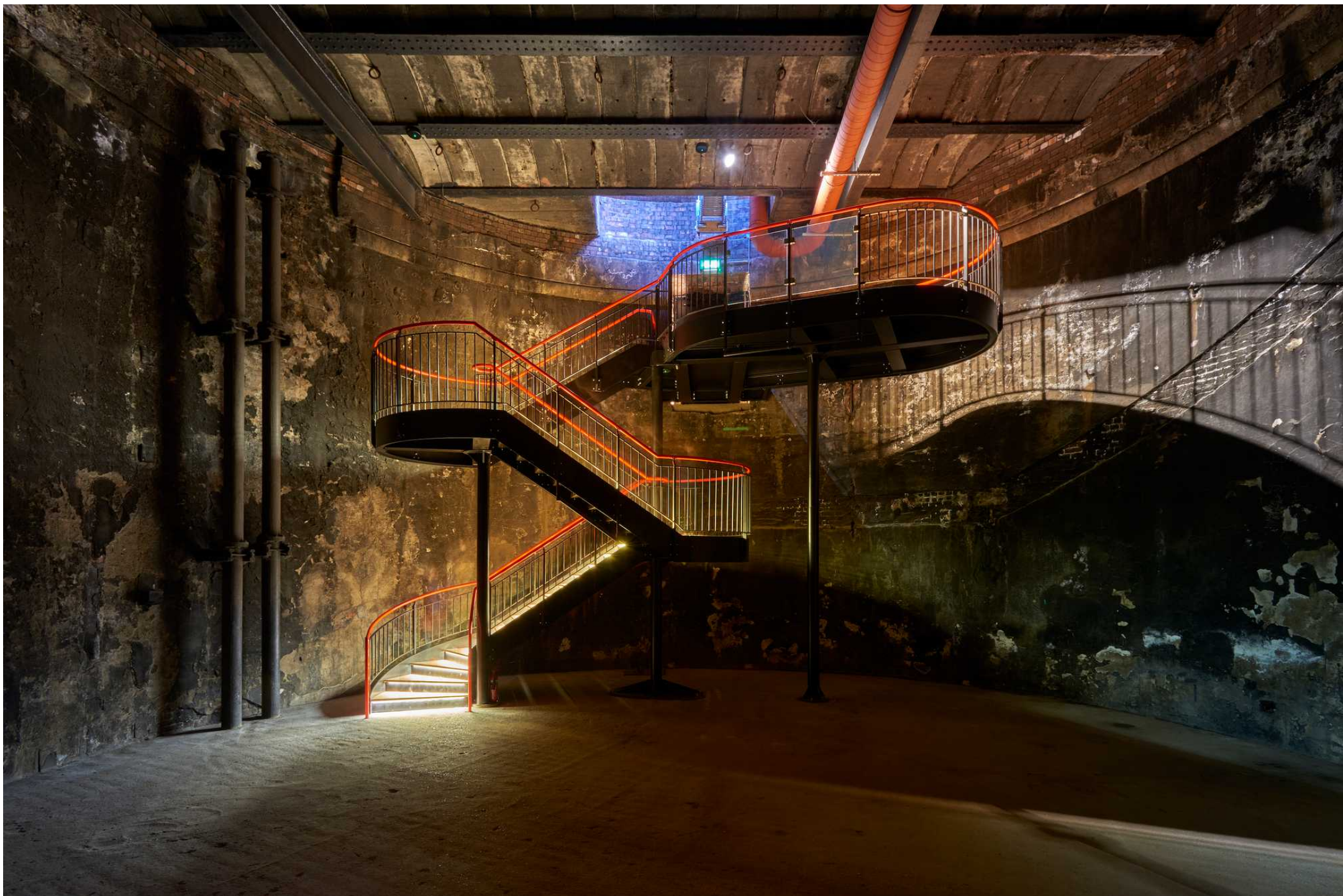


GALLERY 1 OF 7

The Thames Tunnel was spearheaded by civil engineer Isambard Kingdom Brunel's father Marc Isambard Brunel, for whom the younger Brunel worked as an assistant. Pictured: The entrance casts a dramatic shadow across the sooty walls of the chamber.

IMAGE courtesy of Raftery and Lowe



REPORT

The Eighth Wonder of the World

London
3 May 2016

Isambard Kingdom Brunel's career nearly ended where it began: in the shaft of the Thames Tunnel in Rotherhithe, south London. In 1828, at the age of 22, the pioneering mechanical and civil engineer almost drowned during construction of the world's first under-river tunnel. He was rescued by a small door in the adjoining shaft and plucked out of reach of a turbulent swell of river water.

Brunel's legacy has not been forgotten, but for a time, the shaft that set him on course to pioneer the Great Western Railway went unnoticed – overlooked and neglected amidst a largely residential cluster in London's former docklands. The shaft (technically a caisson, a watertight retaining structure used to enable aquatic construction) and underwater tunnel, once described as the “eighth wonder of the world”, have now been reopened for public use as the adjacent Brunel Museum's music venue and exhibit space, thanks to a staircase and doorway engineered by London architecture firm Tate Harmer.

The Thames Tunnel was spearheaded by Brunel's father Marc, for whom the younger Brunel worked as an assistant. “It has a powerful lineage,” says Jerry Tate, partner at Tate Harmer and lead architect on the project. “It's Isambard Kingdom Brunel's first structure; it's the first caisson; it's the first bit of the first tunnel going under a river, and that tunnel was the first bit of the first underground transport network in the world. So it was the start of the world city. Everything kind of began in this space.”

Transport for London granted the Brunel Museum access to the shaft in 2012 after it lay inaccessible for 150 years. Constructed above ground, the 1,000-ton chamber's own weight sunk it into the soft Thames riverbed like an oversized pastry cutter. Engineers could then dig out from the shaft to build the underwater tunnel, which was opened in 1843 for pedestrian traffic. In 1865 the East London Railway bought the tunnel and, from the late 1800s to the early 1900s, the shaft became a vent for smoke from steam trains carrying freight across the river. In 1933, the tunnel became part of the tube; it currently serves as the path between Rotherhithe and Wapping on the London Overground. Without the need to clear out smoke, the shaft became disused.

Approximately 15m in diameter and 15m deep, the space's smoke-blackened brick walls are a reminder of an industrial revolution come and gone. Although the Tate Harmer team considered emulating Brunel's Victorian sensibilities, they instead chose a contemporary and minimal design to avoid detracting from the existing atmosphere – an increasingly common technique in preservation architecture. “It's got this kind of patina of history on the walls, and we really didn't want to touch it at all,” says Tate. “The staircase is like a bit of the 21st century poking into the space.”

Faced with the challenge of providing access to the shaft's floor with the least impact possible, the firm used a ship-in-a-bottle method to haul materials through a 1.3m by 2.4m doorway that they cut in the structure's thick outer wall. A freestanding, cantilevered steel staircase now supports a large viewing platform that overlooks the venue. The black structure recedes into the smoky walls of the space, but a red handrail acts as a thread to guide visitors down to the floor. The solid oak stair treads are slatted with lighting.

Tate says the space's current use as a concert venue is a fitting return to its roots. For the first 20 years of its existence, the shaft was the grand entrance hall to pedestrian tunnels running under the Thames. “It held performances, circus acts, all kinds of things,” says Tate. “Brunel was a real showman so I think it's entirely appropriate that it is a performance space. It also has really good resonance and acoustics, and we're not entirely sure why.”

Robert Hulse, the museum's director, has been working to make the space easily accessible to the public since 2002. He thinks the site has remained undeservedly forgotten for too long. “Rotherhithe is the birthplace of mass urban transport,” says Hulse. “London, New York, Paris, Beijing – none of these places could operate without a subway system. This space is so important to the development of modern life.”

As an architect, Tate feels a reverence for the history of the site, which is at once a beaten up relic and a marvel of modern engineering. “You can see all this history written large on the walls,” he says. “Not all historical spaces are castles and such. In many ways, the history of this space is more important to us and how we live today than a medieval castle.”

In a London that's rapidly accruing sky-piercing towers, the shaft is a timely reminder that sometimes the city's most important innovations stem from below.

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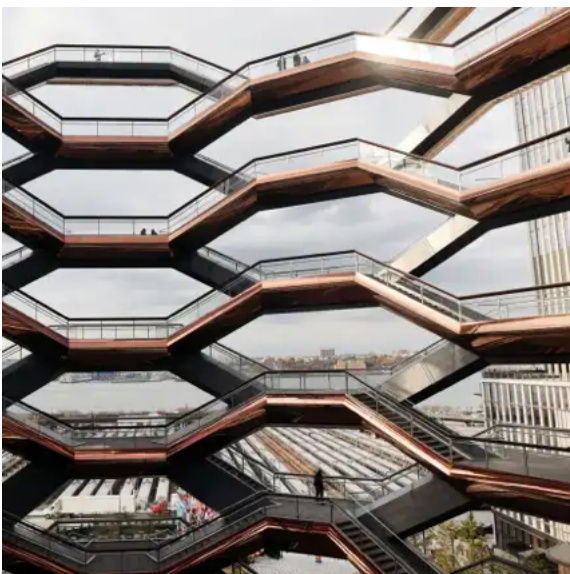
Words *Camilla Sterne*

The Thames Tunnel Shaft is at the Brunel Museum, Railway Avenue, London

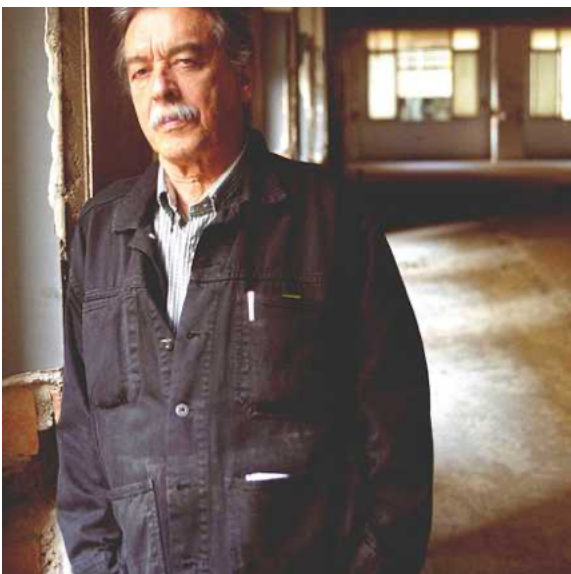
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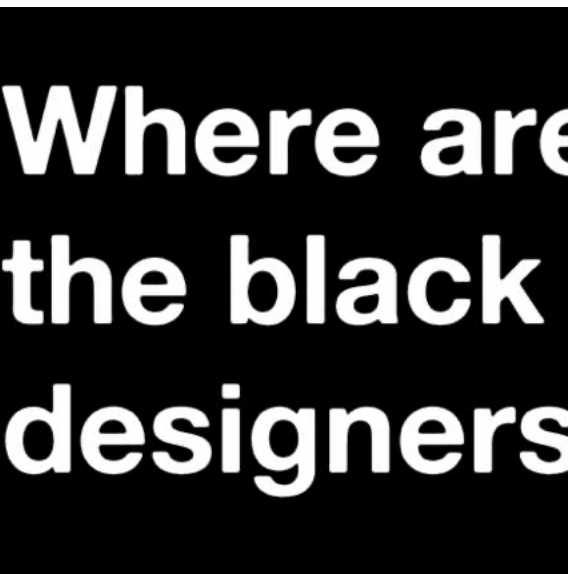
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