BUILDING BRIDGES

Sleek and sensuous, the Northwest's many new bridges will match their Victorian counterparts as lasting architectural landmarks.

Words Deb Mulhearn

Photographs Courtesy of Whitby Bird, Halton Borough Council, Wilkinson Eyre

FROM LEFT TO RIGHT: THE NEW MERSEY CROSSING, TRINITY BRIDGE ON THE RIVER IRWELL, MILLENNIUM BRIDGE IN LANCASTER, HACKING FERRY FOOTBRIDGE ON THE RIBBLE

Bridges capture our imagination on many levels. Marvels of engineering like the Forth Rail Bridge and the Clifton Suspension Bridge celebrate the pioneering spirit and the technology of their time. More modest but no less magical crossings such as Newcastle's 'blinking eye' bridge over the Tyne or London's 'blade of light' are products of the computer age that have dramatically changed familiar skylines. They have also surpassed their functional benefits, symbolising regeneration, winning awards and attracting visitors (and epithets) in their own right. Whether it's their aesthetic appeal, exquisitely engineered or beautifully illuminated at night, or the simple joy of crossing where there was no crossing before, bridges make an impact.

The Millennium provided the perfect opportunity to build bridges as economic and cultural statements around the country, but Manchester was already cleverly using new bridges to revitalise derelict areas. A series of wonderful bridges created new routes and links for pedestrians and cyclists, but also brought the city's neglected canals and urban rivers back into prominence. Bridges such as the Salford Quays lifting footbridge, which links The Lowry and the Imperial War Museum North, are not simply adjuncts to new buildings or refurbishment schemes. They take centre stage, make forgotten parts of the city accessible and attractive, and provide unhurried havens as an antidote to the pace of city life.

What's more, acclaimed architects and engineers were commissioned to design these fabulous footbridges, with striking results. Spanish designer Santiago Calatrava, who trained as both architect and engineer, completed the jauntily angled Trinity Bridge, in 1995. It has been a catalyst for further river based regeneration initiatives ever since. Next came Merchant's Bridge, erected by top engineering firm Whitby Bird & Partners a year later. Whitby Bird went on to design Lancaster's Y-shaped Millennium Bridge over the River Lune and are now designing the Spinningfields footbridge in Manchester, again spanning the River Irwell, which is due to open this year. "It's a great experience to contribute to a place's reversal of fortune, and a new bridge is a good means to achieve this," says Des Mairs, senior engineer at Whitby Bird.

If the Victorians often over-engineered their bridges for safety, advances in computer-aided design mean today's engineers can build lighter and longer bridges. "Calculating the complicated loads and distribution used to be trial and error, but now it is done at the computer stage," explains Mairs, who is working on the new Spinningfields Bridge. "This means we can have much more graceful structures and people have come to expect that. They want to see something dramatic and uplifting. While certain designs are not appropriate for some sites, each bridge more or less generates itself out of its site and context."

Site constraints have influenced the design of a stylish new footbridge planned at the confluence of the River Ribble and the River Calder in rural Lancashire. The Hacking Ferry footbridge will allow walkers on the Ribble Way to avoid an eight mile detour. "It's simple but unusual because it's a tripod design with a foot on three banks," explains Nick Osborne of Lancashire County Council, who commissioned the bridge. "Also, it needed a light touch in terms of construction because it is a remote site with fairly shallow but fast-flowing waters prone to sometimes severe flooding. It has been known for uprooted trees to be carried upright down the river, so we needed eight to ten metres clearance over the water."

Hacking Ferry was the site of an ancient 14th century ferry crossing that ran up until the 1950s. This much-anticipated bridge, due to start on site next year, was engineered by Flint Neill Partnership with design input by Wilkinson Eyre, award winning architects of Newcastle's 'blinking eye' footbridge. "We hope the bridge will become a destination in itself," adds Osborne.

"New structures like this should have as much impact on the landscape as historic bridges did in their day. And with more people walking and visiting, there will be positive knock-on effects for the local economy."

In Northwich in Cheshire, public agencies working in partnership have completed a project to reclaim land around the Anderton nature park and boat lift, creating new recreation spaces, footpaths, cycle ways and bridleways. Carey Park is accessed by a new footbridge across Whitton Brook, which was installed in one piece from pontoons floated down the river. Partners included Cheshire County Council, the Mersey Basin Campaign, British Waterways, Mersey Forest, Northwich Community Woodlands and the local Groundwork Trust. "It's a stunning bridge and the project was made all the more exciting by the complexities of getting 22 tonnes of steelwork rotated into place," says Richard Thorogood of Groundwork, who acted as project manager.

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Beautiful as they are, not all the Northwest's new bridges are small scale footbridges. The most high profile bridge scheme during the next few years will be the new Mersey Crossing, a 2 km double decker bridge planned to ease the traffic loads on the Silver Jubilee Bridge at Runcorn. The forty-three year old bridge was designed to carry up to 9,000 vehicles a day, but nowadays that figure can reach 90,000, necessitating frequent maintenance and repairs. The proposed design for the second crossing, which will be the first major estuary crossing built in the UK this century, would accommodate four lanes of motor traffic, plus trams, walkers and cyclists on a lower deck. "We have tried to keep the design in harmony with the existing bridges to lessen its impact," says Ian Hunt, director at Gifford and Partners, consulting engineers for the project, who also worked on Newcastle's Millennium Bridge.

"We should be looking to posterity and consider the impact our structures will make as much as an architect does with buildings." The new bridge is a type of cantilevered, multiple cable-stayed structure with lattice work to echo both the old railway bridge and the Silver Jubilee's famous curve.

"Bridges get their own personality - we hope the new Mersey Crossing will be embraced by the local population in the same way that Tynesiders have embraced their new bridge."

MORE INFORMATION:
www.merseycrossing.co.uk
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