



## A-Frame Cable Stay Bridge

Spiceball Park Sports Centre

**Client**  
Moss Construction  
**Principal Contractor**  
Freyssinet  
**Engineer**  
David Dexter Associates  
**Contract Value**  
£400K  
**Contract Duration**  
12 weeks



The new Spiceball Park Sports Centre in the centre of Banbury, Oxfordshire, was re-developed by Moss Construction. The so called “island site” is bordered by busy roads and the River Cherwell. Whilst access to the new sports centre site is available by car there is a desire to offer safe pedestrian and cycle access to the new development.

In order to facilitate the requirement for safe pedestrian and cyclist access, the architect involved in the scheme was looking to provide an umbilical link from the Banbury Town Centre to the new sports centre, by way of an “A-frame” stay cable bridge. This structure is intended to make for an attractively proportioned and dramatic bridge with architectural merit and which will be complimentary to the context in which it is located.

To emphasise the link that the bridge will provide, the structure is extended in length across the existing public car park on the south side of the River Cherwell to a point directly opposite the entrance to the new sports centre. The extended length of the footbridge deck not only emphasises its purpose but also allows for a gentle gradient up and over the bridge ideal for wheelchair users, disabled, the elderly and cyclists.

Freyssinet were contracted by Moss Construction to provide a design and build solution for the complete works package. David Dexter Associates undertook the design on behalf of Freyssinet and developed a solution that consisted of two structural elements.

Firstly, an elevated ramp across the existing car park forms section one of the scheme. This structural element is designed and supplied by Reinforced Earth Company (Vinci Group), and takes the form of a 3 metre wide earth retaining ramp formed of Terratrel panels and clad with brickwork, thus in-keeping with the aesthetics of the new sports centre.

The “A Frame” stay cable bridge forms section two of the scheme. This structural element consists of an overall deck length of 42 metres across the River Cherwell and a stay cable mast of 13m in height. SH Structures worked in partnership with Freyssinet to develop the design and provide a cost effective high quality steelwork package. The structure is to be treated with protective coatings, and anti-skid will be applied to the deck prior to dispatch from the fabrication shop. Freyssinet have designed and are supplying permanent bearings for the structure.

Freyssinet also took on the design and installation of rotary bored piles to depths of up to 12.5 metres at foundation locations in order to transfer the bridge loadings.

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