
John Rennie	Engineer responsible for many of the main canals built through the 1790s; went on to become known primarily for his bridges.
Thomas Rolt	Author of <i>Narrow Boat</i> and other works that led to the creation of the Inland Waterways Association after the war and the rescue of much of the system from dereliction.
John Smeaton	Known as the 'Father of Civil Engineering' who devoted much of his time to canals.
Thomas Telford	Probably the greatest of the second generation of canal engineers. Built the second Harecastle Tunnel.
Josiah Wedgwood	Vocal advocate for canals in their early years and driving force behind the creation of the Trent & Mersey Canal.
Robert Whitworth	Engineer taught by Brindley. Perhaps most famous for the Forth & Clyde, one of the many canals he worked on.

paying good dividends through to the 1830s. Money was also still being invested in them with Thomas Telford, the premier engineer of the time, responsible, amongst other achievements, for the Shropshire Union and Macclesfield Canals, as well as a replacement for Brindley's Harecastle Tunnel, which had begun to subside.

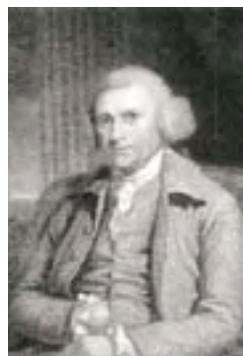


*The Harecastle Tunnel outside Stoke was an audacious enterprise, both Brindley's original (seen on the left) and Telford's successor (on the right).*

If the speed with which canals had grown was impressive, it was nothing compared to the rapidity with which railways usurped them. By 1845, nearly a quarter of the canal companies had sold out to their railway counterparts. In that one year alone, more miles of new railways were proposed than all the canals put together. Some of the new railway companies were benign, creating what we would today call integrated transport systems with the canal basins, whilst others were more ruthless, simply buying the canals in order to remove a competitor. In fact, 1845 represented the peak of the inland waterways system, with over 4,400 miles of navigable waterway, 3,200 miles of which were part of the connected system.



*Just as inspirational as Brindley, Thomas Telford was responsible for many of the later grand projects of the canals.*



*Something of a polymath, with works covering more than simply canals, John Smeaton is sometimes called the 'father of civil engineering'.*



*A boat carrying the Grand Union Canal Carrying Co. livery.*

The days of high dividends, however, were over. Instead, the canal companies cut their rates and the Government of the day removed some of the restrictions previously placed on them, allowing the companies to raise their own fleets. It was during this time that 'bargees' started to live on their boats along with their families to cut costs, their craft still relying on living horse power for propulsion.

The 1860s saw the introduction of steam tugs, and a decade later, engines reduced sufficiently in size to fit onto a cargo boat, which could also pull a 'butty', or second, engineless boat in an effort to boost capacity. The canals soldiered on, but by this time, the speed and predictability of the railways was self-evident, and all they were doing was managing their decline.

The turn of the century brought the diesel engine, but this was a mixed blessing. These were not the machines we know today and needed great skill to operate. Starting them was a performance in itself, requiring a handle and blow torch to warm the thing up. More importantly, the introduction of diesel engines also encouraged the growth of road transport, which before long was even threatening the dominance of the railways. Canals were pushed another notch down the pecking order.

The logistical demands of the First World War provided some reprieve however, and likewise the Second World War, with women in particular coming to the fore in the latter. In between these events, the Great Depression of the 1930s led to a last-gasp effort to make the canals more viable, notably with the creation of the Grand Union Canal.

This was an amalgamation of seven canals that together had provided a more effective route to London from the Midlands than the original route via Oxford.

A major regeneration scheme was initiated, with a widening of the canal from a narrow to a broad basis along much of its length, a process which meant replacing most of the locks. At the same time, a Grand Union Canal Carrying Co. was created with its own fleet of boats, but this was to be just another vain attempt to hold back the tide of progress. During this time, the River Thames also benefited from a major upgrade of its locks. More typically though, canals silted up from lack of use and became unnavigable. By the end of the war, the canals were in a sorry state, their future bleak.



*Right Above: Locks on the Thames were upgraded during the Great Depression and remain in use today.*

*Right: Worsley Delph, the unpromising point where canals were born.*

*Below: A traditional 'pair' of boats used to double up capacity when the economic squeeze came to the canals. (Courtesy of Allan Ford)*

