

## Panel for Historical Engineering Works Newsletter

Number 121 March 2009

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### Sir Alan Muir Wood and Dr N.A.F. (Norman) Smith by the Editor

Many readers will be aware of the recent death of one of the great civil engineers of the twentieth century and a father of modern tunnelling, Sir Alan Muir Wood.

President of the Institution of Civil Engineers between 1977-1978, Muir Wood is described by ICE Director General Tom Foulkes as: "One of the ICE's most distinguished presidents and amongst the very greatest civil engineers of his generation. He was a towering figure with a global reputation and he will be sadly missed by very many people all around the world."

Sir Alan was the author of many significant publications throughout his long career and was an occasional contributor to the *PHEW Newsletter*. The final *Civil Engineering in Context* was published through the ICE's commercial arm, Thomas Telford Limited in 2004. *Civil Engineering in Context* is a series of reflections on his career, the development of civil engineering and the role of the civil engineer.

Readers will also be saddened to learn of the death of Dr Norman Smith who had a distinguished academic career and was greatly respected for his diverse contributions to the understanding of the history of civil engineering and technology. Your editor was undertaking a similar role for the Newcomen Society *Transactions* when it published 'Cathedral Studies – Engineering or History' in vol. 73A (2002). It is a later example of a very substantial body of work which illustrates the scholarship, thoroughness and challenging nature of Dr Smith's writing. His work on the history of dams established it as an academic topic.

### ASCE Engineering History and Heritage Award by the Editor

Ron Cox, the PHEW member representing the Republic of Ireland region, has been awarded a 2009 Civil Engineering History and Heritage Award by the American Society of Civil Engineers (ASCE). The award will be presented during the ASCE 139th Annual Engineering Conference, 29-31 October 2009, in Kansas City.

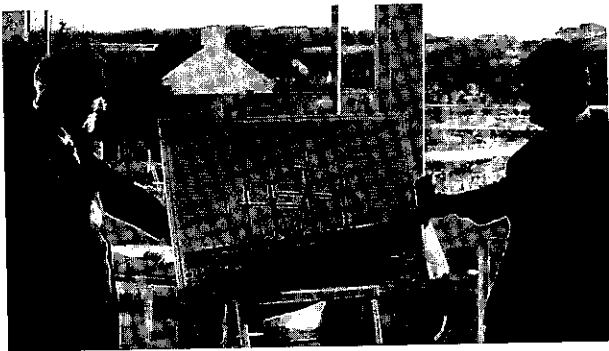
The award citation is to read:

'For his tireless promotion of civil engineering history in his home country of Ireland and the international engineering community through many books and papers in respected journals and his founding and directorship of the Centre for Civil Engineering Heritage, Dublin.'

Ron is currently the first Chairman of the Editorial Advisory Panel for the new international peer-reviewed journal *Engineering History and Heritage*, a part of the Proceedings of the Institution of Civil Engineers.

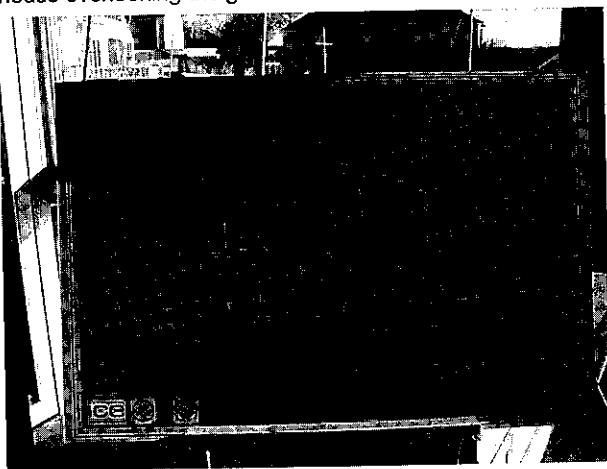
## Brunel's SS Great Eastern by K J Thomas

Bob Lark, Chairman of the Institution of Civil Engineers Wales Cymru presented an information panel to the Commodore of the Neyland Yacht Club on 6 December 2008 to commemorate the connection with Neyland of Brunel's SS *Great Eastern* launched 150 years ago.



*Bob Lark, Chairman ICE Wales Cymru presenting panel to Dick Wooding, Commodore of Neyland Yacht Club*  
© K J Thomas

The ship was so large that it could not be dry-docked for maintenance. The ship was therefore beached on a gridiron in Milford Haven which was located immediately in front of the present Yacht Club. The information panel, produced by Stephen Jones of ICE W-C, will be displayed in the club house overlooking the gridiron site.



*Great Eastern Panel*  
© K J Thomas

When the South Wales Railway arrived in Neyland in 1856, it was just a small community of less than 200 inhabitants. It became the terminus of the railway and provided through communications to London. As well as selecting Neyland as the terminus Brunel also believed its unique qualities made it an ideal home port for the *Great Eastern*. Neyland is proud to be called Brunel's railway town, although sadly the town no longer has a railway. Today this pride has resulted in the redevelopment of the old railway station and quay area as

Brunel Quay, complete with many information panels on Brunel's works, and the only statue of the great engineer to be found in Wales.

The maritime links actually predate the South Wales Railway and the *Great Eastern* and go back 170 years to 1838 when Brunel's first ship; the *PS Great Western*, arrived at Pembroke Dock for refitting on 20 December 1838. This earlier 'leviathan' would be dwarfed by his third ship; the *Great Eastern*, which was launched in 1858. The *Great Eastern* was designed in collaboration with the shipbuilder John Scott Russell (1808-1882), whose 200th anniversary was celebrated last year. The 'great leviathan of the seas' made her first visit to Neyland in 1860 - the panel shows her on the gridiron.

Her most useful work was as a cable-layer, laying the first successful Atlantic cable in 1866, but she was to be laid up following her cable-laying days at Milford Haven. She spent nearly 11 years in the Haven before leaving for good in 1886.

Work began on the ship in 1854 and in all she would take five years to complete and had a displacement of 22,500 tons, a length of 693ft (211 metres), a width of 120ft (37 metres) and a depth of hull of 58ft (18 metres). Built with a wrought iron double hull she was propelled by both screw and paddle wheels, but fully rigged with 6,500 square yards (5,435 square metres) of sail on six masts. A number of Welsh companies made a major contribution to the construction of the *Great Eastern*, which can be seen as one of the largest single pieces of engineering work of its day. These included Brown Lenox of Pontypridd, the famous chain works that supplied the record size chain cables which can be seen in the background of the famous photograph of Brunel, and Finch & Heath of Chepstow who manufactured the wrought iron masts of the ship.

The ship was the largest in the world for the whole of her life and it was not until 1907, almost fifty years after the *Great Eastern* was launched, and some 17 years after the last of her hull was claimed by the breakers that the *Lusitania's* sister ship *Mauretania* became the first to exceed her in size.



*Ted Sangster, Chief Executive Milford Haven Port Authority; Bob Lark, Chairman ICE Wales Cymru; Dick Wooding, Commodore Neyland Yacht Club; Margaret Brace, Mayor Neyland Town Council; Mr Brace*  
© K J Thomas

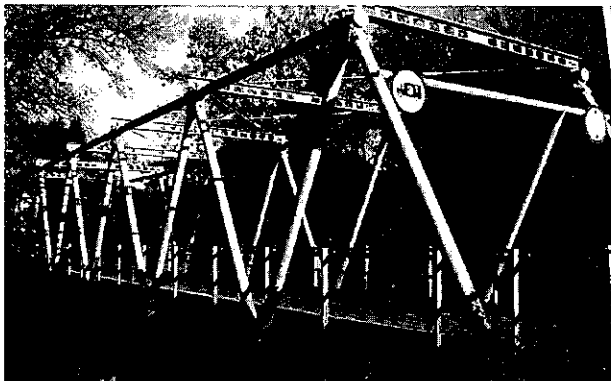
## Inglis Bridge, Monmouth by K J Thomas

The Royal Monmouthshire Royal Engineers' (Militia) headquarters at Vauxhall Field, Monmouth is accessed over the River Monnow by the last known example of an Inglis Bridge (Mark Two) still in public use. The Institution of Civil Engineers Wales Cymru decided this bridge deserved proper recognition. An information panel has been produced and was presented on 8 November 2008.



*Professor Charles Inglis*

The Inglis Bridge was designed in the First World War by Charles Inglis, then a lieutenant at the War Office, as a quick to assemble temporary bridge for use in field conditions. It was designed for rapid erection and deployment with the minimum of mechanical aids, all the components can be manhandled. Three tubular sections are pinned into cast sockets to make a Warren Girder with 15' bays. A maximum span of six bays can be built but the load capacity can be increased by doubling or trebling the Warren Girders. A 60' span could be built by a troop of 40 men in less than 12 hours. The Mark One had two different sizes of tube which proved confusing during erection; the Mark Two was developed with all tubes of equal length. The Mark Three was developed later with higher strength steel and smaller diameter tubes. It was still in use until superseded by the Bailey Bridge in 1941. Sir Charles Inglis became a professor at Cambridge and was President of the Institution of Civil Engineers in 1942.



*The Inglis Bridge © K J Thomas*

This is probably the last remaining example of this form of military bridging in public use. It was built in 1931 by RMRE[M] to replace a decaying timber structure. Only one other is known, over the Basingstoke Canal near Aldershot, but is in use as a pipe bridge. It is always dangerous to describe anything as unique but to the best of our knowledge this one is. It represents an important stage in the design and development of temporary military bridging. Its successor, the Bailey bridge developed in 1940, became an important form of temporary bridging both in civil and military engineering. Although now superseded in military use it still lives on in the construction industry.

Keith Thomas, the Panel Member for Wales was visiting Osbaston Weir a little further upriver earlier this year. This weir, built about 1899, is on the Panel's list of Historical Engineering Works. It provided the water supply for one of the earliest high voltage electricity generating stations at Monmouth Forge, now demolished, which operated for about 50 years. He passed the Inglis Bridge and stopped to look at it, having not seen it for some 20 years. In the 1970s he had been responsible for its annual inspection. He inspected the bridge regularly for a few years but then moved away from Wales and until this year had not seen it again. By now Keith was aware of its probable uniqueness and felt that it deserved wider publication. As this year is also the 100th anniversary of the Territorial Army he felt it an appropriate year to produce and present an information panel on this historical structure.

## The Bicentenary of the Appointment of James Green as Devon's First County Surveyor by David Greenfield

James Green was appointed as Devon's first County Surveyor in October 1808, with responsibility for roads and bridges. Over the next 33 years he designed and built over one hundred bridges as well as working on other projects in Devon. Many of his bridges are still in use today.

To mark the bicentenary, Devon County Council arranged an afternoon of talks and displays at the Devon Record Office in Exeter, which was held 200 years to the week after Green's appointment.

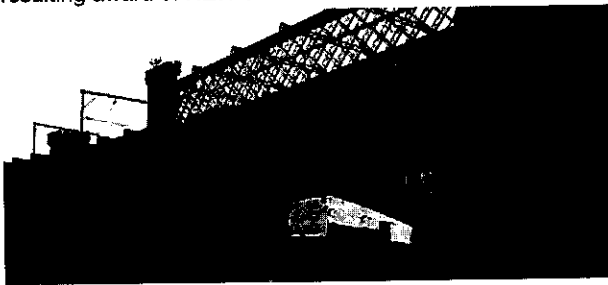
Brian George, the PHEW corresponding member for ICE SW and a former chief bridge engineer for Devon, gave a talk on 'James Green's Legacy', based on his extensive research into Green's life and works. The modern-day counterpart of Green is Edward Chorlton, whose job title – Deputy Executive and Executive Director of Environment, Economy and Culture, Devon County Council – conceals the engineering content of his role. Edward talked about 'Devon's Roads and Bridges Today.' The County Archivist, John Draisey, and his colleagues then guided us through an impressive display of original maps and documents relating to Green's works, after which we enjoyed a Devonshire cream tea in glorious West Country sunshine. Well done to the Devon Record Office for appreciating and celebrating the importance of this prolific engineer.

## Project INCH – Phase 3 underway by Paul Dunkerley

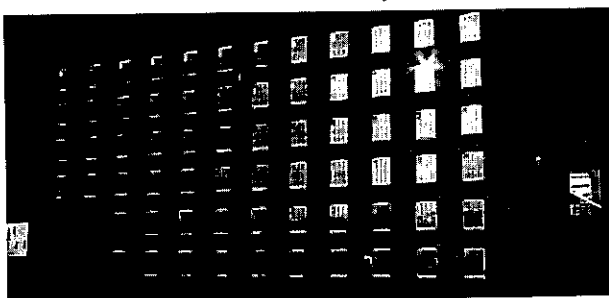
Project INCH (INternet access to Civil engineering Heritage) has so far documented historical engineering works in Lancashire and Cumbria and now work is underway in Manchester.

Project INCH was devised by PHEW Area Panel member Paul Dunkerley to make information about the as-built heritage in his region accessible to ICE members and staff as well as to the general public via the website [www.engineering-timelines.com](http://www.engineering-timelines.com). Project INCH has been financed by the ICE R&D Fund and Engineering Timelines, together with contributions in kind by way of time from Engineering Timelines staff. The field work and research for the project has been carried out by Paul and Anna Dunkerley to date. For each phase of the project, 'Snapshot in time' CDs are prepared and made available for ICE members and staff to use for educational or publicity purposes. The appropriate CDs were also sent to the Historic Environment Records Officers of each county, to inform the statutory planning process in respect of items of civil engineering heritage.

Phase 1 (Pilot Trial) was carried out in Lancashire during the winter 2005-2006, involving the inspection, photography and updating of records for 45 'Individual Historical Engineering Works' (e.g., lighthouses, bridges, etc.) and en passant the inspecting, photographing and researching of some 22 'Extra Items' (structures that might or might not meet the exacting standards required for HEW classification). Phase 2 was carried out in Cumbria and the remaining parts of Lancashire during 2007-2008, involving 120 items in total, including several 'Route HEWs' (e.g., railways, canals, etc.), which were covered on the website by separate items for individual features. A major outcome of this phase was the resulting award of HEW classification to 15 new items.



*Bridgewater Canal Bridge and Cornbrook Viaduct at rear © Anna J Dunkerley*

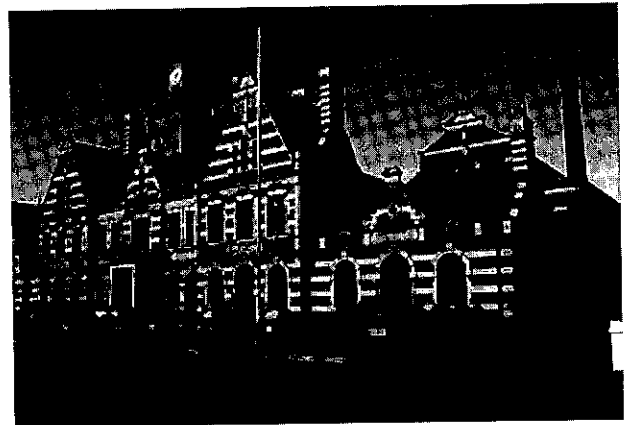


*Merchants' Warehouse, Castlefield Basin © Paul Dunkerley*

The third phase covering the City of Manchester and the six eastern unitary authorities of Bury, Rochdale, Oldham, Tameside, Stockport and Trafford was commenced in October 2008. Recommendations for the award of HEW status for 11 items have already been made to PHEW as a result of initial work, which has concentrated on the city itself, especially some of its railway bridges, warehouses and cotton mills, as well as other items of interest. It is hoped that this phase will be completed by October 2009.



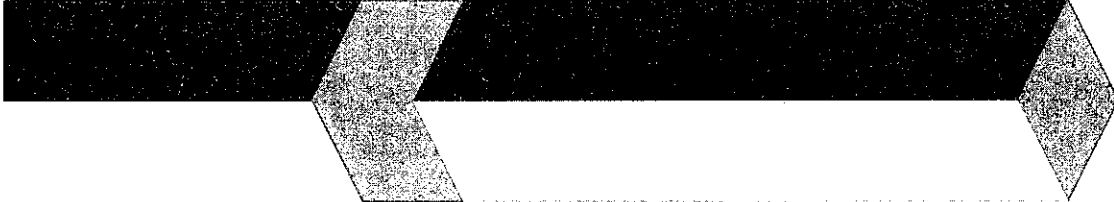
*Brownsfield Mill, Ancoats © Anna J Dunkerley*



*Victoria Baths, Chorlton on Medlock © Paul Dunkerley*

## Rare Joseph Wright of Derby – Portrait of Richard Arkwright information from R N Barton

The National Portrait Gallery and the Harris Museum & Art Gallery, Preston have acquired a portrait of the British engineer and inventor Sir Richard Arkwright by the painter Joseph Wright of Derby. The galleries raised a total amount of £420,000, with the help of £132,000 from the National Heritage Memorial Fund. The appeal was kick-started by The Art Fund – the UK's leading independent art charity – which gave £100,000 towards the purchase. The acquisition has been supported by the Headley Trust, PRISM (the Fund for the Preservation of Industrial and Scientific Material), the Harris Trust and Friends of the Harris Museum, as well as a number of generous individuals.



This newly rediscovered portrait is a rare and compelling image of a fascinating self-made man who is one of the giants of the Industrial Revolution. Born in Preston, Arkwright invented a water-frame which was capable of spinning a vast number of threads. This enabled the large scale mechanisation of the cotton industry and led to Arkwright becoming one of the first of the 'Cotton Kings' and the father of the modern factory system. The portrait was painted by Joseph Wright of Derby at the height of his powers in the mid-1780s and brilliantly captures the man who was later described as a 'plain, almost gross, bag-cheeked, pot-bellied Lancashire man'.

## Proceedings of the Institution of Civil Engineers: Engineering History and Heritage

by Dr Ron C Cox

The first issue of Engineering History and Heritage, the latest part of the ICE Proceedings, was published in February 2009 and was made available free online at [www.engineeringhistoryandheritage.com](http://www.engineeringhistoryandheritage.com). The feedback thus far has been very positive and encouraging and being online has allowed it to reach colleagues in many different parts of the world.

Every branch of civil engineering has a history and it is hoped that the new journal will aid an understanding and appreciation of the challenges faced by members of the profession in the past. The aim of the journal is to chronicle the historical development of all the distinct disciplines within civil engineering and construction on a worldwide basis, including case studies and biography.

To quote Aristotle, 'If you would understand anything, observe its beginning and its development'. By examining historical successes and failures, the journal will help to foster better practice through an understanding of past experiences, and so aid engineers engaged in tackling the challenges posed by the need to adapt and maintain the best of our civil engineering heritage.

The contents of the first issue of the journal are indicative of the intention to provide a forum for a wide range of aspects of our civil engineering history and heritage. Papers included ranged from an historical review of the establishment of the methods of plastic design in structures to early dams in the Middle East, and from the early history of the use of steel columns in the USA to the work of Thomas Telford in Ireland.

Further issues will include a major paper on the importance of the findings of the Stone Committee on the use of high alumina cement, further papers on aspects of the history of dam construction, early water supplies, and historic bridge refurbishment. Work is also in progress for a special issue on Highways.

Readers of the *PHEW Newsletter* are encouraged to contribute papers, of from 3,000 to 6,000 words, to the journal on any aspect of civil engineering history and heritage.

Contact [journals@ice.org.uk](mailto:journals@ice.org.uk) for further information or send your ideas for papers to [ben.ramster@ice.org.uk](mailto:ben.ramster@ice.org.uk).

## Archaeology of Bridges – Regensburg Germany 5-8 November 2009

Further information on the forthcoming International Congress on Bridge Archaeology may be obtained from:

Dr Marcus Pell,  
Secretary,  
Kreuter Weg 6  
86633 Neuberg an der Donau  
Germany

email: [bridges2009@t-online.de](mailto:bridges2009@t-online.de)  
Tel: +49 8431 539282  
[www.bgfu.de](http://www.bgfu.de) (with English downloads)

## Biography of Thomas Hawksley Information from Davina Bridgeman

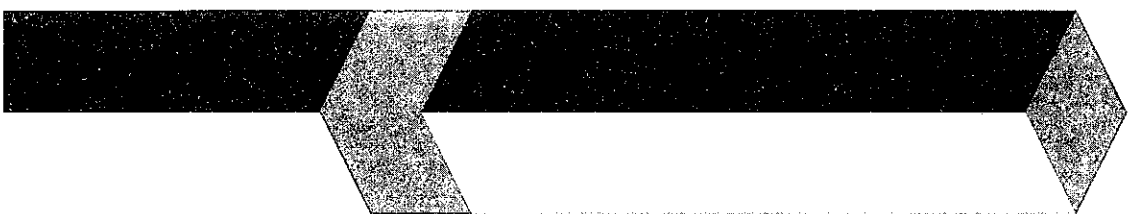
For the past year MWH has been celebrating the bicentenary of one of its founding fathers, Thomas Hawksley. His contribution to raising the quality of human health in the UK, and in other countries, during the nineteenth century was immense, and much undervalued in today's developed world where so much is taken for granted. In addition to designing many water supply installations, his landmark contribution was the provision of pressurised water distribution systems that actually worked – others had tried but failed. Having pressurised water available had a colossal influence on the health of the nation by reducing the incidence of cholera caused by people drinking unsuitable and contaminated water. As part of our celebrations we commissioned *Pure and Constant*, a book that looks at the man himself and the issues that were relevant to the time.

The book is not actually for sale but MWH are requesting donations (minimum £10) to WaterAid. If you would like to proceed on this basis, please send your cheque (payable to WaterAid) and a note of the address to which you would like the book sent, for the attention of: Davina Bridgeman, MWH UK Limited, Terriers House, 201 Amersham Road, High Wycombe, Buckinghamshire HP13 5AJ, and a book will be sent to you by return.

## HEWs in the News by Brian George

Both *New Civil Engineer* 16 October and *Private Eye* 31 October told us of an historic pre-stressed structure facing demolition. The Sittingbourne and Kemsley light railway (HEW 2079), closed on 26 December, and its prestressed concrete Milton Regis viaduct (HEW 2080) will be demolished unless parts of the land can be protected from redevelopment into a shopping centre. The 2ft 6in gauge railway was built in 1867 by publishing magnate Edward Lloyd, to supply his business with paper from the Sittingbourne Mill, and runs for 5.6km. It was upgraded to steam power from horse drawn carriages in 1905.

Closed as a working line in 1969, the heritage railway has been running since 1970. The mill is now owned by Finnish



paper company M-Real but it ceased operation in January 2007 after being taken over in 1998. The firm was originally supportive of the railway, a registered charity, and allowed it to continue running, but now wishes to sell the site for redevelopment. People trying to save the railway include Swale Borough Council and local MP Derek Wyatt.

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*New Civil Engineer* 4 December reminded us that on 5 December 1958 Preston bypass opened as Britain's first motorway. 1936 had been a key date in the conception, visualisation and eventual realisation of Britain's motorway network. This was the year when the Trunk Roads Act was passed, allowing central government for the first time to build and maintain roads on their own account. Prior to that the power to build roads had rested with local government, a power they had only assumed in 1888. 1936 was also the year that professional advocacy for a network of long distance roads, purpose built for high speed traffic, began to emerge, prompted by Colonel REB Crompton, an ICE Fellow and father of the Institution of Highway Engineers.

The IHE published a proposal for motorways derived from an internal study of roads geometry and grade separation, with a map showing new roads extending 2826 miles through Great Britain. In Devon, the county council's staff, as agents for the Ministry of Transport, spent the summer of 1958 carrying out a ground survey for the Cullompton bypass on the Exeter to Leeds trunk road no.16, which when it was constructed was in the right place to eventually form part of the M5 motorway. *Transport Professional*, the magazine of the Institution of Highways and Transportation for November has produced a supplement giving more detail of the Preston bypass and the development of the motorways.

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*Waterways* Winter 2008 showed photographs of the completion on 19 September of the first restored section of the Manchester, Bolton and Bury Canal, which was celebrated at Middlewood, Salford. The opening of this section of the waterway is considered to be the most challenging phase in the restoration of the whole 15.2 mile long canal, which was important to the transport of coal and cotton in the Manchester area in the Industrial Revolution. This part of the canal was filled in during the 1960s, but now the canal through Middlewood represents the focal point for £600 million of urban regeneration that will comprise a mixed urban development.

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Also shown is the new £8 million Boston Lock, under construction for the Fenland Waterways Link. It is intended to be the biggest enhancement project in Europe, opening up 240km of waterways comprising 80km of new waterways and increased access to an existing 160km of little used waterways. The Link will connect the cathedral cities of Lincoln, Peterborough and Ely with the market towns of Boston, Spalding, Crowland and Ramsey. Construction of the new Boston Lock, which will connect the South Forty Foot Drain with the Haven at Boston, is by contractor Jackson Civil Engineering, who has driven the piles and begun casting concrete walls, and the gate recesses have

been formed. The landing stage for entry to the lock from the Haven was under construction, and work has also started on a new facilities block to be housed in Environmental Agency houses, two of which are shown being refurbished.

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Another item in *Waterways* is a view of the recently re-built Oil Mills Bridge at Ebley, Gloucestershire, looking east. Most of the original 1780 bridge was demolished when this section of the Stroudwater Navigation was infilled in 1968, but as can be seen, the lower brickwork remains, having been incorporated in the new concrete portal structure with its lattice style steel parapet. *New Civil Engineer* 13 November shows a closer photograph, for the work is highly commended in the recent Historic Bridge and Infrastructure Awards 2008. Only a short length of infilled canal separates the newly dredged channel under the bridge from the watered section at Ebley Mill, Stroud.

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*Waterways* describes three classic cycle routes, the first of which is the Kennet and Avon Canal (HEW 1030), 84 miles long, crossing the river Avon at Dundas Aqueduct (HEW 188) and ascending the 29 locks of the impressive Devises flight (HEW 1078). The Birmingham Canal Navigation (HEW 1188) provides the Brierley Hill Circular Route of 41 miles with a wealth of interest throughout the route with six hours to complete the ride. The Shropshire Union Canal (HEW 1206), a distance of 25 miles, while never actually using the towpath this route runs along quiet country lanes parallel to the canal between Market Drayton, Audlem and Nantwich. This route actually touches the canal no less than five times on its journey between bridge 48 (near Knighton) and bridge 91 at Nantwich.


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On the Calder and Hebburn Navigation, the December Head Office Bulletin of the Waterways Association tells us that HRH The Prince of Wales visited Sowerby Bridge Wharf on 24 November to see the extensive conservation and regeneration work that has been achieved there over the past twelve years. A project to regenerate the area was established by his charity, The Prince's Regeneration Trust, in 1996. The project has conserved and restored the historic canal buildings, and this has supported existing businesses at the wharf and encouraged new trade to maintain the historically important site's contribution to the community.

The project initially undertook regeneration of the Grade II Salt Warehouse and the Grade II No 4 Warehouse, leading to the creation of new industrial space and offices. This in turn encouraged further development of the wharf; creating pubs, restaurants and shops. While visitor numbers by boat remain low, the restoration of the Rochdale Canal has helped to bring prosperity back to the Sowerby Bridge area.

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A team led by the Caldron & Uttoxeter Canals Trust, and including support from IWA, has produced a canal corridor study that investigates the potential to restore, extend and develop the canal in Leek. The Trust continues to campaign for the improvement to the canal at Leek because the isolated terminus and the lack of mooring facilities actually



discourages visitors who arrive by boat from stopping to explore the town. During the recent consultation the public has also given overwhelming support for the creation for a canal basin in Barnfield along with demanding a broader vision for south Leek.

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On the Grand Union Canal – Leicester Section, Roger Helmer MP unveiled a plaque for the European Route of Industrial Heritage at Foxton Locks on 28 November. These plaques mark prestigious sites that have made a major contribution to industrial heritage and now offer sustainable centres as visitor attractions. The work of the Foxton Lock Partnership at Foxton Locks has been recognised by the European Route of Industrial Heritage and is being heralded as an exciting link to the many waterways of Europe that have been recognised by the organisation.

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*New Civil Engineer* 11 December showed a photograph of the final sections of a new, 112m-long cycle and footway over the river Stour, currently being connected to a Grade II listed masonry arch structure. It is joining nineteenth century stone architecture with modern structure steel and timber design. The project is jointly funded by Dorset County Council and the Borough of Poole as the bridge crosses the boundary between the two highway authorities. It is designed by consultant Buro Happold. The new bridge was attached to the existing masonry arches by pinning connections into a new concrete slab on the top of the 195 year old existing structure. Work on the footbridge is expected to be completed in the New Year, but the B3073 highway into Wimborne Minster had to be closed to traffic for some months while the concrete slab was installed. The footway and cycle track is on the eastern side of the highway bridge because the planners wished their western façade to be preserved.

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Once again the Brunels' Thames Tunnel is in the news as the *Daily Telegraph* 16 December tells us that the grand entrance hall is to be opened up for the first time in 140 years and shows us a picture of when it was being used by pedestrians and horses. Now part of the overground route of Transport for London, East London Line, *Modern Railways* November notes that the tunnel section is being comprehensively renovated with the installation of slab track from the northern tunnel mouth all the way to the new Silwood depot south of the river. In the grand entrance hall, as part of the East London Line community initiative, an extra gallery is being made for Brunel Museum visitors. The whole project is on schedule for reopening in the summer of 2010.

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The *Edinburgh Evening News* featured the city's Scotland Street Tunnel HEW1264 on 4 December. Built in 1844-47 it was used for only two decades before being closed in May 1868. It is 3210ft long, on a gradient of 1 in 27, built mainly in brickwork, and is 26ft wide with an elliptical arched roof 18ft high in the centre. Now part of the tunnel is to be transformed into a youth club under plans being backed by the police. Three years ago police officers were receiving

large numbers of complaints about youths hanging about in Drummond High School after hours, with up to as many as 60 at a time. When they were moved on the teenagers always complained that they had nowhere else to go. The officers decided that the railway tunnel would be a perfect solution, allowing part of it to be converted and opened up as a supervised youth centre. The tunnel is owned by the council and questionnaires have now been sent out to youngsters, asking them how they would like the tunnel to be used, so that they will respect it in the future.

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The *IWA Head Office Bulletin* for January tells us that the full towpath of the Brecon & Abergavenny Canal was reopened just before Christmas, although the canal is not due to be reopened before Easter 2009. The canal has been closed at Gilvern since 16 October 2007 when there was a major breach resulting eight people requiring rescue and the A4077 between Crickhowell and Gilvern being closed for a week. Following an engineering assessment of the whole canal, a sixteen mile stretch of the canal was taken out of use, and £7.5 million allocated for repairs. Much of the canal has now been re-watered with just the breach site at Gilvern to be refilled in 2009.

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Stroud District Council has confirmed that it is to invest a further £2.3million into restoration of the Cotswold Canals and has formally accepted the funding offer of £11.9 million from the Heritage Lottery Fund. Cash from the sale of two Stroud District Council sites will be used to press on with the restoration of the Stroudwater Navigation and the Thames and Severn Canal between Saul and Brimscombe. The council has become the lead partner in the restoration project following British Waterways' withdrawal from the restoration of the canal earlier in 2008 and is to invest a total of £3.8 million.


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In my last report I noted the closure of the Stourbridge Canal. It has now been fully reopened on 19 December after three and a half months of closure due to extreme weather conditions that caused the river Stour to flood in the area. Surges of water levels caused 20 metres of bank to collapse and a two-mile stretch of canal to be de-watered. Repairs cost £650,000 and were undertaken by BW's contractor Morrison Construction, who delivered the project ahead of schedule.

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There is always another use for our canals and the pharmaceutical company GlaxoSmithKline, whose head office is adjacent to the Grand Union Canal in West London, has arranged with British Waterways to use water from the canal and heat exchange technology to provide a more sustainable alternative to traditional air conditioning – with a target to reducing the building's carbon dioxide emissions by 920 tonnes per annum and lowering its energy bills. The GSK initiative is primarily to cool their computer data centre.

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The *Daily Telegraph* 13 January showed a picture of a lighthouse threatened with closure that has been granted a reprieve because satellite navigation technology was not 'reliable enough' to replace it. Southwood lighthouse, which has given its warning since 1887, was among 11 earmarked for closure by 2010. However it has been saved for the moment, along with Lowestoft lighthouse HEW 750, our most easterly shore lighthouse. A 2005 report by Trinity House, suggested that 11 of 69 remaining lighthouses be closed if the Global Positioning System technology and radio navigation back up were good enough, as most sailors routinely used such navigational aids. However, the two lighthouses could not be replaced by technology and there has yet to be consultation on the future of the other nine lighthouses.

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The *Hereford Times* 22 January tells us that work is about to start on a replacement of the bridge over the railway line from Malvern to Hereford at Colwall. The road will remain closed from early in February until completion, which is expected at the end of June. A temporary footbridge will be installed for pedestrian access. Curiously, the exact design of the bridge and vehicle use has yet to be decided. Originally it had been planned for a single carriageway controlled by traffic signals with a footway, but Colwall Parish Council has suggested an alternative layout with two lanes and a footway.

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The *Surveyor* 11 December reported that seven bridges over the River Thames had been listed – Chelsea, Lambeth, Richmond Railway, Battersea Railway (or Cremorne), Hammersmith, Twickenham and Vauxhall Bridges – all are HEWs.

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Network Rail is worried that local people might still regard a Welsh branch line recently reopened to traffic after eight years as disused and wander onto the tracks. *Rail* 28 January says that the 17 mile route leaves the single track 'Heart of Wales' route at Pantyffynnon to reach Gwaun-Cae-Gunwen where Celtic Energy returned to full production the East Pit Surface coal mine last September. One train in each direction is planned to run, to remove about half of the 300,000 tonne annual output.

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Readers of this newsletter are asked, whenever they read of something which they think might deserve mention here, to send it, or a copy, no later than about a week before the deadline, to:

**Mr A B George BSc FICE**  
**8 Clevedon Close**  
**EXETER**  
**Devon**  
**EX4 6HQ**

## Editor's Note

May I repeat my regular appeal for suitable material for inclusion. Contributions, which are both informative and appeal for further information, or publicise forthcoming conferences or the availability of recent books, etc., are particularly welcome. Contributions should be sent to the Editor as soon as possible after receipt of this newsletter.

Contributions on disk are acceptable (Word format). A printed copy will also be required. Diagrams or photographs and/or illustrations may be included.

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