

Press release, 10.06.2022

## **Tour over the Great Belt Bridge**

**When Tour de France races over the Great Belt Fixed Link on Saturday 2 July 2022, it will not only mark a high point of an event transmitted to hundreds of thousands of viewers across the world. It will also celebrate a world-class union of sport and architecture.**

At the end of the second stage, the Tour field will pass over the iconic Great Belt Bridge, and once again the eyes of the world will be on the bridge deck. The Danish architects Dissing+Weitling were behind the bridge, which marked a breakthrough in design when it was completed in 1998, and today, with the Tour de France, it will be the centre for a trial of strength on Danish soil.

According to the general director of the Tour de France, Christian Prudhomme, the Great Belt Bridge is “one of the main reasons we wanted to organise a Grand Départ in Denmark” (TV2, 22.03.2022). The bridge is an iconic piece of architecture and engineering, it was admitted to the Danish Ministry of Culture Canon of Architecture, and it is still one of the world’s largest bridge and tunnel links. It is also one of the reasons why Danish bridge design is so internationally renowned. Poul Ove Jensen from Dissing+Weitling was the architect behind the Great Belt Bridge, says:

“The bridge was a turning point for Dissing+Weitling and for Danish bridge architecture. It was the beginning of our international work on bridges and the outset for the export of Danish bridge design we see today. When we were working on the bridge in the 1980s and 1990s, there was great public outcry against entire project, but this turned circle to national pride when the bridge was completed. The Tour over the Great Belt Bridge is a celebration of cycle racing, and it’s fantastic that it’s also an indirect celebration of what Danish architecture and engineering really can do. It’ll be an iconic cycling drama on an iconic bridge.”

According to the Grand Départ Copenhagen Denmark secretariat, Tour de France is transmitted to about 190 countries, and hundreds of thousands of spectators will be watching the three phases in Denmark. Alex Pedersen, spokesperson for Grand Départ Copenhagen Denmark, says on [www.letourcph.dk](http://www.letourcph.dk):

“The finish over the Great Belt Bridge was crucial for getting Tour de France to Denmark. Television pictures of the riders coming over the bridge will become part of Tour history, and the drama will be even more exciting because all the types of riders are competing on this day to win the stage, a classification, the green jersey, or the mountain jersey – everything is at stake.”

(Translation by Dissing+Weitling)

The most eye-catching element of the Great Belt Fixed Link is the suspension bridge, the East Bridge, with its characteristic, ground-breaking design. Despite the enormous weight of the anchor blocks, it was possible to design them as completely open structures, giving them a light and delicate expression. The pylons meet the water without artificial islands and bases, and the traditional cross girder under the bridge has not been necessary. This approach has since been an example for bridge structures across the world.

The first kilometres to the top of the East Bridge rise slightly until the riders drive 65 meters above the water's surface. Then it goes down again, to a flat 6.6 km long battle against the wind on the open West Bridge. The climb is hardly a problem for either classification favourites or sprinters, but the wind will probably be a decisive factor on the world's third largest suspension bridge.

**See the enclosed fact sheet on the Great Belt Fixed Bridge.**

**For more information, contact**

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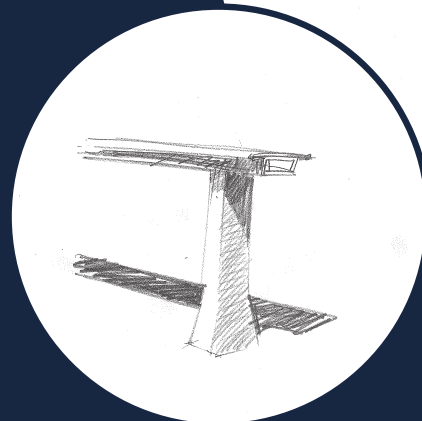
*About Dissing+Weitling*

*Dissing+Weitling works within building and construction, mobility, cultural heritage and transformation. The architectural firm can trace its DNA back to Arne Jacobsen's firm, which Dissing+Weitling has continued since 1971. The portfolio comprises international headquarters and offices, cultural institutions, hotels and residential areas, as well as world-famous bridges such as the Bicycle Snake and the Great Belt Fixed Bridge. Current projects include the Scandic Spectrum hotel, NCC office building, a framework contract with the University of Copenhagen as well as bridges in Scandinavia, North America, Australia, the Middle East and China.*

The Great Belt Fixed Link crosses the Great Belt and links the Danish islands of Funen and Zealand. The link comprises a four-lane motorway and a two-lane railway crossing the strait via two bridges, a tunnel and an artificial island built as an extension of the island of Sprogø.

## Fact sheet

Years	1988-1998
	The motorway over the Great Belt opened on 14 June 1998, while the railway opened on 1 June 1997.
Contractor	A/S Storebæltsforbindelsen
Architect	Dissing+Weitling
Engineers, East Bridge	COWI, B. Højlund Rasmussen, Rambøll & Hanemann
Engineers, West Bridge	COWI, Carl Bro Group, Leonhardt, Andrä und Partner
Engineer, tunnel	COWI, Mott Mac Donald Ltd.
Landscape architect	Jørgen Vesterholts Tegnestue
Total length	Total link 17 km



## Background

A fixed link across the Great Belt has long been a dream for many Danish governments, but the political process and the technical surveys had to wait until 1987 for a combined bridge solution to be initiated. In 1987, the Danish Parliament passed a law on construction containing a zero clause with respect to the environment and water flow. A state-owned limited company, A/S Storebæltsforbindelsen, was set up to take charge of the construction project.

In 1988, three firms of architects and three landscape architects were invited by the contractor to submit applications, and following a series of interviews Dissing+Weitling and the landscape architect Jørgen Vesterholt was appointed to draw up designs for the architectural and landscape elements of the project. The artist Ole Schwalbe was hired as a special adviser.

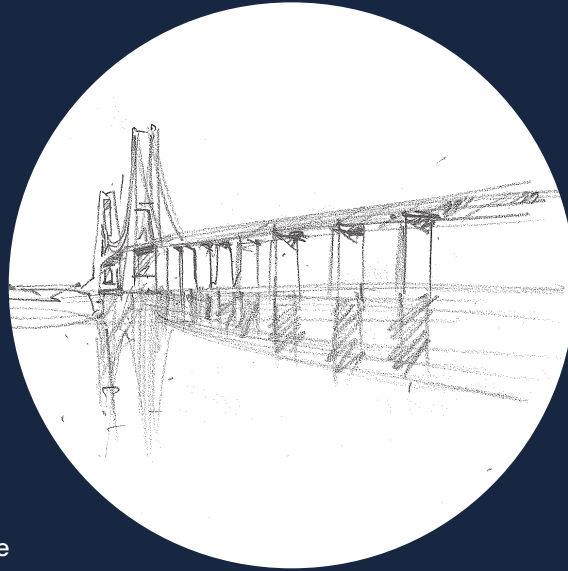
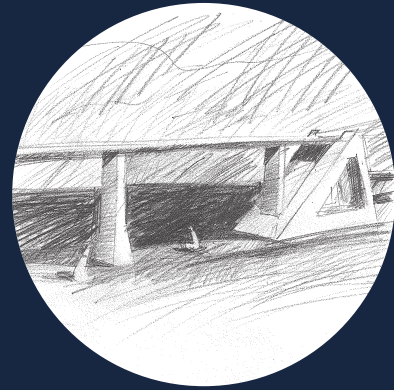
## Groundbreaking architecture

The design of the East Bridge has become an example for the design of suspension bridges. Prior to the construction of the Great Belt Link, all large suspension bridge pylons incorporated a substantial cross girder immediately beneath the bridge girder. The purpose of the cross girder is to buttress the leg of the pylon, but in order to highlight how the entire bridge girder is suspended between one anchor block and the next, the cross girders on the Great Belt Fixed Link are placed above the bridge deck. The floating bridge girder helps give the bridge its unusually elegant expression and makes it easily recognisable.

# East Bridge

## Fact sheet

Year	1991-1998	→ Each main cable consists of 18,648 wires.
Type	Suspension bridge	
Length	6,790 m	→ Underpinning, i.e. the two pylons, two anchor blocks and 19 bridge pillars, contains 259,000 m <sup>3</sup> concrete and 44,000 tonnes reinforcing steel.
Length between the two anchor blocks	2,700 m	
Main span of the suspension bridge, i.e. free span between the two pylons	1,624 m	→ The upper structure, i.e. bridge deck and cables, contains 80,000 tonnes construction steel and 20,000 tonnes cable steel.
Pylon	254 m	
Free height for navigation	65 m	
Weight of pylon with ballast	190,000 t	
Weight of anchor block with ballast	325,000 t	
Diameter of main cables for	85 cm	



# West Bridge

Type	Low-level bridge, concrete construction
Years	1989-1994
Length	6,611 m
Height for navigation	18 m

→ A total of 540,000 m<sup>3</sup> of concrete and 102,000 tonnes of reinforcing steel have been used.

Awards	Danish Culture Canon for Architecture, The Danish Ministry of Culture, 2006
	European Award for Steel Structures, ECCS, 1999
	FIP Award for Outstanding Structures, 1998

