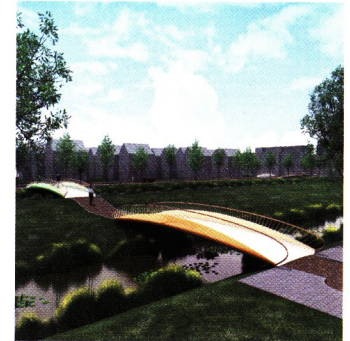
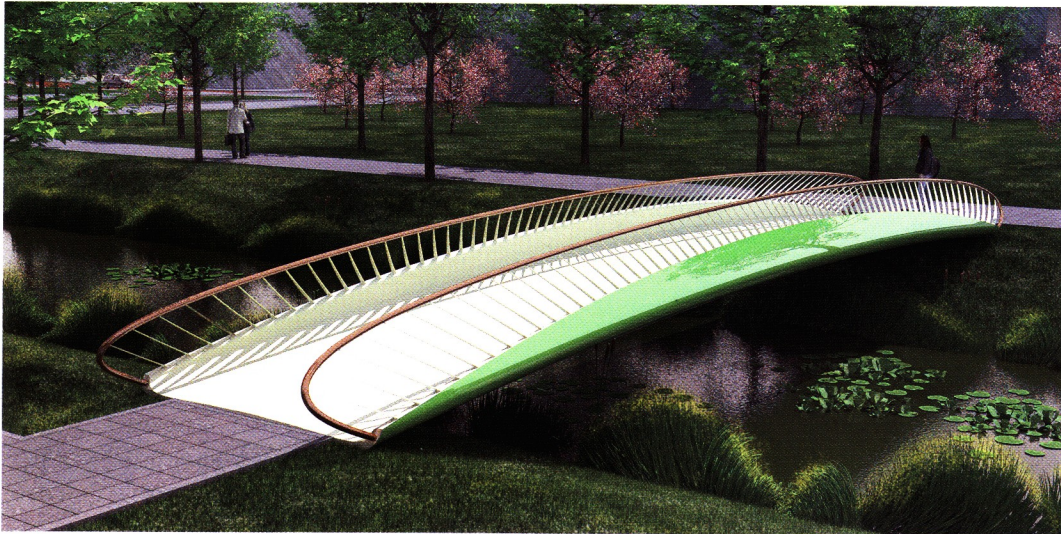


COMPOSITE BRIDGE

WWW.ROYALHASKONINGARCHITECTEN.COM
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Royal Haskoning, in collaboration with FibreCore Europe, has developed a sleek composite bridge for cyclists and pedestrians that combines architectural design with aerospace-industry technology. The bridge is made of FRP (fibre-reinforced plastic) using a mould of which the length and width are continuously variable thanks to a prismatic mid-section. Therefore, both the length and the width of the bridge can be determined from the needs of the client. It also provides a solid basis for the serial production of bridges, resulting in lower prices and shorter production times.

strong and stiff

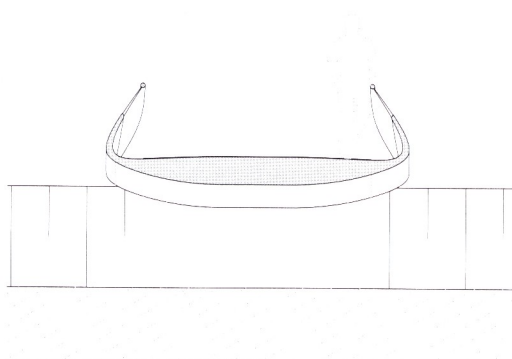
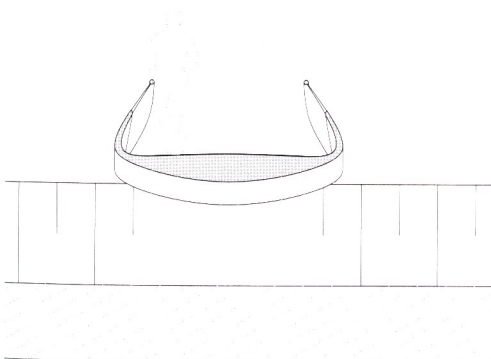
The bridge is designed on the basis of stiffness, a design criterium exceeding strength criteria by a factor of 10 to 20. Therefore it is much stronger than conventional bridges with the same span. Because of its light-weight material (thirty times lighter than concrete) the bridge only requires very light and simple foundations, can easily be moved or relocated and has low transport and installation costs.

Vibrations and resonance do not jeopardise the safety of the bridge. They are easily absorbed due to the FRP's high level of inherent damping. Also, the material is intrinsically fire-resistant: its retardancy time prior to failure in the event of fire is longer than that of steel. If required, the material can be given an additional fire-resistant coating.

light and soft

Since FRP's are chemically inert, the bridge has an estimated life of around 100 years and requires very little or no maintenance at all. The composite load-bearing structure needs only to be washed with water now and then for aesthetic reasons. Graffiti can also be easily removed from the bridge using any detergent.

Finally, the use of composite material makes for a highly diverse choice of colours. The design team has a number of colour schemes available for the bridge, each covering a fresh, saturated shade for the outer shell of the bridge and a light and soft tint for the interior. ➡



<< pedestrian bridge
scale 1 : 100

< bicycle bridge
scale 1 : 100