

# LINKING POLAND AND GERMANY – A NEW RAIL BRIDGE OVER THE RIVER Odra: THE KÜSTRIN-KIETZ CROSSING

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## SUMMARY

Following the first prize in a two-stage limited design competition, the Anglo-German team of Knight Architects and Schüßler-Plan Berlin have developed two new bridges which will be the central part of the Berlin-Kostrzyn-Gorzów railway modernisation programme: one is over the River Odra crossing the German-Polish border and the other crosses the river floodplain on the German side.

The team's solution for the main crossing is an elegant network arch spanning 130m. The majestic steel structure, with its crown positioned above the axis of the state border, will be a landmark that will not only highlight the importance of the location but will be also a welcoming gesture to everyone traveling between the countries. The smaller "Odervorflut" bridge, located 500m west uses the same architectural language as the main bridge creating a family of slender and elegant structures.

**Keywords:** *Rail Bridge, River Crossing, Structural Design, Network Arch, Architecture.*

## 1. INTRODUCTION

In summer 2015, Deutsche Bahn, the German national rail service, has announced an international competition with the cryptic name „O2 Ersatzneubau der Eisenbahnüberführungen über die Oder und über die Odervorflut. Küstrin-Kietz“. What sounded like the mere design of a replacement for an aging rail bridge in the east of Germany turned out to be the task of developing a symbol for European friendship and cooperation: a new bridge over the river Odra, reaching across the border between Poland and Germany. The city adjoining the river is Kostrzyn, which staged one of the fiercest battles of World War II, suffering in nearly complete demolition in March 1945, almost exactly 70 years before this competition. The task of the competition was to replace the existing river crossing, a Frankenstein-esque composition of steel pre-world war 2 trusses, salvaged from the remains of other bridges that fell victim to the fighting and re-assembled into a new, makeshift crossing. The task involved a second crossing, around 500m west of the river bank, crossing a flood canal built to mitigate flood impact of the main river. Both bridges are currently under way, having been granted planning permission in April 2020 with the construction works beginning in December 2020.

## 2. HISTORIC SITUATION

The town of today's name Kostrzyn is located ca. 85km east of Berlin and 45km west of Gorzów Wielkopolski. It is located on the east bank of the river Odra at the confluence of the rivers Odra and Warta. Since the end of World War II, the river was part of the Oder-Neisse line demarcating the border between Poland and Germany.