

Contact author: Héctor Beade-Pereda, h.bead@knightarchitects.co.uk

ST. PHILIPS FOOTBRIDGE IN BRISTOL

A DESIGN EMERGING FROM THE CONTEXT AND ITS CONSTRAINTS

Authors: Héctor BEADE-PEREDA¹, Bogdan BARBULESCU², John McELHINNEY³

Affiliation: ¹ Knight Architects, High Wycombe, United Kingdom

² Jacobs, Swindon, United Kingdom, ³ Jacobs, Bristol, United Kingdom

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The St. Philips footbridge in Bristol (UK) is the result of a painstaking design process that aimed for, in an extraordinarily challenging site, simultaneously responding to numerous constraints. The site, behind Temple Meads Railway Station, was originally used for railway maintenance and will become a new neighbourhood in the city centre as part of one of the most important current urban development projects in Bristol. The footbridge spans the River Avon, contributing to provide the needed accessibility for development to an area previously isolated by several infrastructures and the watercourse.

The constraints faced up during the design were geometric, architectural, hydraulic, environmental or buildability-related. The footbridge connects two banks with a significant difference in elevation, appearance, ground condition and accessibility, one of them soon to be transformed into a new district and the other being an industrial area that is planned to turn into a public space in the longer term. The design should successfully respond to three very different scenarios: when it is the only object that meets the expected architectural quality for the area, when just one of the banks has been developed and, eventually, when developments on both banks have been completed. It should also harmoniously coexist with two existing bridges in the vicinity.

After a design effort to provide a crossing that is aesthetically pleasant and structurally honest with a reasonable economic investment, the outcome of this exercise is a unique solution whose beauty emerges, to a great extent, from the particularities of the site. The bridge, a 50m-span and 4-m wide steel beam with a forked geometry, seamlessly hosts a ramp for disabled and cyclists and a staircase.

The article explains the rationale behind such an unconventional crossing solution and how different design challenges were addressed during the detailed design and construction stages.



Fig. 1. Steelwork lift and finished bridge