

## PEDESTRIAN BRIDGES IN BENAVENTE, CACÉM AND VISEU, PORTUGAL

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### Summary

Four different types of pedestrian bridges built between 2004 and 2007 in the Portuguese cities of Benavente, Cacém and Viseu are presented. All bridges differ substantially from each other in appearance and behaviour in spite of sharing similar situations, having been commissioned by the same landscape architects and having been designed by the same structural engineers. The circumstances that led to their development are briefly discussed.

**Keywords:** footbridge; conceptual design.

### 1. Introduction

Animated by the Polis national program, aimed at improving the living standards in urban environments through selective interventions, the cities of Benavente, Cacém and Viseu decided to launch projects for new parks aimed at revitalizing the long-time neglected and polluted banks of its rivers. Design of the new parks was awarded to NPK Landscape Architects who in turn commissioned J L Cândia Martins Structural Engineers with design of the pedestrian crossings. Similar settings but diverse circumstances led to different approaches and thereby to distinct works of structural engineering.

### 2. Footbridge over the Sorraia River in Benavente

The Linear Park of Benavente has been built along the banks of the Sorraia, a river that flows into the Tejo relatively close to Lisbon. Benavente and the surrounding area are prone to flood hazard in rainy winters. Therefore, the park was designed for coming through flooding without noteworthy damage. This included linking the two banks of the otherwise relatively narrow river by a 100 m long footbridge. Aim of this bridge is to link the city with a vast and partially cultivated but mostly unspoiled land area that was previously hard to access by foot.



*Fig 1 The Bridge under Construction.*