



The Second Severn Crossing at sunrise.



The Second Severn Crossing at sunset.

- massive precast concrete caissons that the second crossing sits on and the 150m high towers.
- Hydraulic, wind and snow modelling.
- An explanation of the precast segmental construction that was used to make the viaducts in a factory on dry land and then assemble them out over the estuary.
- How the cable-stayed bridge was built, with another educational model that lets you build your own cable-stayed bridge and understand the essential differences between the first and second crossings.
- All those extras that make the bridge work for traffic, including the maintenance train that runs under the deck.
- The new motorway approaches and some of the challenges of keeping thousands of vehicles flowing across alluvial flood plains.
- How the earlier studies allowed the environment to be protected and given a helping hand.
- How the same material science used in the latest Alfa Romeo is being used to keep the traffic flowing under the motorway overbridges.

- Live pictures from the motorway control centre's CCTV cameras used to manage the Severn bridges and satellite photography of the estuary.
- How modern materials are making an impact today, including the visitors' centre building being made from glass reinforced plastic.

The centre relies entirely on charitable donations from the construction industry to support its activities. Most of this money goes towards subsidising school visits. Alongside financial help, the centre needs your assistance in raising the profile of the centre and what it can offer to young people. It provides the opportunity for you to share your enthusiasm with young people, demonstrating the excitement and satisfaction that a career in civil engineering can bring.

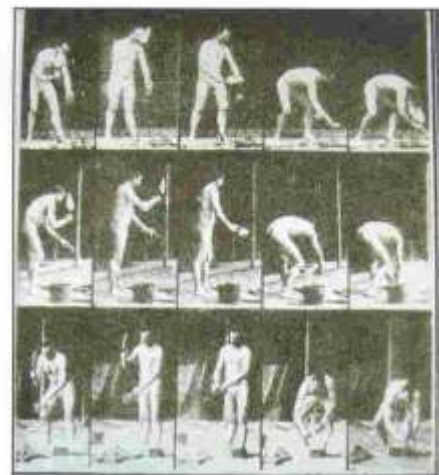
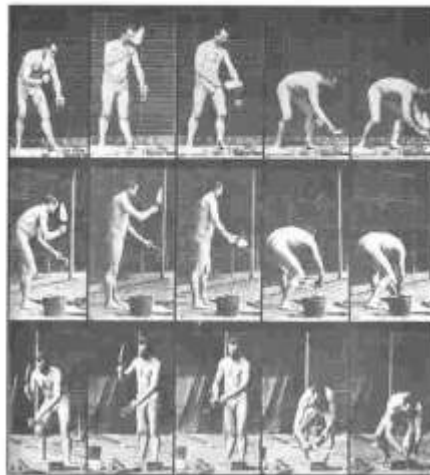
For further information on supporting the trust contact Keith Thomas on (t) 029 2076 1196 or to arrange a visit to the centre and for information on room hire, contact the centre manager, Liz Andrews, on (t) 01454 633511 (w) www.onbridges.com

Concrete

It is concrete, but is it art..?

A new exhibition at America's Smithsonian National Building Museum aims to look at the 'beauty of concrete', with some pretty convincing examples. Concrete, the oldest and the most widely used synthetic building material, is currently produced at a rate of over five billion cubic yards per year and is reportedly the second most consumed substance after water. Today, it suffers from being strongly associated with the often shoddy public and commercial buildings of the mid-twentieth century.

The aim of the Smithsonian exhibition is to portray concrete as a material that "makes possible structures of extraordinary beauty and invention." One of the displays is of a new photographic process in concrete, which allows any high quality graphical image to be permanently placed into a precast concrete surface. Using a combination of chemistry, concrete expertise, and graphical excellence, any precast concrete surface can be transformed into an artistic canvas. The technology works by impeding the cement matrix from forming where the image is located, leaving an exposed aggregate



Spot the difference. The original Muybridge photograph, left, and its reproduction in concrete, right.

surface to form the 'black' of the image. The example on display at the Smithsonian is a rather fitting work from Eadweard Muybridge, considered one of the founders of scientific sequential photography in the 19th century. The specific print used was the bricklayer in motion. Intaglio Composites, the US company behind this particular part of the exhibition, are currently working on a proposal to recreate a civil war

photograph on a 28ft wall at the entrance to a civil war park in Mississippi. The mind boggles.

Details of Intaglio Composites and the concrete process are available from (w) www.intagliocomposites.com For UK enquiries (e) john.ainslie@epluspoint.com The exhibition at the Smithsonian, Washington DC, runs until January 2005.