



THE INSTITUTION OF
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Roger Cragg

CIVILS AWARD FOR ROGER CRAGG by The Editor

Congratulations are due to Roger Cragg who was honoured to be informed in June by the Acting Director General of the Institution of Civil Engineers that he had been jointly awarded the 2002 Certificate for Contribution to Institution Activities, an award first instituted in 1995.

Roger is one of the longest serving members of the Panel for Historical Engineering Works and has represented the Midlands area since 1977 when he took over from his predecessor, Peter Baldwin. During the last 25 years, Roger has been very active in Panel matters and has made many contributions to its work. The number of recorded HEWs in the Midlands area has increased from about 30 in 1977 to today's total of 225. Although Roger has produced most of these Records he has been appreciative of the assistance of many 'helpers' over the years; in particular the contributions of Tony Daniell in Shropshire and Philip Shaw in Hereford and Worcester.

Roger has also ably arranged two Panel visits to the Midlands area – Coventry in 1986 and Telford ten years later – the latter in association with Peter Cross-Rudkin.

In February 1975 the Panel started the production of a 'News Bulletin' which appeared at irregular intervals until June 1978 when it was replaced by the present *Newsletter* with Roger as its first Editor, a job which he undertook until 1984.

Having contributed to the production of the *Civil Engineering Heritage* books for Eastern England and Wales and Western England, Roger took on the task of editing the second edition of the latter book, now more accurately entitled *Wales and West Central England*, which was published in 1997.

The subject of the assessment of the historical importance of HEWs is one which has engaged the attention of the Panel from its earliest days. In March 1993 the Panel set up a Working Party under Roger's chairmanship to look afresh at this subject.¹ From the discussions of the Working Party emerged the Panel's present policy on assessment which included the creation of Sub-Panels to tackle the job of developing databases of information and assessment methods for particular types of structures. In 1998 the Panel agreed to the formation of an additional Sub-Panel for Inland Waterways under Roger's leadership.

As the local Panel Member, Roger has been an ex-officio member of the ICE Midlands Committee for many years and his contribution was recognised by the Chairman at the recent Annual Dinner.

1. Aspects of the working party's deliberations were published in P. S. M. Cross-Rudkin et al, 'The Assessment of Civil Engineering Heritage', *Proceedings of the Institution of Civil Engineers, Municipal Engineer*. 2000, 139, pp.211-216.

I had much money handling upon these two great works. I received nearly all the money from the Railway company in silver and gold as it was returned to the Bank from the various collecting officers. I generally travelled from York by night, arriving at Berwick about 2 in the morning, and these case boxes were so heavy as sometimes to require several men to carry them to my lodgings, the Bank being, of course, shut at that hour. I often think how I did not get murdered in these midnight excursions with precious freights.

I forget now the amount of money that passed through my hands in those three years, but what with disbursements and receipts it must have been far on to half a million. You are already aware how close upon the rocks my own little craft at Balweary was all this time.

THE CHAIRMAN'S COLUMN

by Professor Roland Paxton



Charles Peterson at the Appels' Guest House, Philadelphia,
11 June 2002

© Roland Paxton

I am writing this on 23 August, the 96th birthday of the distinguished American architectural historian and conservationist, Charles Peterson of Philadelphia, who some years ago gave the Panel a stimulating lecture on the development of the 'I' beam. We wish him many happy returns. Peterson has exercised a greater influence on the recording and conservation of the historic built infrastructure of the United States than anyone else and is justly venerated for this achievement. I was delighted recently to see him in his office surrounded by books and planning historical writings on cements and other subjects. The ongoing \$40 million Fairmount Waterworks conservation at Philadelphia referred to in *Newsletter* No.88 is now completed but, sadly, when I went to pay homage, the site was closed as a result of a fire in the restaurant. Of several institutions I visited in the city in search of records on early 19th century open-webbed trusses, the holdings of the American Philosophical Society

managed by departmental librarian Roy Goodman proved outstanding and worthy of mention. More anon on my American visit.

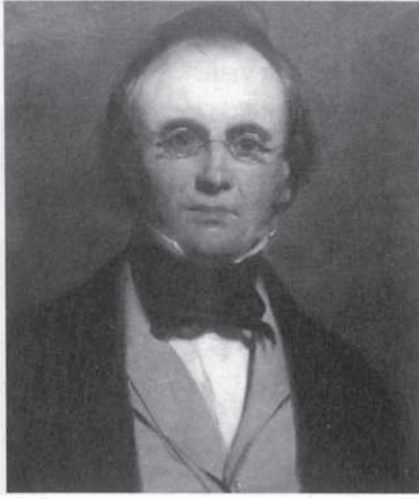


Fairmount Waterworks, Philadelphia, after conservation,
2002

© Roland Paxton

An activity associated with and supported for many years by the Scottish Group of the Panel is the ICE East of Scotland Association's Museum, exhibits from which are curated and now on permanent exhibition at the new School of the Built Environment, Heriot-Watt University, Riccarton, Edinburgh. Visitors are welcome. The Museum, founded in 1971, has the objectives of 'forming, developing and promoting knowledge of a permanent collection of historical artefacts associated with civil engineers', particularly office and site equipment and instruments, and structural materials. It now comprises nearly 250 items and is one of finest of its kind in Britain.

The Museum contains such diverse treasures as old computers, a unique display of pre-steam locomotion plate-way relics from the 'Kilmarnock and Troon' and a duplicate of the Laign Milton Viaduct conservation plaque bearing the Panel's name, Telford letters, ironwork from the Union chain, Menai, Tay and Forth bridges and a one-quarter scale model of a 'skew-back' of the latter! The Menai Bridge item, on loan from The Welsh Assembly Government, is a wrought iron chain-link of c.1824 from an anchorage with, intriguingly on inspection, white paint adjoining the oil coating on the bare metal and, no load-testing proof mark! A range of surveying instruments includes finely crafted examples in brass with telescopes up to 30in long, including T. Carfrae's much worn level probably used in surveying the line of Grainger and Miller's proposed steam-locomotive railway between Edinburgh and Glasgow in 1831. On the subject of Miller, the Museum Committee has been fortunate to locate and recently obtain on loan a portrait of him by Sir J W Gordon. It will be unveiled next month at an Association for Industrial Archaeology/ICE reception in a room containing a painting of Grainger by the same artist, thus reuniting the partners!



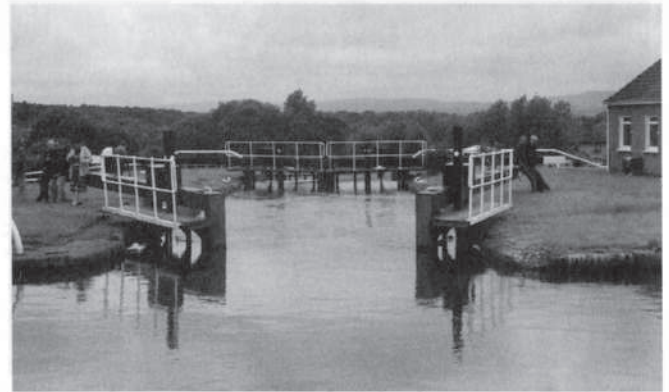
John Miller CE FRSE (1805-1883) from his portrait by
Sir J W Gordon
© Roland Paxton

John Miller's work deserves to be better known. He was the engineer for the present Edinburgh and Glasgow Railway main line and its extension to Berwick-on-Tweed, with its long tunnels, cuttings and viaducts. Other railways for which he acted as engineer were, the North British with its lines radiating from Edinburgh; the Dundee and Perth; Dundee and Arbroath; Glasgow, Paisley, Kilmarnock and Ayr; Glasgow, Dumfries and Carlisle via Ayrshire, and at least 20 others in Scotland. Large masonry viaducts built under his direction included the Almond (43 arches), Avon, Castlecary, Cockburnspath, Roxburgh, Markinch, Ballochmyle (170ft high and 181ft main span), Portrack (timber) and Lugar Water Old Cumnock (150ft high) which he considered his greatest work. The 4,203ft long Drumlanrig Tunnel is one of the most notable of many tunnels for which Miller was responsible. In 1845 he deposited in Parliament plans for more than 1,500 miles of railway. His practice was so successful that he was able to retire to his estate at Millfield, Polmont, Stirlingshire at the age of 44 years.



The 'Falkirk Wheel' 6 July 2002 – Scottish PHEW Group
members embarking
© Roland Paxton

The Scottish Group of the Panel's summer weekend visit to the 'Falkirk Wheel' boat lift and the regenerated Forth and Clyde Canal, most ably organised by Sandra Purves and limited to an attendance of 100, was so over-subscribed that the event had to be repeated in August. Highlights for me were the almost imperceptible motion of 'The Wheel' in operation, panoramic views from the aqueduct and, the next day, sailing down the full flight of Maryhill locks and over Kelvin Aqueduct – a seemingly impossible dream in the 1980s. Congratulations to Jim Stirling, Director Scotland British Waterways, his team, their supporters, and the designers and contractors on the magnificent achievement of the 'Millennium Link' project. I conclude with his recent request for public support, "The engineering may be finished but we still have to make it a viable waterway – a job for all of us". The Panel's joint effort with RCAHMS on two high-quality broadsheets on the canals to be published soon should help to provide publicity. It is good to see that 'The Wheel' has attracted about 200,000 visitors in its first three months compared with an estimate of 250,000 in a full year.



Maryhill Locks, Glasgow – Scottish PHEW Group members
on gate operation!
© Roland Paxton

BRINDLEY GATES – READERS' RESPONSES

Safety Gate on the Grand Western Canal by Brian George

R B Schofield's article on Brindley Gates in *Newsletter* No.93 mentioned that there are other forms of safety gates. One such gate has been discovered this summer on the Grand Western Canal (HEW 1081) in Somerset. There are two parts to this canal, the first from Tiverton to the Devon/Somerset border was built by John Rennie in 1814 and remains in water as a Devon Country Park. The second length was a continuation to Taunton and was built by James Green in 1831-1836, and completed in 1838. This was the first canal in England to have vertical lifts instead of locks in daily service but the length was closed in