WARWICKSHIRE
Industrial Archaeology Society

WIAS

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NEWSLETTER

THIS ISSUE

EDITORIAL

The value of snow for industrial archaeology in the field was not something I had considered until the snowfall around Southam at the end of November.

Out and about in the course of my job, I had to travel to Burton Dasset and then Avon Dasset. This was an interesting exercise in itself as the minor roads had not been cleared and the temperature was below freezing, but the necessary slow pace of travel gave more time to notice the countryside. What was immediately apparent was that the covering of snow, and the low winter sun, accentuated patterns in the landscape. Ridge and furrow that was normally only vaguely defined was thrown into sharp relief as a striking pattern of white and blue-grey stripes across hillsides. Previously unnoticed track ways through the field patterns were similarly visible and it was possible to make out whole field systems where usually only indistinct bumps were visible.

Similarly very distinct were old quarry pits, while vague suggestions of platforms where buildings may once have stood also became noticeable.

Strictly these remains represent landscape archaeology, but the inference for field industrial archaeology is clear. Snowfall, low sunlight and an area of known past industrial activity may reveal more to careful inspection than might be apparent under more usual weather.

Mark W. Abbott

SOCIETY NEWS

Programme.
The programme through to March 2006, is as follows:

January 12th
Mr. Roger Cragg: Thomas Brassey.

February 9th
Mr. Tim Booth: Emscote Mill.

March 9th
Mr. Jeromy Hassell: White and Poppe.

Subscriptions
Members are reminded that subscriptions for the 2005/2006 season are due. The amount payable remains as for the last season: £10.00 per person or couple with an additional meeting payment of £1.00 per person to help cover refreshment expenses. Payment should preferably be made at a meeting, but payments by post are acceptable Please note that receipts for postal payments will not be sent out, but instead will be available for collection at a subsequent meeting. Cheques should be made payable to Warwickshire Industrial Archaeology Society please. If you are unsure of your subscription status for this season please ask the Treasurer. Reminders for outstanding payments will be sent out after Christmas.

Newsletter mailing
Those members who are unable to attend meetings regularly may have noticed the absence of the usual Newsletter mailings during the latter part of this year. This is due to a computer upgrade, which has made the address databases used for this mailing inaccessible, along with the database that holds subscription records. This should be a temporary problem, albeit one of rather longer duration than was originally envisaged! In the meantime, a stock of past Newsletters is always available at meetings, so please ask if you think you have missed a copy. All being well the usual pattern of mailings should resume in the New Year and apologies for any inconvenience caused in the meantime.

Tom Charman memorial
As reported previously in the Newsletter, the Society has partially funded the restoration of a narrow gauge slate wagon from the Tal y Llyn Railway in memory of late member Tom Charman; a long term supporter of the Tal y Llyn Railway Preservation Society. It can now be confirmed that the wagon to be restored will be one of the original TR wagons, fleet number 101. Restoration is about to begin in the Gunpowder Store at Wharf Station. The web address www.ngrm.org.uk/news should yield a photograph.

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Meeting Reports *by Arthur Astrop*

September 2005 Mr. Hugh Compton
The Oxford Canal

The Oxford Canal, one of the most beautiful of our inland waterways, was a vital link in the great system which, in the late 18th and early 19th centuries, was constructed to join the north-west of England to the south-east, and specifically to London. Our members were fortunate to have Hugh Compton, current President of the Rail & Canal Historical Society and author of *The History of the Oxford Canal*, to relate the triumphs and the disasters which accompanied its construction.

Like many of the ambitious civil engineering schemes of that time, those who put up money to build the canal had some years to wait before they were to see a proper return on their investments, but when the profits, and then the dividends, began to arrive they did so in abundance. The delays on the road to profitability, however, must have sorely tested both the nerve and the patience of the shareholders.

There were the usual Parliamentary delays, while Bills were haggled over and passed, together with the inevitable wrangles with land owners and local authorities who were affected by, or who saw financial opportunities in, the new 'cut'. The areas of Hawkesbury Junction and Coventry were great centres of dissension and opposition and Coventry, not least, wanted its share of the spoils, and tried hard to resist any attempt to by-pass the city by building 'shortcuts'. In the end, of course, compromises were reached and Coventry got some, but not all, of its wishes.

The Oxford Canal has approximately 100 locks, and various tunnels, including the Napton, which is wide enough for two boats to pass, and has a towpath at each side. Napton brickworks was ideally placed to supply the millions of bricks required for canal bridges, tunnels, locks, etc. Braunston gradually became a very important trans-shipment area for goods being carried on the Grand Junction and Oxford canals, and Banbury soon had an important boat yard, which is still in operation.

Hugh Compton spoke about the arrival, in 1860, of the Henshaw steam tug which could pull as many as 12 boats. The railway companies protested and managed to get the speed of the tug limited to 3 ½ mph. South of Banbury on the Oxford canal, in a bid to keep costs down, many swing bridges were built instead of using traditional brick and/or stone construction. The mill at Heyford, however, eventually invested in a steam traction engine, which proved too heavy for the wooden swing bridge over the canal. A cast iron bridge was eventually built to take its place.

Other aspects of the Oxford canal mentioned by Hugh Compton, included the building by the canal owners of pubs alongside the waterway, where canal business could also be conducted; the growth of coal yards adjacent to the canal; and the various types of dredgers used, from early versions which were largely dependent on sheer manual effort to the later more efficient steam-driven types.

Cob

Recently noted by Peter Chater in Claverdon is an example of cob construction, in this instance a boundary wall approximately 72 feet long, 6 feet high and 2 feet wide. It has a shaped corrugated iron coping with a good overhang to keep the cob dry. The wall is next to Wheelbarrow Lane (OS Sheet 151 GR 291648).

Cob is an old Devon word for a mud wall, and Devon probably has more cob than anywhere else in Britain, with cob being Devon's traditional construction material since the fourteenth century. However, cob is not restricted to Devon and examples may be found elsewhere in the UK. In Warwickshire cob is now quite rare, although there is a fine example of a row of cob built cottages in Dunchurch.

One reason for the popularity of cob in Devon may be the quality of the Devon clay sub-soils, many of which have a consistency and low shrinkage factor that makes them ideal for cob construction.

Traditionally, straw and sometimes dung, were added to the clay subsoil to reduce cracking problems during drying. Often cattle would be used to tread the mixture, so the addition of dung was inevitable!

Once the mixture was ready to use, the walls were usually built up in layers, typically by forking lumps of wet cob onto stone plinth foundations 450–900mm wide. This was heeled together by a team of people to form a horizontal layer up to 1000 mm thick. Each layer was given time to dry, to enable placing of the next one without the walls compressing and bulging. Sometimes shuttering would be used; the exact technique varied according to the quality of the cob mixture, the weather and local tradition.

Lintels and beams were seated and openings

Continued on page 4

AIA Conference Highlights

October 2005 Dr. Michael Harrison

Highlights of Recent Annual Conferences of the Association for Industrial Archaeology

Our Society has long been affiliated to the Association for Industrial Archaeology but relatively few of our members manage to attend the AIA's annual conferences. WIAS is therefore deeply indebted to those who do attend, and especially for their subsequent reports on the proceedings. Such firsthand reports from members however must, of necessity, be rather short but at our October meeting, Dr Michael Harrison, past-President of the AIA, was able to take a wider view and to cover in considerable detail the proceedings at two of AIA's most recent annual events.

He dealt first with the 2003 Conference, held in Cardiff, and then with the 2004 event, held in Hertford. The annual conference is, of course, the occasion of the Association's annual general meeting, but that essential business occupies only a small part of the total event. The 'host' town or city always prepares for delegates a special programme of visits to important IA sites in its area, and it was that aspect of the 2003 and 2004 events on which Dr Harrison mainly concentrated. South Wales has a rich history in the technologies of coal and iron, and early sites for both industries were visited, described and splendidly photographed by Dr Harrison.

He took us through museums associated with both industries, also a working pit for anthracite, and traced the routes from the pits and iron works to docks and export shipping. The wealth that both these industries once produced for South Wales was boldly expressed in the architecture and grandeur of the region's municipal buildings, which reflected the success and self-confidence of the area. We were reminded, for example, that the Taff Valley iron works was founded in 1765 and less than 40 years later could proudly claim to be the largest in the world. In Wales, the links between industry and adult education were always particularly strong, and were a proud by-product of the region's wealth.

A complete change of environment and range of industrial archaeological sites met those delegates who, in 2004, attended the AIA's annual conference held in Hertford. As Dr Harrison pointed out, Hertfordshire's industrial history lies in a very wide variety of activities, ranging from paper-making to gunpowder production and from brewing to flour milling. The development, during WW2, of the computer which cracked German's Enigma codes also took place in the county, at Bletchley Park

The production of gunpowder in a works at Waltham Abbey began in 1650, by private enterprise, but by 1787 the entire site was Crown Property. Photos of early gunpowder production buildings, with a variety of different designs of 'blow-off' roofs and walls were shown. The New River, started in the 1600s to supply water to the rapidly expanding population of London, also originates in Hertfordshire, and examples of some splendid early water-pumping stations were illustrated.

In conclusion, Dr Harrison spoke about the typical structure of an AIA annual conference. Basically, each consists of three parts, namely the Annual General Meeting, seminars, and site visits arranged over a weekend. Obviously with an eye to the future, Dr Harrison ended his presentation by commenting on the fact that Warwickshire is rich in industrial history!

Society Website

The Society website is, as of October 2005, a member of the Industrial Archaeology and History Ring, managed by I A Recordings. This is collection of 104 vetted websites (at December 2005) all devoted to aspects of industrial archaeology and history. Membership is worldwide and not surprisingly the quality of sites varies from rather amateur looking to very professional. Each member site has a link to the main listing of sites as well as the ability to link to a random choice and previous or next links.

A quick few tries at the random link turned up sites as diverse as a business specialising in railway books to a site featuring photography of underground New York!

How useful the service is for locating sites on a particular specialist subject is debateable, but as a means of investigating the diversity of industrial history available on the Internet, it undoubtedly has some value and is recommended.

Incidentally, some excellent pictures of the old Kenilworth railway station, taken by Derek Billings, have also recently been added to the Society website. This building has long been demolished, but as these images show, it was a surprisingly imposing red brick structure with a beautiful glass roof to the main building.

Again well worth a look for members with an Internet connection, as is the News page, which is regularly updated with items of local and general IA interest.

Mark W. Abbott.

Ironbridge: Recent Research Results

November 2005 Mr. David de Haan
Ironbridge

There can be few 'monuments' more familiar to industrial archaeologists than Abraham Darby III's unique 100-ft span cast iron bridge over the Severn, but David de Haan's talk to the Society in November kept members enthralled for the entire meeting. Even to the point where, at the end, there was barely time for 'any other business'!

David is Programme Director of the Ironbridge Institute, also Deputy Director of the Ironbridge Gorge Museum, and his knowledge of Darby's bridge, down to the smallest detail of design and construction, must surely be unequalled. He described how the modern technique of photo-grammetry has been used to measure and 'map' the bridge and to enable rotatable computerised views of it to be created. His illustrations included fascinating examples of the latter, with the bridge being seen from a continuously moving viewpoint.

It is only in relatively recent times that the methods used to erect the bridge have been established, and what is more have been proved in practice. It was in 1997 that de Haan gave a lecture on Darby's bridge to the Newcomen Society. Among his slides on that occasion was a rather impressionistic water-colour by a Swedish artist recording a very early stage in the erection of the bridge. WIAS-member John Selby was present at that lecture and subsequently suggested to de Haan that what appeared in the painting to be rudimentary scaffolding could, in fact, be a twin-upright wooden derrick by which the five sets of semicircular castings were raised into position. In short, there might be much more to that painting than first met the eye!

The accuracy of John's theory was borne out only a few years later, in 2001, when television's *TimeWatch* programme set out to build a half-scale replica of the bridge using, as far as possible, the methods Darby had employed. A team of Royal Engineers successfully tackled the challenge, using exactly the type of derrick seen in the water-colour.

David de Haan described how the 21st century iron castings were made using strickled moulds in the foundry floor, as were Darby's originals, and showed details of the cast dovetail joints whereby major castings were joined, without the need for bolts. He also spoke about the 'missing ribs', lower-end portions of the second and third sets of curved castings, which were originally absent but were subsequently completed by inserting individual castings.

The second and third sets of curved castings pass through slots in both vertical and horizontal members, and the slots were made large enough to allow for assembly, and to accommodate expansion and contraction. The gaps were then filled with cast-iron blocks, and molten lead was run in. The bridge originally had masonry abutments, but these proved to be too heavy for the river banks and were subsequently removed and replaced by towers.

The work carried out on this priceless bridge in recent years has also been aimed at establishing a programme of ongoing preservation and maintenance which will ensure its survival for posterity.

Cob ***continued*****:**
formed in the cob as it was built up. The cob needed to dry to some extent before any frames were placed in the openings since the walls shrink in height with drying. This would cause a window or door frame placed too early to be compressed and become load bearing.

A good quality cob can survive quite well without rendering, but normally it is coated with a render made from quicklime putty and coarse sand, followed by a lime wash. These traditional coatings have the important property of being breathable, so that any moisture that does get into the cob, by penetrating rain or rising damp, can evaporate out.

Mark W. Abbott

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