



THE INSTITUTION OF
CIVIL ENGINEERS

Panel for Historical Engineering Works

NEWSLETTER

DECEMBER 1996 no.72

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THE RE-OPENING OF THE WORLD'S OLDEST PUBLIC RAILWAY VIADUCT

The world's oldest surviving public railway viaduct, sited near Laigh Milton Mill at Kilmarnock was re-opened for pedestrian traffic on 29 October 1996 after completion of a £1m preservation contract undertaken by Ayrshire company, Barr Construction. A section of the unique four feet gauge track has been reconstructed and laid on the viaduct. The re-opening attracted good media coverage including a six-column spread in the *Guardian*.

The restoration project was initiated by the ICE's Panel for Historical Engineering Works and managed by the Laigh Milton Viaduct Conservation Trust, chaired initially by Mr W J Barr, since March 1994 by Lord Howie of Troon, and served by Panel Chairman Professor Roland Paxton as Secretary, Director and technical adviser.

Provost Stirling, Lord Howie & Provost Campbell
at Re-opening of Viaduct

note: preservation of distorted arch 2 and
representation of 'The Duke' 1816
(courtesy South Ayrshire Council)

The commemorative ductile cast-iron plaque
is worded as follows:

LAIGH MILTON VIADUCT
FORMERLY KNOWN AS MILTON BRIDGE
ON THE 'KILMARNOCK & TROON'
SCOTLAND'S FIRST PUBLIC RAILWAY,
THE WORLD'S OLDEST SURVIVING PUBLIC
RAILWAY VIADUCT. BUILT 1809-11
DUKE OF PORTLAND, CHAIRMAN
WILLIAM JESSOP, ENGINEER
JOHN SIMPSON, CONTRACTOR
CLOSED 1846 WHEN THE RAILWAY WAS
REALIGNED WITH EDGE RAILS ON A
TIMBER VIADUCT JUST TO THE SOUTH.
SAVED FROM COLLAPSE AND PRESERVED
IN 1995-96 BY THE LAIGH MILTON VIADUCT
CONSERVATION TRUST INITIATED BY THE
PANEL FOR HISTORICAL ENGINEERING WORKS
OF THE INSTITUTION OF CIVIL ENGINEERS.

THE CHAIRMAN'S COLUMN

by Roland Paxton

The Institution including the Panel have now commented on the recent Department of National Heritage and Welsh Office publication *Protecting Our Heritage*, a consultation document on the built heritage of England and Wales. Amongst numerous points made, one comment, based on our experience of the Thames Tunnel project, was that the incidence of 'eleventh hour' listing of buildings under threat should be reduced if listing authorities had a statutory duty to implement a pro-active programme of identifying and listing worthy items in their area. It was also emphasised that provision must be made for adequate recording prior to any demolition or substantial alteration of historically important structures.

Through the good offices of the Panel's correspondent Dr Emory Kemp a copy of *Field Notes*, VI, no.2, 1996, of the Institute of the History of Technology and Industrial Archaeology at West Virginia University has been received. An item of the Institute's news of particular interest to Panel members is that a public works preservation guide is in preparation. It will deal with issues such as local records, historic property surveys, state and federal resources and electronic information resources available on world wide web. The guide will also include instructions and forms for completing National Register nominations and HABS/HAER documentation.

A less well-known role of the Panel is to suggest the topic and speaker for the Institution's prestigious annual Smeaton Lecture, which next year will take place on 22 July. I am delighted to give advance notice that Emeritus Professor Hugh Sutherland of Glasgow University, former Institution Vice-President, has kindly agreed to lecture on the subject of his distinguished Victorian predecessor *Rankine the Polymath*. The lecture which will have present day relevance will not only cover Professor Rankine's academic and engineering background but also his militia activities and musical prowess. Please note this date in your diaries now!

One of the more indelible impressions of my Japan Society of Civil Engineers visit was seeing more than forty bridges over the Sumida River in Tokyo from a motor-launch in the company of Mr Shoji Terada, Executive Director of the Japan Association of Steel Bridge Construction and others. The city-scape was breathtaking. The bridges in their attractive looking pastel green, grey, blue and ivory colours

although modern by our standards, date from the great earthquake of 1926 and constitute a fascinating world-class case-study of the development of the steel bridge over the past 70 years. One of the most elegant structures, the cable-stayed 215m span Chuo-ohashi of 1993, reminded me of Poyet's innovative proposal of c.1790. Attractive examples of Lohse arches were seen at Odai-bashi (Nielsen system) and Otake-bashi, both of 1991. The earliest bridges 1926-1930 were mainly of the arch type. The largest uniform continuous crossing seen, which was rather dominant for my taste, was that of the double deck truss girder of the Ohji Line 'Metropolitan Expressway' currently under construction, at an impressive 319.4m. Traditionally the river was crossed by ferries and timber segmental arch bridges carrying traffic on their extrados, but these structures have been replaced long ago. I saw excellent illustrations and models of them in Edo-Tokyo Museum. More anon.



Odai-bashi 1991 Nielsen system Lohse arch
(author's photograph)



New double-decker road crossing 1996 - continuous truss
Mr Yamoaka of JASBC with myself
(courtesy of Shigero Onoda)