

# Architectural Boomerang over the Seine

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**FORCE Technology's wind tests are approved for spectacular bridge over the river Seine in Paris.**

The river Seine winds its way calmly through the heart of the city of cities. Toward the west near Boulogne-Billancourt, it cuts a large curve in its course. In this curve is the small crescent-formed island, Ile Seguin, which at the moment is the centre of a large development taking place in the area from where there is a view of the city's 100-year-old architectural landmark: The Eiffel Tower.

Soon, Ile Seguin will be the location for another spectacular architectural landmark: The boomerang shaped pedestrian bridge, Passerelle de Sèvres, which will connect the island to the river bank and provide access to the cultural and scientific institutions, which will take possession of the area.

One arm of the boomerang forms the 80m main span across the Seine while the other forms the approach ramp on the Sèvres bank. The suspension bridge will look impressive and contribute to giving the old industrial area new wind beneath its wings.

## The wind plays a part

The wind factor has been taken very seriously by both designers and architects.

Not only must the bridge be stable in strong winds, it must also have the correct aerodynamic design so that pedestrians experience the bridge as safe and reliable. Aesthetics and technology have to complement each other. This is a task in which FORCE Technology has been deeply involved.

In 2006, FORCE Technology was contacted by the British engineering consultant, Flint & Neill Partnership, who are consultants for the owner. They wanted to test the bridge's design and performance in relation to various wind conditions. An exciting and interesting task as the bridge's asymmetrical form contains many complex, technical challenges. FORCE Technology has very modern test facilities at our disposal and in the course of a relatively short time, we were able to deliver the requested data on which the architects and designers could base the further work on the bridge's final design.



View of the foot bridge's deck.

## Thorough test

The designers in FORCE Technology's model workshop created a true model of the boomerang-shaped bridge deck in the scale ratio 1:20. The tests were then conducted in one of the company's three wind tunnels. FORCE Technology used about one-and-a-half months to conduct the thorough tests, which provided the designers with important data about how the bridge reacts when the wind force increases. ■

*"FORCE Technology was amongst the companies that were qualified to conduct the wind tunnel tests. We have previously worked together with FORCE Technology and we know that the company has a good professional reputation in international circles. Since the economy was also advantageous, we chose FORCE Technology. They have also lived up to the good reputation as far as professional competence and collaboration are concerned. As a design company, we naturally place great importance on design and technological innovation comprising an integral whole. FORCE Technology has contributed to the documentation that Passerelle de Sèvres lives up to our ambitions", says Ian Firth and Chris Barker from the British company Flint & Neill Partnership.*



Illustration of the Passerelle de Sèvres crossing the Seine.