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Gateshead Millennium Bridge

WHEN it is in motion, this contemporary steel structure looks like a modern work of art that reminds many of a winking eye. The reflection of its form in the Tyne River adds to its majestic beauty as an art sculpture. However, this structure is much more than just a beautiful work of art, for it is actually the world's first tilting bridge.

In just four minutes, electric motors and hydraulic rams lift this 850-ton bridge into an open arch gateway for tall ships to sail under way. Since this bridge's story is best told with still and motion pictures, I suggest you visit www.gateshead.gov.uk to journey over and under the Gateshead Millennium Bridge, and to www.tynebridgewebcame.com to see motion picture links.

The famous Chicago architect Louis Sullivan (1856-1924) coined the phrase "form follows function." Frank Lloyd Wright (1869-1959) further developed Sullivan's concept of design when he coined the phrase "form and function are one." The principles of both of these great architects were most certainly at play when the civil engineering firm of Gifford and Partners joined forces with the architectural firm of Wilkinson Eyre to develop the design for this bridge.

Made up of two arches joined together by a series of suspension rods, when the bridge is closed one of the arches lies flat and is open to foot and bicycle traffic.

This design is so fresh and revolutionary that it was chosen as one of the exhibits for the Great Expectations

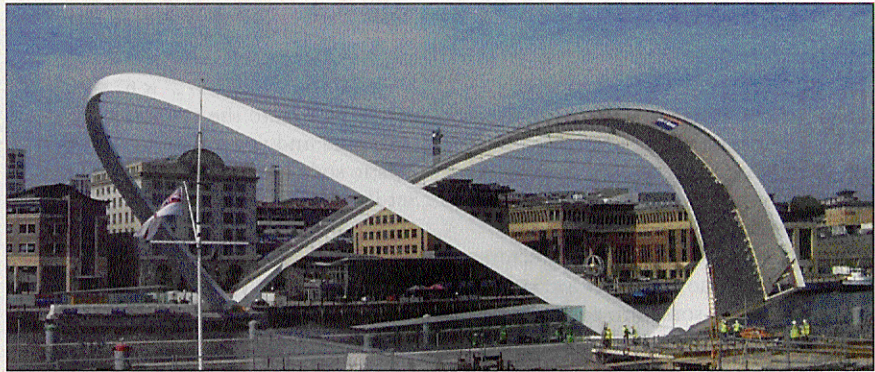


Photo courtesy of the Design Council of the UK.

Exhibition held by the Design Council of the UK in New York City this past October 16-18. This exhibition showcased over 100 outstanding examples of cutting-edge British designs.

When the Design Council learned that I was researching the bridge, they extended an invitation to the UKwithNY press conference. Under very tight security I met the Duke of York as he performed his duties as the British Ambassador for British Business and opened the UK Great Expectations Exhibition as a "powerful symbol of solidarity" between the people of our two nations.

At the news conference, representatives from the different design firms and Design Council members shared their knowledge about the displays with Prince Andrew and members of the press.

The bridge was built off site and then lifted and sailed up the Tyne River to its permanent location by the world's second-largest crane. The Gateshead Council reported that the Singapore-based Hercules II crane sat on a 100-ft. wide

barge that was almost as wide as the river. With only three millimeters to spare, the crane deposited its load onto the new foundations that were built on the site. The foundations contain approximately 19,000 tons of concrete.

As I write this, the Gateshead Mil-

lennium Bridge is opened and closed manually. Eventually the tilting mechanism will raise and lower the bridge under the control of an automated computer system. ☺

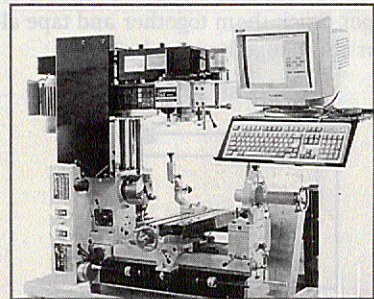
Recalling the Facts

1. Why is this bridge so unusual?
2. What is it about the shape of an arch that makes it possible for this bridge to allow tall ships to pass under, even though it doesn't physically open?

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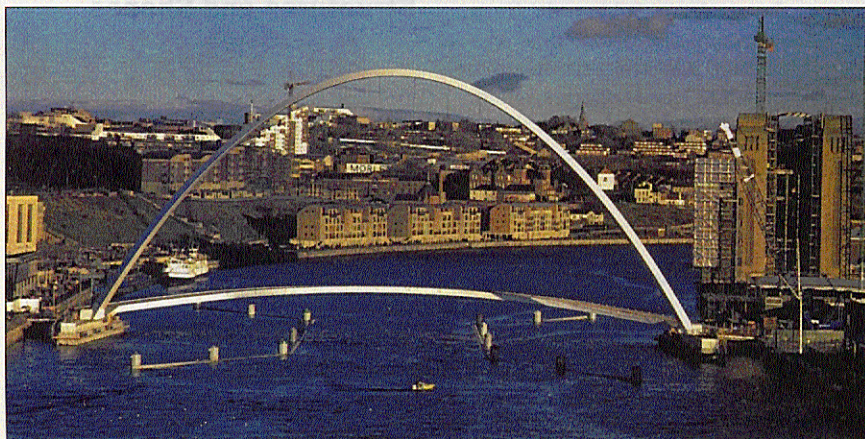
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