

## Lannion downstream bridge over the Léguer River

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### Abstract

With a total length of about 210 m, the new Lannion downstream bridge will cross the river with an “S” shape path. Deck will be made up of a steel and concrete composite box girder. To reduce impacts on the river flow, only a pier will be placed in the riverbed. It consists of a steel tetrapod formed by four legs, embedded on the bottom plate of the box and designed as extensions of box's webs. Crutches meet on a metal base resting on a reinforced concrete pier. The architectural design consists of a light structure characterized by natural and maritime shapes: an homage to the site's history and landscape.

**Keywords:** bridge, river, steel and concrete composite box girder, steel tetrapod, “S” shape path.



*Figure 1: 3D rendering view of the new downstream bridge*

## 1 Introduction

The project is situated in the Breton city of Lannion. It consists in creating a new infrastructure allowing the link between two departmental roads bypassing the Pont of Viarmes. The new

infrastructure includes a new bridge crossing the Léguer River and a link road.

### 1.1 The site

At the heart of the Côtes d'Armor Department, Lannion is a major urban and economic centre