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workmanship on London's Waterloo Bridges 1934 -1946  
Wall, C.**

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## William Arrol and Peter Lind: demolition, construction and workmanship on London's Waterloo Bridges 1934 -1946

By 1924, when William Arrol and Co. constructed a temporary crossing, Rennie's Waterloo Bridge was 'marred by a broken back ... and had passed from utility to obstruction.'<sup>1</sup> Arrol was tasked with demolition of the old bridge in 1934, the process revealing perfectly cut and tapered arch-stones and faultless construction of the piers. The new bridge, engineered by Rendel, Palmer and Tritton, designed in collaboration with Giles Gilbert Scott and in association with London County Council engineers was built by contractor Peter Lind. The result was a modern, functional addition to London's river crossings. However it was a complicated structure and required a large amount of temporary works including gantries, steel bridges, timber piles and platforms. The design also required innovative welding techniques leading to labour disputes with the steel-fixers. The construction process was delayed by four strikes in 1938 and 1939. Labour shortages because of war resulted in a diminished workforce while working conditions were very harsh with severe winters in 1938 and '39 and bomb raids throughout 1940 and '41.

This paper, using documentary and photographic evidence from both public and family archives, considers the changing labour force, including demolition of the old bridge and construction of the new bridge, employed by the two contracting firms. It examines the different approaches to labour, and labour disputes, demonstrated by the contractors. William Arrol and Co., a Scottish civil engineering firm established in the nineteenth century and specialising in bridge building, and Peter Lind and Co. a smaller civil engineering firm based in London and set up by the Danish engineer in 1917. Questions of skill and labour, conditions of work, and construction employment are examined in the context of pre-war, wartime and post-war circumstances.

Although Rennie's first Waterloo Bridge was built initially as a purely commercial enterprise the site soon became a significant landmark in London's social, political and urban history. While acknowledging the shifting, symbolic meanings of Waterloo Bridge this paper addresses the demolition and construction process arguing that this, although usually overlooked by historians, is integrally related to the wider landscape of social and urban change apparent in mid-twentieth century London.

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<sup>1</sup> Buckton, E.J. and Fereday, H.J., 1936. The Demolition of Waterloo Bridge. *Journal of the Institution of Civil Engineers*, 3(8), pp 472-498.