

# INDUSTRIAL ARCHAEOLOGY NEWS

**129**  
SUMMER  
2004

THE BULLETIN OF THE ASSOCIATION FOR INDUSTRIAL ARCHAEOLOGY

FREE TO MEMBERS OF AIA



**Brunel bridge discovered • Ironbridge waterways weekend • Letters  
TICCIH in Romania • Crossness steam • Smithfield in danger • TV news • Scotland**



## INDUSTRIAL ARCHAEOLOGY NEWS 129 Summer 2004

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AIA Office, School of Archaeological Studies,  
University of Leicester, Leicester LE1 7RH  
☎ 0116 252 5337, Fax: 0116 252 5005  
e-mail: AIA@le.ac.uk

### Website:

[www.industrial-archaeology.org.uk](http://www.industrial-archaeology.org.uk)

### COVER PICTURE

*John Brown's Shipyard on the Clyde, now mostly demolished, with the exception of the Giant Cantilever Titan crane built by Sir William Arrol & Company in 1907 (see regional report on Scotland, page 12)*

*Photo: Crown Copyright: RCAHMS*

## Timely rescue of Brunel's canal bridge

*A newly discovered I.K. Brunel iron bridge of 1838, which carried Bishop's Bridge Road across the Grand Union (formerly Grand Junction) Canal at Paddington (TQ 26488159) in west London, will have been completely removed by early May for a major road widening scheme. Its carefully dismantled cast ironwork and facing bricks will have been put into temporary storage, for re-erection when a suitable place for that can be confirmed and funds raised. It is hoped it may not be far from the original site. Meanwhile the structure has been carefully recorded by measurement and photography.*

Malcolm Tucker

When, in 1837, the Great Western Railway Company finally decided on Paddington for their

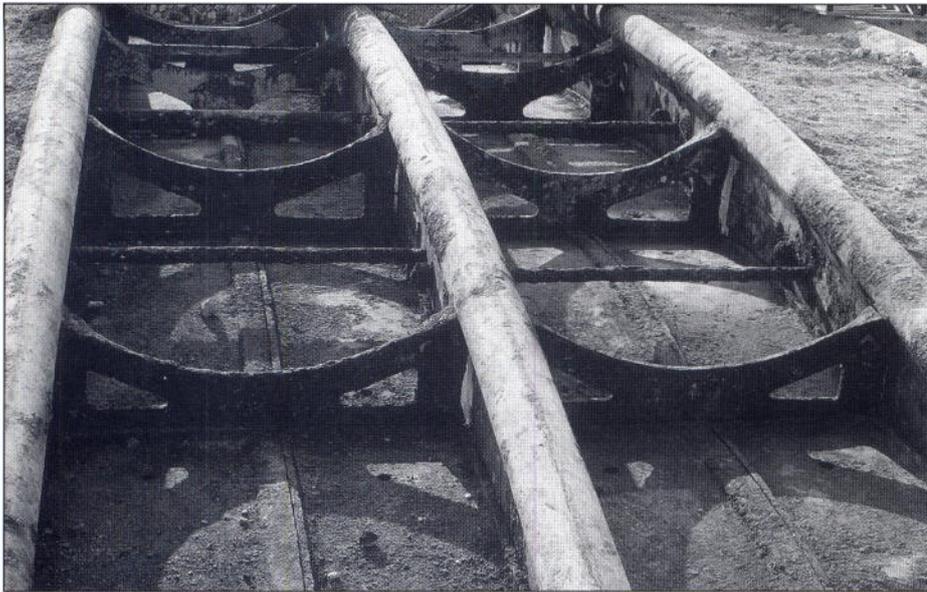
London terminus, the parish vestry required then to provide a public road access across the station site. At one end this had to climb abruptly from the Harrow Road to pass over the canal, which here paralleled the railway at a higher level. In order to achieve a gradient of 1 in 20 and maintain navigational headroom, Brunel (as the railway's chief engineer) was obliged to adopt cast-iron girders for the canal bridge to minimise its constructional depth. This seems to have been his first use of the material in a bridge. Brick or cast-iron arches would have risen too high and wrought-iron girders had not yet been developed. Brunel's reasoning on this is confirmed in his letter to the canal company.

To keep the girders to practical lengths he used two spans, one of 35 feet (10.67 m) clear width as the main navigational span, for two



*Underside of the main span of the bridge*

*Photo: Malcolm Tucker*



*Bulb-topped girders with cross-beams and tie rods, with concrete infill*

*Photo: Malcolm Tucker*



*Distinctive bull-nosed end of main bridge girder*

*Photo: Malcolm Tucker*



*General view of the main span of Brunel's Paddington bridge, with later brick parapet*

*Photo: Malcolm Tucker*

barges to pass each other alongside the towpath, the other of 16 feet (4.88 m) for barges using the busy wharves on the offside. This was evidently unsatisfactory to Brunel's architecturally sensitive eye and so, to maintain symmetry at least on paper, he designed a further span of 16 feet behind the towpath. This was faced to match the canal spans, although closed by recessed walls to hide a conventional brick barrel vault within. This was the start of the viaduct across the station site. Also for sake of appearance, he formed the undersides of the girders as shallow, segmented arcs and hid their side faces behind brickwork, with classical entablatures of frieze and cornice in Portland stone and smart, cast-iron parapets. The piers stood forward as pilasters between the spans and to close the ends. The bridge was 40 feet (12.2 m) wide between the parapets.

Thus the bridge remained until around 1909, when the open parapets were replaced by high walls of red brickwork and views of the canal were cut off from the road. Also, this part of the canal remained inaccessible to the general public after the other London towpaths were opened as footpaths in the 1970s. Thus concealed, the canal bridge's survival as a Brunel relic of interesting design went unrecognised by historians, although some railway enthusiasts claim his association with it as common knowledge.

The key identification was made by Steven Bridle of English Heritage. He had found a Brunel notebook in the Public Record Office with careful sketches and a tabulation of the proof load tests on the bridge's girders. On gaining access to the bridge in May 2003, he found Brunel's structure intact. But a major road contract that would sweep it away had already been signed. Fortunately, Westminster City Council has risen to the occasion, and has been able to fund the extra costs of dismantling rather than demolishing the bridge, within a tight construction programme.

The details of the bridge's ironwork have proved particularly interesting, and indicative of Brunel's unceasing originality. The girders have an unusual bulb section to the top boom. This has a greater cross-sectional area than the bottom flange, contrary to Hodgkinson's principle of making cast-iron bottom flanges considerably larger than the top (in proportion to the material's inferior strength in tension compared with compression). Did Brunel look upon the pronounced sickle shape of these girders as forming an arch, with the top boom taking an extra compression force? He did not provide end bearings for that, but incidental arching will have helped withstand heavy modern traffic. Curiously, the shape anticipated Brunel's 'balloon' flanges in wrought iron, despite the major differences of the two materials.

The plates in the soffit that supported the lime-concrete deck fill are also unusual. In the main span, they arched longitudinally between cross beams which stabilised the girders, while in the small span they arched laterally from girder to girder, like jack arches. I have had the privilege of recording all these features in detail on behalf of English Heritage.

## The 2004 Ironbridge Weekend

*The annual AIA Ironbridge Weekend was held this year held on 3-4 April at the Ironbridge Institute in the Long Warehouse, Coalbrookdale. This year's subject was on Inland Waterways and attracted a full house. We heard speakers on a wide variety of topics and the following account is but a brief summary. Thanks go to Ray Riley, the AIA affiliated societies officer, who organised this successful weekend and also contributed part of this report.*

Roger Ford

John Crompton chaired the first morning's lectures, first off being Mike Messenger on the Liskeard & Looe Union Canal (on which he has written the book), an example of a canal that was truly overwhelmed by success. Earlier proposals for a canal along the 8-mile valley had included a contour route of 15 miles! The canal was opened in 1828 to convey sand and lime inland for agricultural purposes, but the opening of the Caradon copper mines after 1837 so swamped it with mineral traffic that it was unable to cope, prompting the construction of a railway alongside in 1859.

Stephen Capel-Davies of the Thames Conservancy next gave a dissertation on Thames locks and weirs. The navigable section of the river has a 230-foot drop but millers and trading boat owners were in constant conflict. The mill weirs were an obstacle even though they impounded river sections of deep water. Flash locks were inserted to allow through navigation but they were under the control of the millers who sometimes kept boats waiting for days if not weeks. The first three pound locks were constructed in 1608, whilst the last paddle-controlled flashlock was built in 1910 and lasted until 1938.

Following coffee, Stephen Rowson spoke on the canal boats of South Wales, a district where the canals developed independently of each other and therefore had their own differences. The barges did not live on their boats, although small overnight accommodation cabins were available for when needed. Ian Wright joined in and showed slides dating from 1943 when he first started photographing the Glamorganshire Canal. This experience makes him a living link between the working canals and the present day.

In the final morning presentation, Ian Wright raised the interesting question of Foxton, where it is intended to construct a working replica of the steam-operated inclined plane that enabled boats to bypass the two five-lock staircases until its abandonment due to lack of traffic in 1910. Already a boiler house has been built (from a recycled Methodist chapel), the pub at the foot of the locks is making way for a visitor centre with restaurant and shop, together with a car park. The site is said to attract 350,000 visitors per annum. Since the intention is to construct the replica inclined plane on top of the original one, this puts the boating lobby in direct conflict with industrial archaeologists. The question was also raised whether such a multi-million pound project was really worthwhile, when negotiating the staircase locks is already one of the highlights for boaters.

Saturday afternoon's field trip was led by Neil Clarke. The tour took the form of a car convey negotiating Telford's confusing roads and roundabouts to visit the former sites of canals and inclined planes. We first went to Aqueduct where we were shown the line of the Shropshire Canal's longest tunnel, which was leased to the LNWR in 1849 and replaced with a branch railway through an open cutting. An original bridge at the junction of the Coalbrookdale and Coalport canal branches still exists in the undergrowth. More impressive is the original

aqueduct of c1792 which crosses a former turnpike road at Aqueduct. It was restored in 2001 as a memorial footbridge. We then moved on in pouring rain to the site of Donnington furnaces where we scrambled through bushes to see a brick-arched bridge over the Donnington Wood Canal (this would be very overgrown in summer). From here we crossed a modern road to ascend the course of the Wrockwardine Wood inclined plane of the Shropshire Canal. Finally, those of the rather soggy party who could keep up were rushed to Ketley Old Hall where we had access to private property to see traces of another inclined plane. The wooded site also has William Reynold's tunnels, a complex of brick-arched tunnels built for an unknown purpose and still extant. The highlight of this visit was the invitation by local children to see more tunnels in their garden next door!

The evening dinner was held in the New Inn at Blists Hill, following which we had the traditional 'quiz' hosted by Ray Riley. Breaking with tradition, though, it was possible for most of us to answer more than 5 per cent of this year's illustrated questions!

On Sunday morning Peter Stanier was in the chair to introduce David Alderton on the subject of East Anglian waterways. These, David stressed, were not canals but were built to enable the coasting traffic to access towns they could not otherwise reach. Unfortunately the projector decided to eat rather than exhibit the slides, but David continued with a fascinating account of the peculiarities which made these waterways so different.

Jonathan Briggs of British Waterways followed, talking about the conservation, management and future re-instatement of the 'Cotswold Canals', namely the Stroudwater and Thames & Severn Canals (including Sapperton Tunnel). He first screened a short film produced to promote the Cotswolds Canal scheme, showing the wide range of enthusiastic and interested parties from district and parish councils to local inhabitants. A 93-page conservation management plan is being produced, which has to include a biodiversity action plan, a habitat action plan and a species action plan, all of it



Field visit leader Neil Clarke showing AIA delegates the course of the Shropshire Canal's tunnel at Aqueduct, later converted to a railway cutting

Photo: Peter Stanier



One of William Reynold's mystery tunnels, seemingly nothing to do with canals but of great interest to the AIA visiting party

Photo: Steve Dewhirst



AIA delegates pose for a group portrait beneath the aqueduct at Aqueduct  
Photo: Peter Stanier



Standing in a disused canal bed somewhere in Telford, Ray Riley tries unsuccessfully to explain that the rain is not his fault  
Photo: Peter Stanier

tailored to obtain heritage lottery funding.

Mike Nevell, Director of the University of Manchester Archaeology Unit, was the last main speaker, on the topic of canal warehouses. He made specific reference to a survey of 60 surviving structures in the North West, most dating from the 1770s to 1840s. He showed how it was possible to group them into four main classes, beginning with split-level warehouses, some of which reached enormous proportions. The movement, storage and transhipment of food products was seen to be an important factor in the fast-expanding towns of the region during the period.

The weekend ended with short contributions from six members. Rodney Pitt represented the Shrewsbury & Newport Canals Trust, formed in

2000 with the intention of reopening the canal link between Telford and the national network. He gave a brief history of the canal before discussing the consultants' report, undertaken at a cost of £20,000. No major engineering problems are envisaged, even though a tunnel will have to be constructed because of later roadworks, and a lock re-sited for the same reason. Five District Councils have given their support to the project, which is just as well since the cost over 10 years is likely to be £86 million!

Peter Brown filled in more detail on this canal in a talk about Wappenshall Junction Wharf. From his researches into the wharf's traffic between 1835 and 1850, he was able to demonstrate what some of us have long suspected, that canal traffic was by no means restricted to bulk commodities,

but comprised a wide range of items which could just as easily be moved by barge as by horse and cart. Food and household items such as candles and furniture were carried, and moreover goods came from as far as London, Birmingham and Ellesmere Port.

Mike Clarke's subject was the little-known Douglas Navigation linking Wigan with the River Ribble to the north, which only operated between 1741 and 1781. He has been studying the navigation and believes that the lock of 1760 at Sollom may be the oldest surviving original lock in the country. Equally, a 1740 weir may also have a similar distinction.

David Viner, who has recently published a book on the Thames & Severn Canal, gave a lucid description of the warehouses and the five lengthman's roundhouses on the canal. The structures are notable for their use of local materials and the way they match local vernacular architecture. Because of the unusual shape of the roundhouses, now in residential use, they command substantial prices on the housing market.

The Fenland navigation and drainage network is nothing if not complex; Henry Gunston treated the audience to a lightening exposé of some of the solutions put in place over a long period, including the work of the Dutch water engineer Vermuyden in the seventeenth century.

Concluding this feast of goodies, Ron Martin commented with admirable brevity on the recent restoration of a water-driven scoop wheel at Orford lock on the Wey & Arun Canal near Billingshurst.

AIA Chairman Mike Bone brought the proceedings to a close, thanking all those who had taken part as well as the staff at Ironbridge, including John Powell, who had made the event possible. Next year's weekend will again be on a selected theme.



The Aqueduct aqueduct

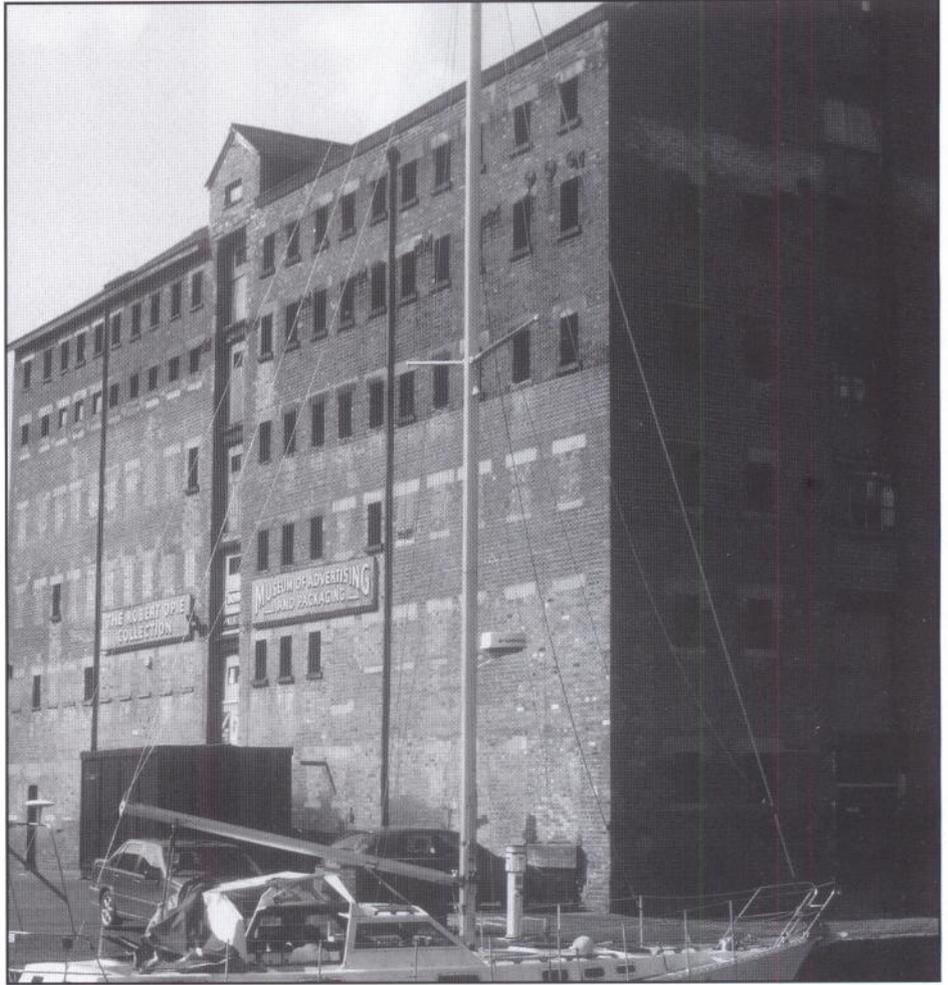
Photo: Peter Stanier

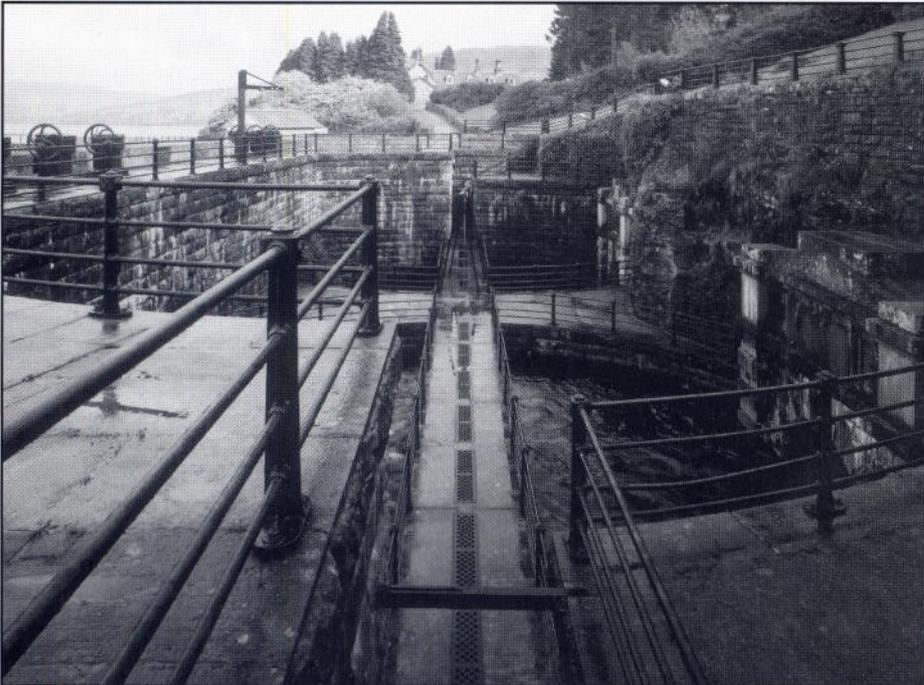
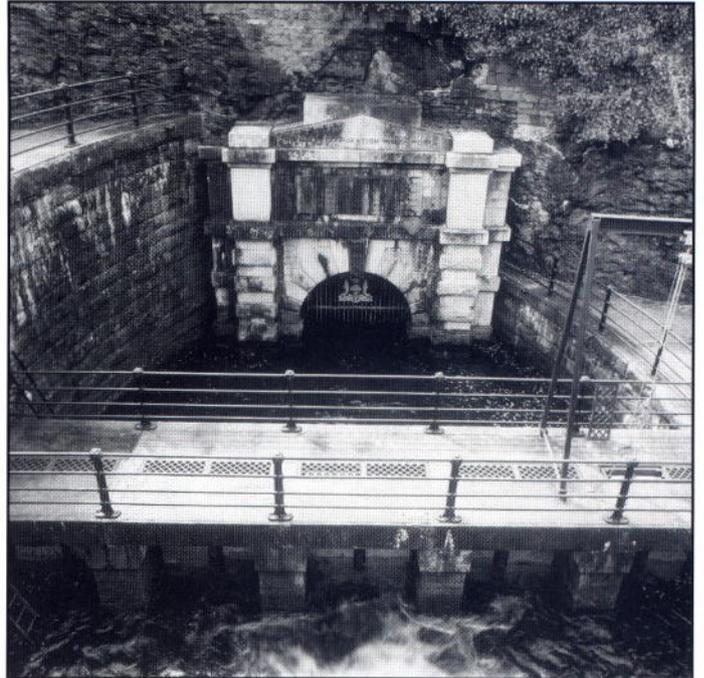
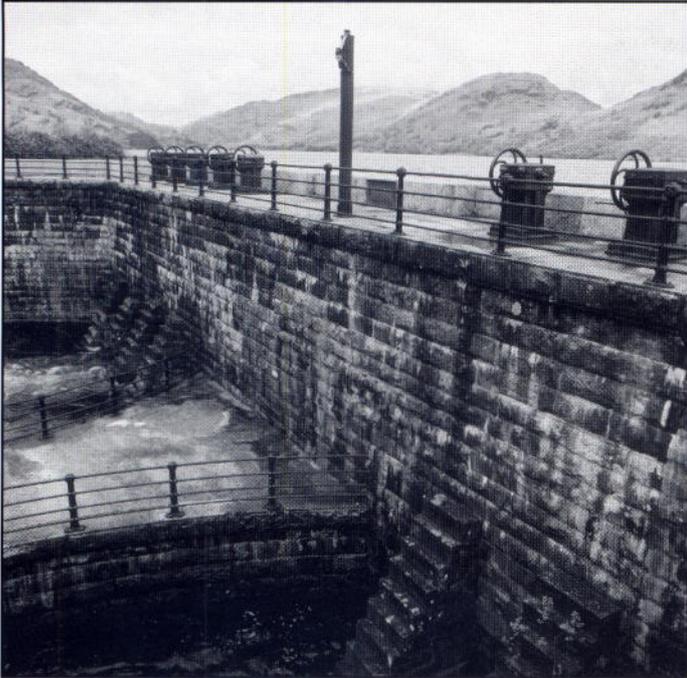
## TWO CONVERSIONS IN THE SOUTH

*Right:* The Albert Warehouse, Gloucester Docks, seen here in May 2001. It is shown in almost its original state when it housed the Robert Opie collection of advertising and packaging, which closed in October 2001. The building has since been converted into apartments, with some inevitable change in its appearance.

*Below:* Bliss Mill, Chipping Norton, is a successful conversion of a former mill building to residential accommodation, photographed in April 2002.

*Photos: Graham Vincent*



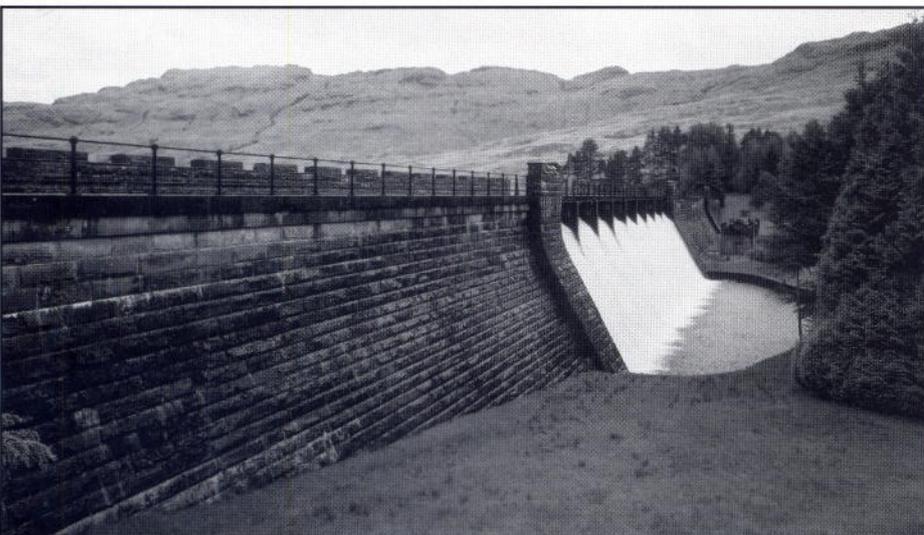


## LOCH KATRINE WATER SUPPLY

The Royal Commission on the Ancient and Historical Monuments of Scotland has recently completed a photographic record of the Loch Katrine water supply scheme.

*Top left and centre:* The intake basins at Royal Cottage, from which water is taken down a 26-mile system of tunnels, conduits and aqueducts to the Mugdock and Craigmaddie reservoirs at Milngavie, prior to distribution in Glasgow.

*Top right:* Detail of one of the two tunnel entrances at Royal Cottage on Loch Katrine.



*Left:* View of the dam at the west end of Loch Arklet, completed in 1909 and built to divert the water of the loch from flowing into Loch Lomond, taking it instead eastwards into Loch Katrine, and then on to Glasgow.

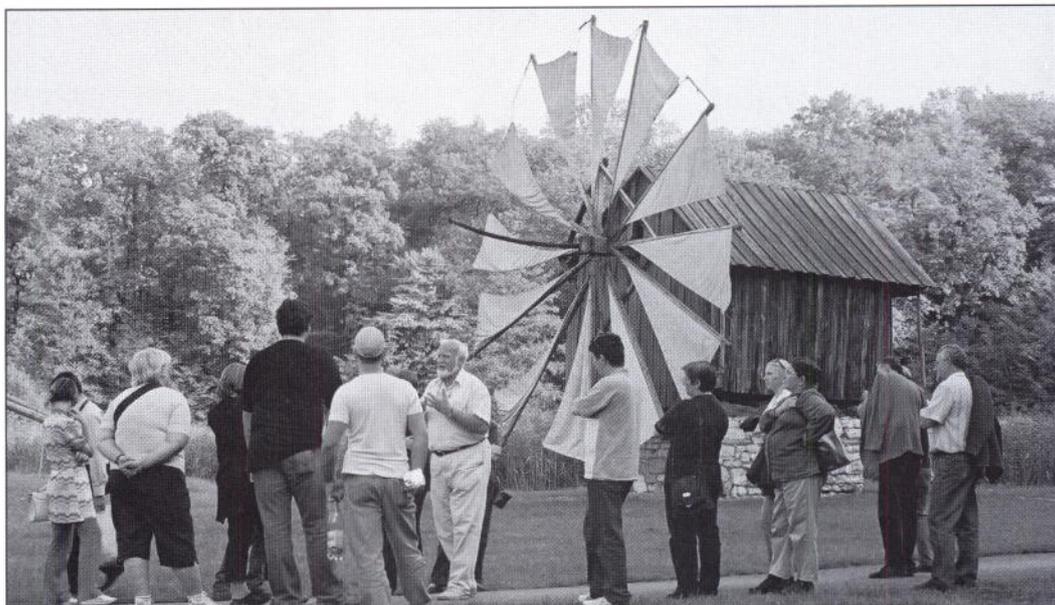
*Photos: Crown Copyright RCAHMS*

## TICCIH News

Those AIA members who attended the Scottish conference in 2002 will remember Irina Iamandescu from Romania. In September 2003, she and her colleagues at the Ministry of Culture and Religious Affairs organised the third in a series of Industrial Archaeology workshops, this time formally in association with TICCIH, and based around the city of Cluj-Napoca in Transylvania. It commenced with delegates assembling in Bucharest, after which the ministry's bus transported a mix of international and local participants through the Carpathian mountains to Cluj. En route, the opportunity was taken to visit the extraordinary Astra Museum of Traditional Folk Civilisation at Sibiu, an open-air museum featuring re-sited examples of wind and water mills of every conceivable type. A tour of the city of Sibiu itself was also fascinating, particularly because of the success of its innovative urban conservation policies.

In Cluj itself, visits included local glass and leather factories, a water works, and an early example of a municipal hydro-electric plant. However, perhaps the most impressive was the Remarul locomotive works, which, as well as maintaining diesel engines, continues to repair steam locomotives from all over Europe. The theme of railways was important because of the number of recent line closures within Romania, and a major theme for discussion was the role industrial heritage might have both in the resuscitation of such railways, but also in the regeneration of isolated areas cut off by the closures.

Further afield, there were visits to the amazing salt mines at nearby Turda, to the iron-workers' village at Rimetea, and to picturesque town of Sighisoara, a UNESCO World Heritage Site. On the return journey to Bucharest, the trip included a visit to Rosia Montana, a gold mining centre dating from Roman times, and now threatened with obliteration by a Canadian-based multinational mining consortium. Back in Bucharest, there was also time for some overseas participants to explore what is not only a truly fascinating city, but also one which is rapidly being overtaken by the forces of capitalism.



*TICCIH delegates examining one of the many windmills from all over Romania which have been reassembled at the Astra Museum of Traditional Folk Civilisation at Sibiu*  
Photo: Miles Oglethorpe



*TICCIH delegates with one of several steam locomotives awaiting repair at the Remarul Locomotive Works in Cluj Napoca, Romania*  
Photo: Miles Oglethorpe

Since this workshop, our Romanian hosts have kindly invited TICCIH to stage a future meeting of the Mines Section in Romania. This would be entirely appropriate, given the wealth of mining activity in the country. However, in the meantime, the next meeting of the Mines Section is to occur in Slovenia in mid-April, and promises to be fascinating.

Meanwhile, work by the Textiles Section is ticking over in the background, and it is hoped that more thematic sections will be established in due course. A specialist TICCIH Museums section is also convening a meeting, this

time in Oberhausen, Germany, from 24-26 June. In the following month, there will be the fourth in TICCIH's series of Latin American conferences, this time in Lima, Peru, from 11 to 18 July. More affiliated conferences are planned in Norway and Poland in 2005.

Before then, however, there is to be a TICCIH Board meeting and gathering of national representatives in Barcelona in June 2004. There will be a lot to discuss, not least the establishment of representative national TICCIH structures in individual countries. We will need to consider how this might be done in the UK, so watch

this space! Readers can also find out more by visiting TICCIH's website at: <http://www.mnactec.com/TICCIH/>  
Miles Oglethorpe  
UK TICCIH National Representative

## Thanks to IA after all

A small item 'Industrial History No Thanks!' in *IA News 126*, Autumn 2003, reported that industrial heritage was the least popular category of 500 projects receiving grant aid from the Local Heritage Initiative, administered by the Countryside Agency. Some clarification of the categories and criteria for allocation seemed

necessary, and the Local Heritage Initiative has helpfully explained that:

- (a) there were only five categories in the first place.
- (b) the categories were archaeology, industry, natural environment, built environment, and traditional culture and customs.
- (c) the industry category had 48 projects, equal to 9.6% of the total.
- (d) some industry projects, for instance on old canals and railways, were classified as archaeology, the most popular category.
- (e) some projects with an industrial element, for instance about towns and river valleys, were placed in the traditional culture and customs category.

A re-arrangement of the allocation would strengthen the industry category and at the same time reduce the importance of the others. To say, as the item did, that industrial projects fell 'far behind' those in other categories can hardly be sustained.

*Ray Riley*

## Crossness steaming

On Sunday 4 April this year a very grand steaming event took place at Crossness, Thamesmead, South East London. One of the four identical triple-expansion beam engines, 'Prince Consort', is now steampable on all three cylinders and to celebrate the 139th anniversary of the opening of the Southern Outfall Works at Crossness by HRH the Prince of Wales on 4 April 1865, guests were allowed into the beam engine house in groups to witness in motion one of the four largest rotative beam engines in the world. It was most impressive.

'Prince Consort' has been just steampable for about nine months and a very special steaming had already taken place but this was an opportunity for a more public celebration with, apart from visits to the beam engine house, a speech of welcome by Peter Bazalgette, Chairman of the Crossness Engines Trust, and a lavish English tea. A comment overheard – 'twenty years ago I hardly expected to live to see this' – summed up the mood of the day. When GLIAS was founded c1968 one of the objectives of industrial archaeology in London was the restoration of the engines at Crossness. Sunday 4 April 2004

was indeed a memorable occasion.

Visits by appointment are now possible, to book telephone 020 8311 3711 on a Sunday or Tuesday between 10.00am and 3.00pm. See website: [www.crossness.org.uk](http://www.crossness.org.uk)

The postal address is Crossness Engines Trust, Crossness Sewage Treatment Works, Belvedere Road, Abbey Wood, London SE2 9AQ.

*Robert Carr*

## Don't butcher Smithfield

*Don't Butcher Smithfield* is the title of a publication by SAVE Britain's Heritage highlight its vigorous challenge to the threatened demolition of 'one of the grandest processions of market buildings in Europe.' Unfortunately, the General Market is set in a high-value part of the city of London and is under immediate threat of demolition by the Corporation of London for yet more office development, even though a study has shown that viable schemes for re-use exist.

There has been a market at Smithfield since 1123 and the buildings now occupying the site were the response of the Corporation of London to the 1849 Royal Commission into the safety of trading livestock in the city centre. Sir Horace Jones designed the Metropolitan Meat & Poultry Market of 1868, which was followed by the General Market in 1883, and then the Triangular Block and Red House in 1888-99 and 1899. The Poultry Market burned down in 1958 and was replaced with a new domed hall by T.P. Bennet, which is now listed Grade II. Surprisingly, the threatened General Market buildings and the Red House cold store are unlisted. All the buildings have suffered from 'years of deliberate neglect' in this historic part of London.

The extremely informative report is available for £5, including p+p from SAVE Britain's Heritage, 70 Cowcross Street, London EC1M 6EJ, ☎ 020 7253 3500.

## Cast-iron robbery

There have been recent press reports of man-hole covers disappearing from streets in Gloucestershire, Cambridgeshire, Lincolnshire and Norfolk, leaving behind gaping holes and bills of thousands of pounds for the local councils to replace them. It is suggested that this result from

rising prices for scrap iron, fuelled by the growing economy in China. These easily portable artefacts can be of great historic interest and there are very serious implications here for the preservation of out industrial heritage. Protectors of historic iron beware!

## Steel City: A Time Team Special

The Channel 4 Time Team series screened 'Steel City: A Time Team Special' on 22 March. Viewers were shown the work of ARCUS (Archaeological Research and Consultancy at the University of Sheffield), which has been excavating Sheffield's industrial sites prior to redevelopment for over six years. Two sites of interest (reported in *JA News 128*, pages 14-15) included the excavation of a cementation furnace at the Marshall Works site and the Wisewood Forge site. The latter was rebuilt after the 'Great Flood' (said to be Britain's worst man-made disaster) when the Sheffield Waterworks Co.'s new Dale Dyke dam collapsed on 11 March 1864 and sent millions of gallons of water down the Loxley valley, destroying over 500 factories, shops and houses; more than 200 people died.

During the programme it was refreshing to hear an archaeologist enthusing that industrial archaeology is indeed 'real' archaeology and a vital tool in explaining the lives of our more recent predecessors where we are finding that documents and other records do not tell the complete story.

## Restoration TV

Last summer 'Restoration' was a huge success when two and a half million BBC viewers voted for their favourite building at risk to be rescued from ruin. A total of £3.5 million was raised towards the winning building, Victoria Baths in Manchester.

Now BBC Two viewers are set to have another chance to make their mark on history. This spring, a 60-minute launch programme, presented by Griff Rhys Jones, will unveil a further 21 threatened architectural gems across the UK, whose fate will be in the hands of viewers when the series returns in the summer. The programme will also feature information on how

viewers can support their own local buildings and start their own campaigns. Viewers will also be treated to a 'taster' of what's to come in the main series this summer when seven one-hour programmes will each be devoted to an area of the UK and focus on three properties at risk in that region. The 21 buildings that the nation must choose between will be announced in due course.

Industrial buildings feature among this year's contenders. They include the Lion Salt Works, Northwich, Cheshire (North Region), the last remaining pan salt works in Britain using traditional techniques and one of only three left in the western world; the ruins of South Caradon copper mine (South West); Knockando Wool Mill (Scotland), a listed woollen mill that has been working continuously for the past 300 years; and Y Dolydd Workhouse, Llanfyllin (Wales) which is impressive architecturally and one of the few remaining examples of its type.

'Restoration', which is being produced by Endemol UK for BBC Scotland, is currently in production and is due to be transmitted on BBC Two this summer.

## Long-term lectures thrive

The Surrey Industrial History Group's 29th series of 11 fortnightly lectures begins on 28 September at the University of Surrey, Guildford. Wide-ranging topics include paper making, canal lifts, straw hats, sound mirrors, John Logie Baird and television, WWII boatwomen, the Wealden iron industry, Robert Mann Lowne and Inspiration and Perspiration. Details from Stuart Chrystall (SIHG lectures), Dene Lodge, Drovers Way, Ash Green, Aldershot, Hampshire GU12 6HY.

## Laxey gets another big wheel

A 50-ft diameter waterwheel made by the Hawarden iron works in Flintshire was first set to work in 1865 at the Snaefell Mine on the Isle of Man. It last worked pumps via a 1¼-mile flat-rod at a china clay pit on Bodmin Moor in Cornwall in 1920-34. Acquired by the Trevithick Society, the 'Gawns Wheel' was dismantled in 1971 and was sent five years later to the Mid Wales Mining Museum at Llywernog.

Hopes of re-erecting the wheel were never realised, but now all these years later the pieces have been shipped back to the Isle of Man where the Laxey Mines Research Group will erect the wheel on the washing floors in time for the 72-ft Lady Isabella Wheel's 150th anniversary.

### Tangye engine centenary at Brede

The Brede Steam Engine Society is celebrating this year's centenary of the Tangye pumping engine on 17-18 July. Many attractions are planned to interest all ages at the Brede Waterworks, Brede, Rye, East Sussex. The society's website is: [www.bredesteam.supanet.com](http://www.bredesteam.supanet.com).

### Hereford refurbishments

Major refurbishment at the Waterworks Museum, Hereford, has recently seen the main building shrouded in scaffolding and re-roofed in Penrhyn slates (from the same Welsh quarry as the originals). Ivy has been removed from the chimney stack and lean-to buildings have been taken down to make way for the new development which will include a new visitor centre, education centre engine gallery and maintenance workshops. The open-plan layout will allow adaptability with ease of access to the historic collection. The museum, which closed last September, is due to reopen sometime during the summer of 2004. Information will be

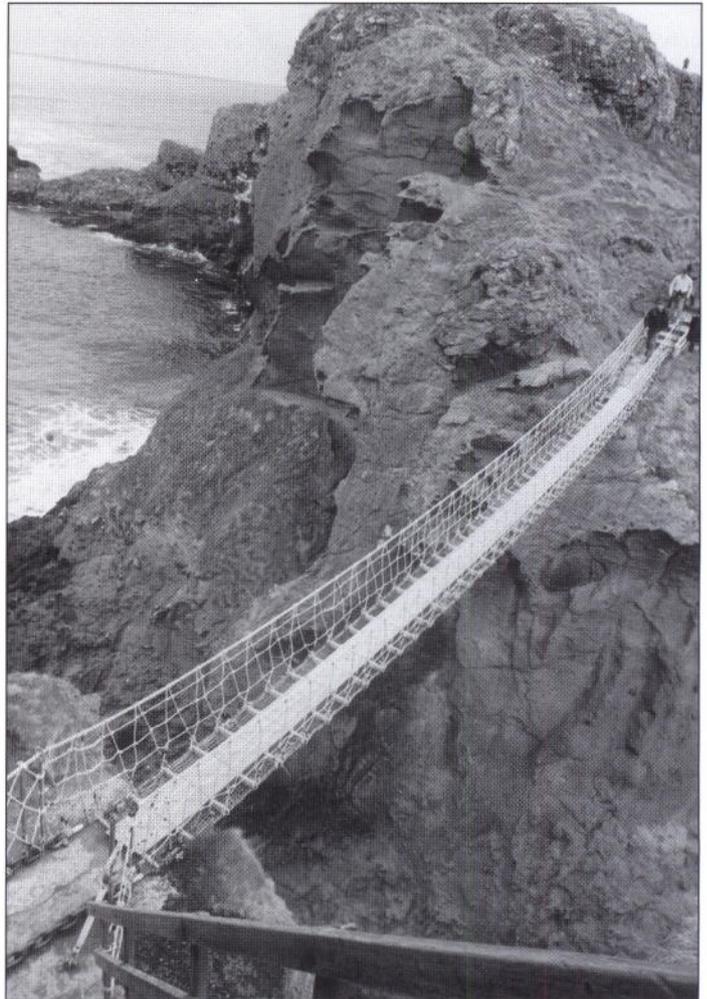
posted on the website: [www.waterworksmuseum.org.uk](http://www.waterworksmuseum.org.uk).

### Kew steams away with events

Apart from the usual weekend steaming of its giant beam engines, the Kew Bridge Steam Museum holds a number of events throughout the year. On 6-7 March the live history event 'Meet the Pioneers', enabled the public to 'meet' Dr John Snow, the first person to prove that cholera was a water-borne disease and Joseph Bazalgette, who designed and built London's first integrated sewer system. The fifth Stirling Hot Air Engine Rally was held in association with the Stirling Engine Society on 4 April, while 24-25 April saw 'The Magic of Mecanno Show'. The popular annual Historic Fire Engine Rally returns on 16 May. For further information on events, ☎ 020 8568 4757, or visit the website: [www.kbsm.org](http://www.kbsm.org).

### Rope bridge sways

Recent attempts were made to reduce the sway of the exhilarating Carrick-a-Rede rope bridge on Northern Ireland's Antrim coast after concerns over health and safety aspects. It was erected over a 24-metre drop to give salmon fishermen access the island, but elements have been replaced many times since it was first reported in 1786. The bold crossing is now a popular National Trust attraction, weather permitting!



*The Carrick-a-Rede rope bridge on the Antrim coast of Northern Ireland*

*Photo: M Gould*

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**WHEN?** Pre-conference seminar Friday 13 August  
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Post-conference programme Sunday 15 August to Thursday 19 August

Lectures will cover a variety of themes on the IA of Hertfordshire and the Lea Valley, including malting, paper-making, gunpowder making and the aircraft industry. Planned visits include Luton, Bletchley, Enfield, Hendon, Lea Valley, Essex maltings, Waltham Abbey Gunpowder Mills and the Leighton Buzzard Railway.

Booking details from: The AIA Liaison Officer, AIA Office, Department of Archaeology, University of Leicester, Leicester LE1 7RH. ☎ 0116 252 5337, Fax: 0116 252 5005, e-mail: [AIA@le.ac.uk](mailto:AIA@le.ac.uk)

The Editor welcomes correspondence on all matters of interest to our readers

## Willans & Robinson steam engines

Peter William Willans and Mark Heaton Robinson met by chance while fishing. They became close friends and later set out on a business venture together that resulted in the formation of the firm Willans & Robinson. The early days were involved in designing and building high speed steam engines to power yachts and launches, together with the vessels themselves. Around 1879 it was discovered that these reliable, high speed engines were ideal to power the early dynamo electric machines. This resulted in the patenting of a powerful Central Valve Engine involving a triple expansion system, a design that resulted in a distinctive 'wedding cake' appearance. Over time their engines were used to generate electricity for ships, trains, army and navy searchlights, Buckingham Palace, the Royal Laundry at Kew, the Vienna State Opera House, together with a host of other, slightly less prestigious but equally vital, generating tasks. The engines were made at Rugby, a factory which eventually came part of the English Electric combine.

Peter Willans died only a year after being awarded the Watt Medal by the Institute of Civil Engineers in 1891. Colonel R. E. B. Crompton, said, in tribute to him, at a meeting of the Institute of Electrical Engineers, 'He was one of the most unassuming men, who could stand at your side and suggest ideas which you found of incalculable value, and he did this in such a way that you felt that the idea had come from you.'

Now, over a hundred years after my great grandfather Peter Willans and his good friend set out on their business venture, I am hoping to find the last vestiges of their work in the form of any remaining Willans & Robinson engines, whether the smallest yacht engine, or the grandest generating system. Sadly, as technology moved steadily on, the results of their work were almost totally dismantled and scrapped but my hope is that there are more engines remaining out there than we know of at present. If anyone can help, with knowledge of remaining engines, new information to add to the family archives, or with

corrections to this short and inexpert telling of a big chunk of steam history, I would be most grateful.

Lucy Willans  
Tremar, Bickington  
Barnstaple EX31 2JW  
E-mail: lucy@willans.eclipse.co.uk

## Skills, education and society

I write with reference to Mike Clarke's letter 'The skilled worker in society' in *IA News* 127. Interesting! But I must admit from the outset that I have never been a total devotee of Tom Rolt's writings. However, his *Railway Adventure* did introduce me to railway preservation which, in turn, suggested and became a component of my college thesis 'The Development of the Steam Locomotive and its Implications for Leisure Pursuits'. This was based upon personal experience on the footplate, technical knowledge and recorded historical fact. Like John Hume, I had also subsequently missed Rolt's 'interest in the role of and attitude to, the skilled worker in society.' Was it really so apparent?

I must also admit that the theme of Mike Clarke's letter took me completely by surprise. Firstly concerning the direction from which it surfaced: *IA News!* But secondly, by the reawakening of a topic, which I as an educator had spent some 37 years beating my head against the academic wall in a vain attempt to achieve. Unfortunately, it is difficult to reverse the effects of attitudes created since the dawn of civilisation and now deeply embedded in the human psyche.

What then are the barriers, arising from these attitudes, which preclude this acceptance of skill? What force drives these attitudes? As early development relates to the home environment perhaps parental aspiration is the initial influence. Perhaps rightly so, but why this almost hypnotic desire for an 'academic' education for their progeny? But, in many cases, in their enthusiasm to provide a better 'status' they make the wrong choices. I could elicit many case studies.

Language may have some bearing but as we have enough misunderstood words in our own tongue the wide definition of the

German 'kunst' becomes largely irrelevant. We do need to relearn the meanings of many words such as academic, intellectual, engineer, historian, archaeologist, industry, education, instruction, training and so forth. Living language is all very well but it can and does create chaos and confused thinking.

It is suggested that the greatest barrier of all is the education system, the managers of which, at all levels, must clearly bear some responsibility. At secondary level, the diversion of the able pupil, whatever his/her ability or interest, away from the 'practical' subjects is well documented. Allied with this is the inability, even reluctance, to finance a meaningful education with a technological bias. How many schools, in their quest for credibility, opt for the specialist status of 'sport' or 'media' studies?

The history of education is complex; the history of 'technological' education even more so. Both are a mish-mash; a misunderstanding of human abilities, economic requirements and political agenda. The recommendations of royal Commissions and Acts of Parliament were never implemented; they were not accepted or even understood by the managers of education. Research, however relevant, is still given scant regard. We teach as we were taught, largely perpetuating the 'grad-grind' syndrome. The present National Curriculum is a disaster area.

We think of 'practical' activity as 'being good with the hands' thus assuming that any allied thought processes begin at the wrist. The creation of a tangible artefact gets

little recognition. We may extol the virtues of a piece of incomprehensible art; a piece of incoherent poetry; a piece of unintelligible music. BUT do we think when operating our fully automatic photo-copier what a wonderful collection of mechanisms, electronic circuitry and art forms we are utilising?

Should we not go down on our knees and sincerely thank the persons who make such things possible? After all, art, poetry and music can only exist if we have leisure; leisure is created by technology; technological outcomes are dependant on skill.

I could go on, possibly have, but it is impossible within the confines of the Newsletter to develop fully the arguments set out, the mass of learned references, case studies, observations and research accumulated over a long and obsessive career.

To conclude, any analysis of J. M. Barrie's *The Admirable Creighton* sums up the whole problem. Creighton had an extensive knowledge base. He understood the knowledge and had the expertise of application. This equates somewhat with Mike Clarke's premise of 'Arkwright and Stephenson obtaining positions within the country', both scenarios being a product of time and place. One must therefore ask, did Barrie really comprehend the subject of his play or was it just a cynical ploy to provide and entertainment at the expense of the 'lower' orders of society?

Peter M. Hughes  
6 Lingwood Close  
New Mill, Holmfirth HD9 7NN

## COPY DATES

Contributors are asked to note that final copy dates for *IA News* have been changed, although only by a day. Please be reminded that these are the final dates for receiving contributions and not for posting them!

1 January for February mailing

1 April for May mailing

1 July for August Mailing

1 October for November Mailing

## Scotland

Without doubt, 2003 was not a particularly good year for the textiles industry in Scotland, the latest casualty, Castleblair, rendering the future of some of Dunfermline's finer surviving mill buildings uncertain. Meanwhile, having held out great optimism over plans to convert Broadford Works in Aberdeen into an urban village, the project appears to have stalled, but the good news is that the site is still partly in use, not all production having yet been transferred to the new site. It is still hoped, therefore, that the project will eventually go ahead. Plans to convert Johnstone Mill in Renfrewshire, which again is 'A' listed, also seem to have been delayed, with proposals still awaiting approval from Renfrewshire Council. Once again, it is hoped that there will be a positive outcome.

In total contrast, great sadness has been caused by the destruction of both the spinning mill and carding shed of Dangerfield Mill in Hawick in separate arson attacks during the summer of 2003. The buildings and their contents were totally destroyed, and it was possible to salvage only a few pieces of drive shaft for potential display elsewhere in the town, possibly at Tower Mill.

Unfortunately, vandalism is not confined to the Scottish Borders, so it is also sad to note that the Tam o' Shanter Hone Stone Mine at Stair in Ayrshire has closed after over 200 years of operation. This extraordinary industry was well documented by D. Gordon Tucker in a booklet published by the Ayrshire Archaeological & Natural History Society in 1983. Its owner has had to cope with persistent assaults on the site of the mine itself, and of the Hone Works nearby. Indeed, it is ironic that Heron Mill, in which part of his production was based, survived the accidental delivery of some Luftwaffe incendiary bombs during World War Two, only to be attacked by local arsonists 60 years later. Also fatal to the business has been a huge rise in insurance premiums, and the cost of maintaining the mine has become prohibitive. Once the current stocks of mined stone are exhausted, the business will therefore cease.

On a more positive note, a consortium of participants, including Heriot Watt, Glasgow and Dundee

Universities, Paisley Museum & Art Galleries, and the Glasgow School of Art, have launched a new project called 'Textiles Heritage on Line', with the assistance of the Scottish Museums Council's Strategic Change Fund. It is described as 'a groundbreaking cross-sector cross-domain pilot project aiming to provide resources for researchers, museum curators and archivists wanting information about Scottish textile collections.' (see <http://www.scottishtextiles.org.uk/stho/partnerCollections/index.htm>).

At a time when the astonishing stupidity of rail privatisation has really begun to hit home, there is at least some good news for railways in Britain. Network Rail commissioned a £20 million refurbishment project for the Tay Bridge, and this was completed to such high quality that it won not only a British Construction Industry Award, but also the Saltire Award for civil engineering. Network Rail has, in addition, continued to invest heavily in the continuing maintenance and painting of the once neglected Forth Bridge, which is also to become the subject of a BBC TV documentary on 'Best Buildings' in the coming year.

Sticking with transport, the Millennium Link seems to be prospering, the Falkirk Wheel continuing to attract visitors. Also significant has been the first cargo shipment along the canals since

1933. This involved the shipment in June 2003 of a cargo of recycled aggregate from Ratho on the Union Canal near Edinburgh to the Firhill Basin on the Forth & Clyde Canal in Glasgow. It is hoped that this will be the beginning of a revival of freight traffic on the canals. Meanwhile, at Inverness, the British Waterways Board are in the process of completing a major refurbishment of the Muirtown Locks at Clachnaharry. They are currently empty, and are shrouded in huge areas of scaffolding whilst the lock walls are re-pointed, and the gates repaired or replaced, all at a projected cost of £2 million.

Elsewhere, British Aluminium's alumina plant at Burntisland in Fife has now disappeared, not long after the Kinlochleven smelter produced its last ingots of pure aluminium. In the west, Rolls Royce are in the process of moving production from their historic Hillington factory to a new purpose-built unit at Inchinnan, next door to the beautifully renovated art-deco former offices of the India Tyre Factory. One advantage of this move is that it allows most employees to witness the product of their labours in action at the adjacent Glasgow Airport. On the other side of the Clyde, nothing now remains of the once famous John Brown's Shipyard at Clydebank, except the 'A'-listed Titan Crane, which, in 1907, and was the first of the giant cantilever cranes to

be built by Sir William Arrol & Company.

There is good news and bad news in the museum world in Scotland. The Dundee Heritage Trust have just received a 5-star rating from Visit Scotland, and have managed to keep Verdant Works open. The future of the Scottish Maritime Museum in Irvine remains uncertain after a review of its collections was commissioned by the Scottish Executive. Also in Irvine, the Millennium-funded 'Big Idea', a science and invention centre built on the southern end of Nobel's Explosive Factory, closed amid considerable embarrassment and disappointment during 2003.

In Falkirk, the *Charlotte Dundas* has returned after two years in Arbroath for repairs, and British Waterways have provided a free berth in the Falkirk Wheel basin. However, Heritage Engineering assess that it will take another £130,000 of work to get her to full steaming condition. Meanwhile, in the Far East, pieces of Concorde are continuing to arrive for reassembly at the Museum of Flight at East Fortune. It also seems likely that the National Museums of Scotland, of which East Fortune is a part, will soon be experiencing a similar re-fabrication process as it is undergoing a major review.

Having successfully avoided being de-royaled (for the moment at least), RCAHMS had a busy year of



Broadford Works, Aberdeen. The proposed conversion of the mills to an urban village has been delayed, but it is hoped that the plan will nevertheless be realised  
Photo: Crown Copyright: RCAHMS

**Local Society and other periodicals received**

Abstracts will appear in *Industrial Archaeology Review*.

- BW Monthly*, December 2003, January, February & March 2004
- BIAG Newsletter*, 1, February 2004
- Brewery History*, 112, Summer 2003
- Brewery History Society Newsletter*, 26, Winter 2003/2004.
- Manchester Region Industrial Archaeology Society Newsletter*, 106, February 2004
- The Mundling Stick* (Lion Salt Works Trust), 9/3, Autumn 2003, 9/4, Winter 2004
- PHEW Newsletter*, 100, December 2003
- Scottish Industrial Heritage Society Bulletin*, 29 & 30, December 2003 & March 2004
- Society for Industrial Archeology Newsletter* (USA), 33/1, Winter 2004
- Suffolk Industrial Archaeology Society Newsletter*, 84, February 2004
- Surrey Industrial History Group Newsletter*, 137 & 138, Jan & Mar 2004

**Books Received**

The following books have been received for review in *Industrial Archaeology Review*.

*Canal Boatmen's Missions*, by Wendy Freer & Gill Foster. Oxford: Railway & Canal Historical Society, 2004. 72 pp, 44 illus. ISBN 0 901461 53 9. £12.50 incl. p+p from Atlantic Publishers, Trevithick House, West End, Penryn, Cornwall TR10 8HE.

Canal boatmen's missions, chapels and institutes were set up in England from the 1820s and continued to operate into the second half of the twentieth century. They made an important contribution to the social and moral welfare of the 'floating population' and provided not only places of worship but also schools, recreational facilities, charitable services and medical help. The physical remains are listed and detailed and records sought to show how they were operated and by whom.

*Early Railways 2*, ed. by M.J.T. Lewis. Newcomen Society, 2003. 288 pp, illus. ISBN 0 904685. £31.50.

This volume comprises 19 papers (out of 25) which were delivered at the second Early Railways Conference held in Manchester in September 2001. The well-referenced papers were rigorously refereed and are presented in four groups: history, infrastructure, mechanical and overseas. They are illustrated with contemporary and modern images, maps, diagrams and tables. Available from the Newcomen Society (Book Sales Dept.), PO Box 421, Elmswell, Bury St Edmunds, IP30 9XF for £35.60 incl. p+p.

*Ecton Copper Mines Under the Dukes of Devonshire 1760-1790*, by Lindsey Porter. Ashbourne: Landmark Publishing, 2004. 240 pp, 92 illus. ISBN 1 84306 125 2. Hardback £19.95.

This book looks at the spectacularly profitable Ecton copper mine in the Manifold Valley in North Staffordshire when it was run by the Dukes of Devonshire. After the discovery of a very rich ore body profits from the mine financed, for example, the Crescent in Buxton. The author has drawn on archive sources in the Devonshire Collection at Chatsworth to describe the management and working of the mine as well as and smelting and transport. A detailed examination of invoices and accounts covering a 30-year period has resulted in fresh conclusions on the history of this important mine. The book is illustrated with maps, diagrams and photographs, many of which show underground views of the mine today.

*From Farmer to Factory Owner: Models Methodology & Industrialisation*, ed. by Michael Nevell. (Volume 6 Issue 16 of *Archaeology North West*) University of Manchester Archaeology Unit et al, 2003. 114 pp, 115 illus. ISSN 0962 4201. £10.00.

This volume, the second in an occasional series on models and methodology in North West archaeology, brings together many of the leading researchers in the region to present for the first time detailed studies of the landscape and social archaeology of the industrial period. The book is

divided into two sections. The first deals with models and methodologies for approaching the period in North West England. The second part presents a series of five case studies from around the region which show how landscape and social archaeology models and methodologies have been applied. These innovative approaches allow us to look at the archaeological monuments, landscapes, and buildings of the Industrial Period from the farm to the factory.

*The Grand Union Canal from Brentford to Braunston*, by Ian J. Wilson. Stroud: Tempus, 2004. 128 pp, 193 illus. ISBN 0 7524 2933 7. £12.99.

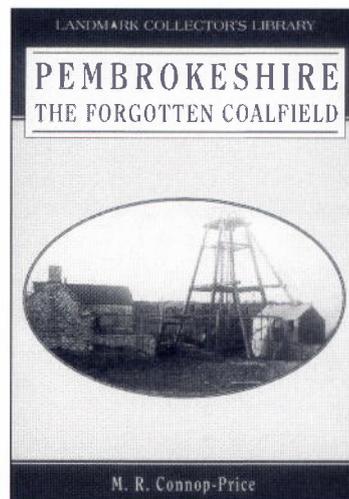
A collection of historic photographs illustrating the Grand Union canal in all seasons from where it leaves the Thames at Brentford, through the market towns of the Home Counties on its way to the Midlands. This book shows the impact the canal has had in changing the landscape through which it passes. The photographs follow the main line to Braunston and also journey along the Paddington, Slough, Wendover, Aylesbury and Old Stratford & Buckingham Arms. However, a route map would have been useful for those who are unfamiliar with this canal.

*Merthyr Tydfil Tramroads and their Locomotives*, by Gordon Rattenbury & M.J.T. Lewis. Oxford: Railway & Canal Historical Society, 2004. 88 pp, 54 illus. ISBN 0 901461 52 0. £14.50 incl. p+p from Atlantic Publishers, Trevithick House, West End, Penryn, Cornwall TR10 8HE.

The Glamorganshire Canal opened in 1794 but was to be subject to serious delays, and so in 1802 the Merthyr Tydfil Tramroad (sometimes known as the Penyarden Tramroad) was opened to by-pass the most heavily congested sections. Just two years later, this tramroad was the scene of the epoch-making run of Richard Trevithick's steam locomotive. In this book, published to mark the 200th anniversary of this event, two well-known writers describe the history of the Merthyr Tramroad and the other tramroads in the district and the locomotives which ran on them. The history of the tramroads by the late Gordon Rattenbury has not previously been published. Michael Lewis's contribution on the locomotives represents a revised and expanded version of his *Steam on the Penyarden* of 1975.

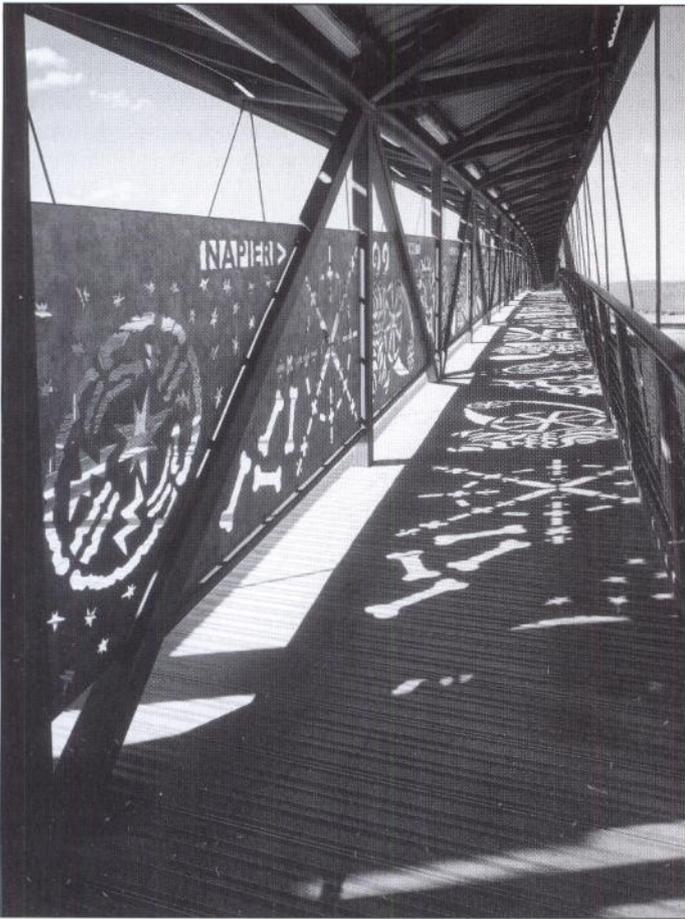
*Pembrokeshire – The Forgotten Coalfield*, by M.R. Connop-Price. Ashbourne: Landmark Publishing, 2004. 256 pp, 132 illus. ISBN 1 84306 094 9. Paperback £17.95.

Pembrokeshire coal mining began in the thirteenth century and ended in 1951. This book is based on the author's research for his PhD thesis at the University of Wales, and is an important contribution to the history and industrial archaeology of this fascinating mining field. Accompanied by many photographs, maps and diagrams, it gives a detailed overview of the region's oldest industry. This little-known coalfield, which lies in a narrow band between Carmarthen Bay and St Brides Bay, had a significant impact on the local economy and society. The author examines the geological background and the development of the coalfield, along with details of landlords, labour relations, mining technology and health and safety. Transport includes tramways and the important coal shipping trade which was served by quays on the coast and on the Milford Haven estuary.

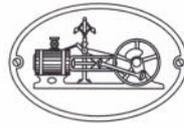


*The Stroudwater Navigation*, by Joan Tucker. Stroud: Tempus, 2003. 192 pp, 132 illus. (30 in colour). ISBN 0 7524 2806 3. £16.99.

The 8-mile Stroudwater Navigation was opened in 1779 from Framilode on the Severn to Stroud in the Cotswold foothills. Ten years later it was linked to the Thames & Severn Canal which took trade, in effect all the way



*The Bridge of Scottish Invention, a retractable bridge built over the River Irvine to connect the town of Irvine with 'The Big Idea', which was built with the support of the Millennium Fund on the southern tip of Nobel's Explosives Works, and was intended to be a centre of science and invention. 'The Big Idea' suffered financial difficulties in 2003 and subsequently closed*  
 Photo: Crown Copyright: RCAHMS

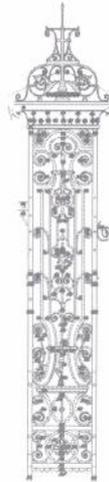


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survey, centred on finishing the photographic work on the Loch Katrine water supply scheme, and at Broadford Works in Aberdeen. Other work involved lighthouses on the north coast, including Cape Wrath, and the completion of the measured survey of Johnstone Mill. Historic Scotland has also been active, and amongst its many projects has been sponsoring continued research into the Monklands iron industry, the Ayrshire coal industry, and condition surveys at Woodhead and Pibble lead mines in Dumfries & Galloway.

Finally, after over 25 years of activity, the Scottish Industrial Archaeology Panel is also to undergo a review of sorts. Active participation and attendance has been dwindling over the years, but for the hard core who do attend, it remains immensely useful. For this reason, the March meeting was postponed, and its future form and function will be a major topic of discussion at the next meeting, to be held at RCAHMS on 8 October.

*Miles Oglethorpe*

## REGIONAL CORRESPONDENTS

Please support your Regional Correspondent by sending relevant material which may be of interest to our readers.

### Region 1: SCOTLAND

Dr Miles Oglethorpe, RCAHMS, John Sinclair House, 16 Bernard Terrace, Edinburgh EH8 9NX

### Region 2: IRELAND

Michael Coulter, Department of Environment, Historic Monuments and Buildings, 5-33 Hill Street, Belfast 1

### Region 3: NORTHERN ENGLAND

Cumbria, Northumberland, Tyne and Wear, Durham and Cleveland  
 Graham Brooks, Coomara, Carleton, Carlisle, Cumbria CA4 0BU

### Region 4: YORKSHIRE AND HUMBERSIDE

North, South and West Yorkshire and Humberside  
 Derek Bayliss, 30 Muskoka Avenue, Bents Green, Sheffield S11 7RL

### Region 5: NORTH WEST ENGLAND

Lancashire, Merseyside, Greater Manchester and Cheshire  
 Roger N Holden, 35 Victoria Road, Stockport SK1 4AT

### Region 6: WALES

Pat Frost, Castlery Archaeology, 6 Castle Ring, Pontesbury Hill, Pontesbury, Shrewsbury, Shropshire SY5 0YA

### Region 7: WEST MIDLANDS

Shropshire, Staffordshire, West Midlands, Warwickshire, Hereford and Worcester

John Powell, Ironbridge Gorge Museum Trust, The Wharfage, Coach Road, Coalbrookdale, Telford TF8 7DQ

### Region 8: EAST MIDLANDS

Derbyshire, Nottinghamshire, Lincolnshire, Leicestershire and Northamptonshire

David Lyne, 10 Somerville Road, Leicester LE3 2ET

### Region 9: EAST ANGLIA

Cambridgeshire, Norfolk, Suffolk and Essex

David Alderton, 48 Quay Street, Halesworth, Suffolk IP19 8EY

### Region 10: GREATER LONDON

Dr R.J.M. Carr, 127 Queen's Drive, London N4 2BB

### Region 11: HOME COUNTIES

Oxfordshire, Bedfordshire, Berkshire, Buckinghamshire and Hertfordshire  
 Phil Morris, 71 Van Diemens Road, Stanford in the Vale, Oxon, SN7 8HW

### Region 12: SOUTH EAST ENGLAND

Hampshire and Isle of Wight, Surrey, Sussex and Kent  
 Alan Thomas, 6 Birches Close, Epsom, Surrey KT18 5JG. Email: a.h.thomas@btinternet.com

### Region 13: WEST OF ENGLAND

Somerset, Avon, Gloucestershire, Wiltshire and Dorset  
 Mike Bone, Sunnyside, Avon Close, Keynsham, Bristol BS18 1LQ

### Region 14: SOUTH WEST ENGLAND

Devon and Cornwall  
 VACANT, volunteer urgently required.

through to London. The Stroudwater Navigation was in the hands of the original company for over 200 years and the author makes use of the company archive to record the canal's history. In addition, a range of other sources, including census returns, paintings, plans and poetry, help bring to life the canal's role in the social history of the region. The book is detailed and the illustrations show the canal in times past and at the present when steps are now under way to restore the Cotswold canal systems.

*The Willing Servant: A History of the Steam Locomotive*, by David Ross. Stroud: Tempus, 2004. 352 pp, 54 illus. ISBN 0 7524 2986 8. £25.00, hardback.

Published to coincide with the 200th anniversary of the running of the world's first steam locomotive in South Wales, this large book traces the development and spread of this new form of power across the world. After slow beginnings, the locomotive was the sustaining force of industrial growth in Britain and Europe, it helped create the countries of the USA and Canada, it helped to bolster the Russian empire and bought about the Russian revolution, and it opened up vast colonial territories. This is the first history of that world-wide development, tracing the history of design, construction and use, as well as the intriguing story of human involvement – of all inventions it is the one which most seemed to possess a life and spirit of its own. The illustrations confirm the wide-sweeping nature of the book, depicting locomotives in Britain, Austria, Czechoslovakia, Germany, India, Indonesia, Italy, New Zealand, South Africa, Syria and the USA, for example.

#### ALSO RECEIVED

*The Birth of a Museum*, by Madge Jackson. Old Kiln Museum Trust and Rustics, 2004. 26pp, 20 illus. £3.50 plus £1 p+p, obtainable from the Rural Life Centre, Reeds Road, Tilford, Farnham, Surrey GU10 2DL.

The Rural Life Centre at Tilford near Farnham is the creation of a remarkable couple, Madge and Henry Jackson. Beginning with the first exhibit acquired in 1967, they built up the collection from discarded or redundant farming and other equipment from rural trades and activities and first opened it to the public in 1973. Since then the collection has continued to expand, from 1990 with the help of volunteers, the 'Rustics', to its present status as one of the principal museums in Surrey.

This short book has been compiled by Alexa Barrow from Madge Jackson's diaries and chronicles their struggles to create a home at the 'Old Kiln' cottage (named after the adjacent hop kiln) from 1948 and to create the museum from the late 1960s, in the face of accident, illness and tragedy. Madge and Henry Jackson's work was publicly honoured in 2000 by the award to both of them of the MBE.

*British Anti-invasion Defences, 1940-1945*, by Austin J Ruddy. Storrington: Historic Military Press, 2003. 32 pp, illus. ISBN 1 901313 20 4. £3.49.

This pocket reference guide details the network of anti-invasion defences constructed in Britain during World War II. Sited at road junctions, railway embankments, alongside canals, on farms, estates and along the beaches many of these structures, commonly called 'pillboxes' soon became common sights throughout the country. This book provides a brief and concise insight into the history of pillboxes, anti-tank obstacles, airfield and other defences which have survived the passing of 60 years of development and erosion. Well-illustrated in colour, with plans and grid references to various examples, this book will prove a useful handbook for fieldwork. Obtainable from the publisher, Freepost SEA 11014, Pulborough, West Sussex RH20 4BR.

*Somerset Roads, The Legacy of the Turnpikes, 2 volumes*, by John Bentley & Brian Murlless. Somerset IA Society, reprinted 2004. 112 & 121pp total, with extensive maps and illustrations. £7.50 per volume, plus £1.50 p+p for each copy.

This work was published in two volumes, *Phase 1, Western Somerset* (1985) and *Phase 2, Eastern Somerset* (1987). In 1988 it received the

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**Southern Works:** Riverside Business Park, St Annes Road, St. Annes Park, Bristol, BS4 4ED. Contact: Geoff Wallis  
Tel: (0117) 9715337 Fax: (0117) 9771677

Association for Industrial Archaeology's Award for Fieldwork & Recording and has since been one of the benchmarks for the study of the heritage of Somerset's roads. The publication was originally grant aided resulting in limited editions but the Somerset Industrial Archaeological Society has now reprinted both volumes, which are obtainable singly or in sets from G. Fitton, Hon. Secretary, Giles Cottage, Brent Knoll, Highbridge, Somerset TA9 4DF (cheques payable to SIAS).

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**12 JUNE 2004  
THE CHANGING  
STROUDWATER TEXTILE  
MILLS**

at Ebley Mill, Stroud, Gloucestershire, a day conference on the Changing Stroudwater Textile Mills. The conference aims to improve the understanding of the history of mills in the Stroud area and so inform the debate about their future. Contact for further information: Ian Mackintosh, 6 Castle Villas, Stroud, GL5 2HP, ☎ 01453 766273, e-mail: imack@btopenworld.com.

**12 JUNE 2004  
EERiac 14**

an Blythburgh, Suffolk, the 14th Eastern England Region IA Conference, with visits to the Halesworth area. For full details and booking form when available, please send SAE to Mrs Brenda Taylor, Crown House, Horsham St Faiths, Norwich, NR10 3JD.

**25-26 JUNE 2004  
UNDERSTANDING THE  
WORKPLACE: AN AGENDA  
FOR INDUSTRIAL  
ARCHAEOLOGY IN BRITAIN**

at Nottingham University, jointly organised by the AIA and English Heritage, to produce an agreed national research framework for the

archaeology of the industrial period. For further information and to book a place, please contact the AIA Liaison Officer, Simon Thomas, School of Archaeology and Ancient History, University of Leicester, Leicester LE1 7RH, or email aia@le.ac.uk.

**26 JUNE 2004  
INDUSTRIAL ARCHAEOLOGY  
IN SHROPSHIRE**

at Shrewsbury, a one-day meeting to review recent research and developments in the IA of the county, organised by the Shropshire Archaeological & Historical Society, supported by Ironbridge Archaeology, Ironbridge Institute and Shropshire Records and Research Centre. There will be a field trip on Sunday 27 June. Details available from David Poyner, 136 Hoo Road, Kidderminster, Worcestershire, DY10 1LP, e-mail: David@D-Poyner.freeserve.co.uk.

**27-30 JUNE 2004  
THE AGE OF STEAM IN THE  
WEST COUNTRY**

at Dillington House, Ilminster, Somerset, a course examining the evidence for past industries in the West Country landscape, with lectures and two field visits to mines and other industries around the Brendon and Quantock Hills, also

canals and waterways. Details from Dillington House, Ilminster, Somerset TA19 9DT, ☎ 01460 52426, e-mail: dillington@somerset.gov.uk, website www.dillington.co.uk.

**23-25 JULY 2004  
NAMHO CONFERENCE 04**

at Coniston, organised by the Cumbria Amenity Trust Mining History Society, with a varied programme of lectures, underground and surface trips. Booking forms available from CATMHS Hon Sec, Sheila Barker, The Rise, Alston, Cumbria CA9 3DB. For accommodation list see www.catmhs.co.uk.

**13-19 AUGUST 2004  
AIA ANNUAL CONFERENCE:  
HERTFORDSHIRE & LEA  
VALLEY**

at the new de Havilland Campus of the University of Hertfordshire, Hatfield. See advertisement inside for some information or contact the AIA Liaison Officer, Simon Thomas, School of Archaeology and Ancient History, University of Leicester, Leicester LE1 7RH, or email aia@le.ac.uk.

**16-19 SEPTEMBER 2004  
THIRD INTERNATIONAL  
EARLY RAILWAYS  
CONFERENCE**

at the National Railway Museum, York. For details contact: Early Railways Conference Office, National Railway Museum, Leeman Road, York YO26 4XJ, ☎ 01904 621261.

**2 OCTOBER 2004  
THE ARCHAEOLOGY OF  
INDUSTRIAL PROCESSES,  
PART ONE**

at the London Archaeological Archive & Research Centre, London, to cover the results of recent archaeological investigations of industrial processes and production sites in London, the south of England, Europe and the East. See inside for contact details.

**6 NOVEMBER 2004  
THE ARCHAEOLOGY OF  
INDUSTRIAL PROCESSES,  
PART TWO**

at the Ironbridge Gorge Museum, Coalbrookdale, the second part of this unique conference will cover the results of work done in the Midlands and North of England, and in the Atlantic World. Contact details as for Part One.

*Information for the diary should be sent directly to the Editor as soon as it is available. Dates of mailing and last dates for receipt of copy are given below. Items will normally appear in successive issues up to the date of the event. Please ensure details are sent in if you wish your event to be advised.*

*Please view the AIA Website's Diary Section for the latest notices of conferences and meetings.*

[www.industrial-archaeology.org.uk](http://www.industrial-archaeology.org.uk)



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- 1 January for February mailing
- 1 April for May mailing
- 1 July for August mailing
- 1 October for November mailing

*The AIA was established in 1973 to promote the study of Industrial Archaeology and encourage improved standards of recording, research, conservation and publication. It aims to assist and support regional and specialist survey groups and bodies involved in the preservation of industrial monuments, to represent the interests of Industrial Archaeology at national level, to hold conferences and seminars and to publish the results of research. The AIA publishes an annual Review and quarterly News bulletin. Further details may be obtained from the Liaison Officer, AIA Office, School of Archaeological Studies, University of Leicester, Leicester LE1 7RH. ☎ 0116 252 5337 Fax: 0116 252 5005.*

The views expressed in this bulletin are not necessarily those of the Association for Industrial Archaeology.



*The Tay Bridge, as seen from the Wormit end on the south bank of the Firth of Tay. The bridge has just benefited from an award-winning £20 million refurbishment project (see page 12)  
Photo: Crown Copyright RCAHMS*