

ESPERANCE BRIDGE – AN INNOVATIVE TAKE ON A TRUSS BRIDGE

Authors: Ian WILSON¹, Martin HOOTON², Solene FERCOCQ³, Ben ADDY⁴, Ezra GROSKIN⁵

Affiliation: ¹ Associate Director, Arup, London, UK – ian.wilson@arup.com

² Associate, Arup, London, UK – martin.hooton@arup.com

³ Engineer, Arup, London, UK – solene.fercocq@arup.com

⁴ Managing Director, Moxon Architects, London, UK – b.addy@moxonarchitects.com

⁵ Director, Moxon Architects, London, UK – e.groskin@moxonarchitects.com

Summary

The Esperance Bridge crosses the Regents Canal in Central London and was opened in the summer of 2021. It is an innovative take on a traditional warren truss bridge that uses tapering and folded steel plates to create an elegant and sculptural form at this popular section of the canal. The bold pomegranate red carbon steel plates set against the diagonal stainless steel tension ties illustrate the structural behaviour of the Warren truss, where struts act in either compression or tension.

The bridge is the final of three canal crossings in the heart of the landmark Kings Cross Development, developed by Argent. The bridge completes a new pedestrian route through the development and crucially provides greater connectivity to the shopping destinations at Coal Drops Yard. The pedestrian bridge compliments the Victorian heritage of the canal environment while providing a viewing platform and enclosure to the adjacent Ghat Steps, which is a popular public event and leisure space.

In addressing the conference themes, the paper focuses on the user experience and how the context of the bridge fits within a wider pedestrian network. The design, fabrication and construction of the bridge is also discussed.



Fig. 1. Esperance Bridge

Keywords: Steel, truss, aesthetics, 3D modelling, fabrication, foundation re-use