

WARWICKSHIRE

Industrial Archaeology Society

NUMBER 11 June 2003

PUBLISHED QUARTERLY

THIS ISSUE

- ☉ Meeting Reports
- ☉ Miniature Railway IA
- ☉ Shuttleworth Collection
- ☉ Programme to Year End

EDITORIAL

The photographic image is undoubtedly a key resource in the study of Industrial Archaeology from the middle of the 19th Century onwards. It is unique in its ability to give a visual record of an instant in time and to show how things were, as opposed to maps, plans and written descriptions which can be inaccurate.

This role of the photograph was most convincingly shown by Peter Chater's March presentation about aspects of railway civil engineering and architecture. The most striking feature of these images was how much the appearance of our surroundings has changed, even over a relatively short period of time. Such change is typically slow and imperceptible; often unnoticed. It is only when presented with, for example, a street view taken as little as 15 years ago that change becomes startlingly apparent. The road vehicles, the style of street furniture and fashions; all such minute details suddenly become noticeable when compared with the modern scene. Yet at the time these things were unremarkable,

just as a car in the street or a particular road sign are today.

This is perhaps the key hidden value of photography as a resource in industrial archaeology. It is often the details that are incidental to the subject photographed that become of interest later.

Nevertheless, the expansion of this valuable resource is in danger of becoming lost to future generations, overwhelmed by a tide of digital data.

A photograph is an instant visual reference. Even as a negative, the content can be assessed easily. However, a digital image needs technology to translate the binary data into a picture, be it on screen or a print. That technology is changing fast and there is no guarantee that it will be possible to view images archived to CD, for example, in as few as 10 years time. Remember the Betamax video format?

Yes, a digital image can be printed, but how many are? Research company IDC estimates that 78 billion digital pictures were captured world wide in 2002. At best, half may have survived in-camera editing and other research by Lexmark, suggests that three quarters of digital pictures are never printed. Thus, 68.25 billion images may never be printed from 2002 alone!

Film exposures for 2003 are estimated to be 85 billion world wide. Many of these will not survive long, but at least those that do endure should be accessible to future generations.

Mark W. Abbott

SOCIETY NEWS

Programme.

The programme for the remainder of this year is as follows:

10th July

Society AGM, followed by Lyndon F. Cave: *Brickmaking in Warwickshire*

August

No meeting.

11th September

Dr. Michael Hodder: *The Industrial Archaeology of Birmingham*

9th October

Mr. John Boynton: *Railways to Stratford-upon-Avon*

13th November

Regional Survey. A presentation by members of the Society on the industrial archaeology of the Warwick District.

11th December

Dr. Barrie Trinder: *The Industrial Archaeology of the Market Town*

Society Coach Trip.

The date of the coach trip, organised on behalf of the Society by John Haslam, is confirmed as Saturday 16th August 2003. Saltaire and Armley, Leeds are the planned destinations. Please show your appreciation of John's hard work for the Society and support this venture.

Leamington Gas Works

Thank you to all those members who answered the appeal for information about Leamington Gas Works in the last Newsletter. It is intended the facts be submitted to *Archive* as a short follow up article to the photograph published in Issue 37.

NEWSLETTER

Meeting Reports *by Arthur Astrop*

March 2003

Members' Evening

The Society was 'batting in depth' at its March meeting when, the scheduled speaker being unable to attend, three members came forward with a full programme of illustrated presentations, each of exceptional interest. First in was Peter Chater, who drew on his wonderful collection of slides to talk about railways, but with barely a mention of locos or rolling stock!

Instead, he dealt almost exclusively with all those aspects of the railway industry which were needed to support the actual trains themselves. Thus, he looked at everything from stations to hotels, from bridges to tunnels, from booking offices to waiting rooms, from arrival/departure boards to signal gantries, and from station advertising boards to railway workers' houses. Railways stations and railway hotels came in a wide variety of architectural styles, some for example rather pretentiously echoing the Italianate or even French *chateaux*, while others, specially in major cities, projected the air of solidity and permanence which was thought essential to persuade apprehensive passengers that their lives were in safe hands.

Passengers' fear of the 'new technology' also led to some other strange ideas which were designed to reassure. The portal entrances to some early tunnels, for instance, were deliberately made unnecessarily high and wide so that passengers would not get the impression they were plunging perilously into a small dark hole. A few hundred yards further into the tunnel, however, the workings returned to a more appropriate height and width! A tunnel in Sussex had a twin-tower portal with, between the towers, a small cottage. This building was occupied by the man responsible for the gas lighting inside the tunnel, again provided to reassure passengers.

Some excellent slides of permanent, swing- and tilting bridges followed, also a variety of viaducts some with 'stop piers' included to avoid the possibility of the arches falling in domino-effect during the construction. The 150-ft high by 700 ft long railway viaduct near Consett had supporting piers added as a precaution following the Tay Bridge disaster. Moving nearer our own times, Peter showed some slides of the advertisements which were commonplace in stations and alongside railway lines, including the never-to-be-forgotten Hall's Distemper men carrying a plank on their shoulders!

Next in was George Sayell, who started by showing a short Government film, made in the middle of the second WW and simply entitled ***Life in an Aircraft Component Factory***. The factory, it

transpired, was in fact Automotive Products, Leamington Spa, a company for which George worked for 35 years and in the preservation of whose history he has played a crucial part. In fact, the last six months of George's service with AP included heroic efforts to save priceless Company records, including vast numbers of photographic negatives, which were being wantonly tossed into skips. Almost entirely due to George's efforts, which are in the best traditions of Industrial Archaeology, the County Records Office now has in safe keeping a treasure trove of data on AP which would otherwise have finished up in the incinerator.

The third presentation was by Roger Cragg, who spoke on the original ill-fated Tay Bridge, its conception, basic design, construction and finally the findings of the enquiry which was charged with investigating the causes of its tragic collapse. Roger brought to life both the night of the tragedy and the findings of the enquiry, which were as devastating in their criticism of the design of the bridge, the quality of the workmanship, and the standard of maintenance, as they were of the culpability of its designer Sir Thomas Bouch.

Anthony Coulls and Miniature Railways

Members may be interested to learn that Anthony Coulls, who has spoken at Society meetings on two occasions in the past, has an article in the current edition of ***Industrial Archaeology Review (Volume XXV May 2003 Number 1)***. Titled ***The Ephemeral Archaeology of the Miniature Railway***, the article seeks to establish why miniature railways both merit and require archaeological study, as an aspect of the industrial archaeology of leisure and a form of 'mimic technology' of the industrial period. It further shows how a study of their surviving material remains illustrates the worth of some unusual sources which have survived as evidence of a railway's existence.

The article is easy to read and supported by some fascinating period photographs, which invoke happy memories of family seaside holidays.

Other articles of interest include: ***Technology as Culture: The Tom Rolt Memorial Lecture 2002*** by John R. Hume and ***The Archaeology of the Canal Warehouses of North-West England and the Social Archaeology of Industrialisation*** by Michael Nevell, together with the usual book reviews and shorter notices.

The ***Review*** is available for loan to members from the Treasurer.

Members Presentations

April 2003

Members' Evening

Rarely has the phrase 'circumstances beyond my control' been more appropriate than when applied to Paul Cook, the speaker scheduled to address our April meeting. On the day in question, Paul was literally still 'grounded' at Dallas airport, Texas, USA, by a combination of a security alert and a tornado! Nevertheless, our chairman Martin Green and member John Brace stepped in at extremely short notice to provide members with a most interesting variety of topics.

Martin dealt first with Rock Mill, the former water-powered cotton mill on the Avon between Warwick and Leamington and now a prestigious residential address. His slides showed various views of the mill prior to development, and then as it is today, when sympathetic conversion has enabled various aspects of the character of the original buildings to be preserved. Close to Rock Mill is the Potterton Works, now unoccupied and with the site currently the subject of substantial (and needless to say controversial!) development plans. To the rear of the abandoned factory, Martin found the remnants of the greyhound track which once flourished there, including a small wooden building inside which the remnants of the electrical switchgear once used to control the 'running of the hare' can still be seen.

Turning to the Automotive Products factory on Tachbrook Road, Leamington, so recently swept away and already fast fading in local memory, Martin then showed excellent slides of the Works in the days when the names Borg & Beck, Lockheed, and Thomson meant so much to the town. Today it is virtually only the AP water tower (used now as a support for a number of telecommunications aerials), and parts of the Sports and Social Club buildings, which remain standing on the site.

Emotive shots included the mosaic paving in the entrance hall carrying the name Lockheed, and views of the water feature in the forecourt. Even more nostalgic were the shots of *Miranda*, the bronze mermaid which once graced the water feature and which one night simply 'vanished'. Believed to have been 'stolen to order', *Miranda* was sculpted by a German artist who fled the Nazis in the 1930s and was first shown publicly at the 1951 Festival of Britain. Cast from the sculptor's original by the lost-wax process, *Miranda* has never been recovered and is still on the 'wanted list' of stolen art treasures maintained by Interpol.

John Brace's account of the fire in the Channel Tunnel, with its grievous loss of life, was in some

respects not unlike the inexorable unfolding of a Greek tragedy. From the moment when it was reported by an observant member of staff that a train carrying a vehicle on fire had been spotted entering the tunnel there was a sequence of events, a veritable 'chapter of accidents', in which confusion became worse confounded and the tragedy developed unchecked and in a nightmare of wrong decisions, and/or lack of decisions.

One after another, with a terrifying 'cascade' effect, the forward planning, strategies and automatic systems installed to deal with just such an emergency either simply failed to cope, were not followed, or were overtaken by events. At root, the catastrophe may well have started because all the advanced systems were designed to react to a fire which started *within* the tunnel. What had not been foreseen was a fire which started *outside* the tunnel, and was then carried into it.

Finally, mention may be made of the fact that the Coventry Watchmakers' Project Ltd has succeeded in acquiring premises to the rear of the Shakespeare pub in Spon St, Coventry. The building is in a rather poor condition, with a great deal of work needed to be done, but it is hoped that in due course it will house a museum dedicated to a trade which flourished in Coventry from approximately 1660 to 1960.

The Shuttleworth Collection

Members attention is drawn to the Shuttleworth Collection, a private collection of historical aircraft, many unique, and motor vehicles, originally begun by the late Richard Shuttleworth and situated near Biggleswade. It is now a charitable trust, but differs from other similar collections and museums in that during the summer, the aircraft are flown from the Collections own grass airfield and the motor vehicles are regularly driven.

Displays are held at roughly two week intervals from May to October and are an atmospheric experience. No where else in the UK is it possible to see operational historical aircraft at such close quarters, while the remarkable sight of a Bleriot taking to the calm evening air, is an event unique to Shuttleworth.

The Collection is open as a museum throughout the year and apart from the aircraft and vehicles, contains many aviation and motoring artefacts. Full details and a 2003 display programme are available from the Treasurer.

Warwickshire Civil Engineers

May 2003 Peter Cross-Rudkin
Some Civil Engineers of Warwickshire

Distinguished civil engineers with notable achievements in the County of Warwickshire formed the core of Peter Cross-Rudkin's presentation to the May meeting, and many of them in fact occupied the post of County Surveyor at one time or another. Peter started with brief reference to Sir William Dugdale, a well-known name in our area and author of an early book (1662) on the civil engineering of 'banking, draining and the construction of sea defences', with special reference to The Fens and East Anglia as a whole.

The post of County Surveyor originated principally in connection with the care and maintenance of bridges, after it was laid down by the King's Bench Division that any bridge which had established itself as 'being useful to residents of a County' should thereafter become the responsibility of that County. This ruling applied nationwide, and thus overnight to no fewer than 77 bridges in Warwickshire! From that point, it was obvious that the post of County Surveyor was one of considerable importance and responsibility.

Henry Couchman (1738-1803), although born in Kent, first made his mark as Clerk of Works at Packington Hall. As his career developed he became Bailiff of Temple Balsall Hospital, Surveyor of Buildings and then, in 1790, Bridgemaster (i.e. effectively County Surveyor) of Warwickshire. He also had considerable involvement with the county's canals and when he died he was succeeded as County Bridgemaster by his son Henry Couchman Junior. Eventually, many bridges required rebuilding as distinct from regular maintenance, and Henry Couchman Jr, born in Packington in 1771, was responsible for many County projects in that respect.

Next, Peter described some of the work of William Wright of Barford, contractor for the Staffs & Worcester canal, Clerk of Works of the Birmingham Canal, and associated with

Wolverhampton Locks and the Stroudwater Canal. Charles Handley (c1750-1812) was also associated with Barford and was a prominent contractor on the canal network, including the Warwick to Napton stretch. Tamworth-born Thomas Sheasby Senior (1740-1799) was originally a stone mason who turned to canal work and notably bridge building. He contracted to demolish and rebuild the stone bridge at Polesworth and worked on the 5-arch Dukes Bridge at Coleshill. Extensive work on canal systems in a number of counties followed. His son, Thomas Sheasby Junior, followed in his father's footsteps and is credited with designing and building the first canal aqueduct to be lined with hydraulic cement.

The work of Thomas Baylis on the Gloucester to Sharpness ship canal impressed Thomas Telford and as a consequence the two men co-operated on a number of civil engineering projects thereafter. Baylis was involved considerably with Telford on work on the Holyhead Road, mainly concerned with evening-out the gradients, and his contract in that respect included work on the Braunston, Meriden, Hickcliff and Brickhill sections. A colourful character, Baylis tackled a wide variety of work and had a chequered career, including going bankrupt in 1829. Nevertheless, eight years later he was 'afloat' again and went on to complete a distinguished career.

ADVANCE NOTICE OF THE AGM

The AGM of the Society will be held on Thursday 11th July at 7.30 pm. The attendance of all members is requested so that any decisions about the future of the Society accurately reflect the wishes of the membership. Please advise the Secretary, Dennis Crips, as soon as possible, if you have a particular matter you wish to bring to the attention of the Society.

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- ☉ Favourite IA
- ☉ Society Website
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EDITORIAL

I first raised the subject of an example of favourite industrial archaeology in the editorial of the December 2001 Newsletter. The intention then was to prompt members to contribute examples of their own favourite industrial archaeology sites, so that a list of recommended IA could be compiled for those travelling elsewhere in the UK, perhaps on holiday. Sadly, the response to this initiative was poor, save for an excellent short article from Richard Storey describing the malting industry in his home town of Ware.

Not before time this article is reproduced overleaf, using the space normally reserved for the full programme for the forthcoming season. The programme does not appear, because the Chairman, Martin Green, who now has the task of compiling a programme, understandably would prefer only to publish details of confirmed speakers. A couple speakers for 2004 are not yet confirmed, so a programme to December 2003 is included under the Society News heading and the remaining

programme will be made available at a later date. Also, since a number of members have indicated that they would prefer a reminder of the programme to appear in each Newsletter, rather than just the full programme appearing in the September edition, this quarterly listing of speakers will continue. I hope this change meets with the approval of all.

Returning to a listing of favourite IA, this is something I would still like to pursue as I am sure many members have knowledge of sites that may be unknown to others. Such an exchange of information is surely one of the potential benefits of membership of the Society. A full article, such as Richard Storey's piece, is not necessarily required. Just a brief list of a few sites of particular personal interest, with perhaps some location directions and a little of what a casual visitor might be expected to see or to look out for. Initially, I envisage a simple A4 sheet published as an insert to a future Newsletter, so please submit some sites for inclusion.

Mark W. Abbott

SOCIETY NEWS

Companion to British Road Haulage History.

As some members will be aware, for six years Richard Storey has been a member of a team of five contributing editors of a pioneering work on the history of road haulage. The project was successfully completed this year when the Science Museum published the Companion to

British Road Haulage History. Priced at £39.95, its 437 pages include several hundred cross-referenced entries. It contains in addition an eight page bibliography and 128 photographs. Member Roger Cragg contributed entries on the civil engineering infrastructure supporting modern road transport.

Programme.

The programme for the remainder of 2003 is as follows:

11th September

Dr. Michael Hodder: *The Industrial Archaeology of Birmingham*

9th October

Mr. John Boynton: *Railways to Stratford-upon-Avon*

13th November

Regional Survey: A presentation by members of the Society on the industrial archaeology of the Warwick District.

11th December

Dr. Barrie Trinder: *The Industrial Archaeology of the Market Town*.

Details of the programme for the remainder of the 2003/2004 season will be published once all the speakers are confirmed.

Subscriptions.

Members are reminded that subscriptions for the 2003/2004 season are now due. As agreed at the AGM, the amount due remains at £10.00 per member (including partner). Cheques should be made payable to Warwickshire Industrial Archaeology Society please. Prompt payment is appreciated thank you.

NEWSLETTER

Favourite Industrial Archaeology

Richard Storey

Malting in Ware

My favourite piece of industrial archaeology is a whole town, Ware in Hertfordshire, where I grew up. Situated at the crossing of the London-Cambridge road and the River Lea, it developed as one of the major malting centres for the London brewing industry. Barley was grown on the boulder clays of the area and brought down by the road to the maltings, which initially developed mainly along the northern bank of the river. The malt produced was transported along the Lea Navigation to London as were locally made bricks, with grain and manure as return cargoes. Gradually awareness of these activities and their physical manifestations dawned on me. A key experience was the local Festival of Britain exhibition in 1951, where a large sectioned model of a malting gave me some idea of the processes of barley steeping, spreading on the germinating floor and kilning, which malt-making involved. I had left the town before industrial archaeology had begun to take shape as a concept and activity, but when I became aware of it, many memories of the distinctive malting buildings surfaced, prompting observation and recording, photography and reading, to reveal a complex local economy.

Malting was seasonally related to brickmaking, for which suitable clay was available locally and for which the large malting buildings created a special demand; small foundries and metal workers developed locally to meet the demand for tie plates, kiln wire and window grilles. Barge owning and banking were also an integral part of the malting scene; although obviously not so directly related to IA as bricks and metal products, they were important components in this complex local economy with its direct and obvious links to the wider world.

An interesting question, to which I have never found a satisfactory answer, is why brewing developed on a large scale in Hertford (McMullens), but only resulted in a small-scale undertakings in neighbouring Ware. Perhaps being the county town made a difference.... On a recent visit to Ware I was pleased to see that what must have been the smallest brewery in the town, serving one outlet on New Road, still survived, only just, but partly shrouded in sheeting, which suggested there was an intent to restore.

Physical features taken for granted as part of the place where one lived began to stand out in their significance as part of an industry which was in fact in process of deserting the town, despite the

construction of one automated malting after the Second World War.

The rectangular brick slabs of the malting buildings were given variety by the different types of cowl: fixed and louvered, the *Chinaman's hat* (an apt term invented by one of my fellow-researchers in the 1960s), and, most attractive of these variants, the subtly curved and tapering rotating cowls, clad in painted corrugated iron and with a projecting wind vane, often with a heart shaped terminal. The horizontal aspect would be punctuated by projecting sack-hoist installations (lucams) and by a variety of cast-iron tie plates, which could be recorded and their legends correlated with local directories. The most exciting IA breakthrough was to recover one of these plates, with a short, hooked rod, from a malting site across the border in Essex and to find that, instead of holding a tie-rod in place, its function was to hold the wire floor of the kiln in tension.

On the ground the surface of the access yards to the riverside maltings was also in evidence: paved strips for the cart wheels between the setts the horses walked on and the round axle-protecting stones at the entrances. The yards themselves fitted into a recognisable pattern, as deep burgage plots, maximising access for numerous undertakings to the main road at one end and the river at the other, with room for narrow maltings or workshops in the yards themselves.

Some of the results of recording went into the *Journal of Industrial Archaeology* and *Industrial Archaeology* and it was a privilege to be able to supply Branch Johnson with material for his Council-sponsored survey of Herts. IA, which resulted in a county volume in the David and Charles series.

Other interests have subsequently eased aside direct concern with IA in Ware and district, but I still visit family there and was recently delighted to discover the statue of the Ware maltman, erected in front of the parish church as a millennium project. Having moved away from Herts malting, it was something of a relief to me when Brown and Clark's works appeared, to document in permanent form a much changed industry.

Further Reading:

1. Mathias, *The Brewing Industry in England 1750-1830* 1959
2. W. Branch Johnson, *The Industrial Archaeology of Hertfordshire* 1970

Continued on page 4

Meeting Reports *by Arthur Astrop*

June 2003 Dr. Anne Langley

The Brandon Silk Mill

Rather like pulling one end of a loose thread which gradually unravels, Dr. Anne Langley's original interest in a 'silk mill at Brandon' turned out to be a much longer and more fascinating research project than she could have imagined. The 19th century 1-inch map of Daventry and Coventry certainly showed a silk mill at Brandon but that proved to be only the start of the story. Research showed that there had once been a variety of mills, for different purposes, in and around the same area, and the Domesday Book recorded one in Brandon itself which, in 1086, was 'worth 26 pence a year in rent'.

A map of Brandon dated 1630 shows 'Mr Wilcocke's Mill', and in 1711 it is recorded that a Mary Wilcox (Wilcocke?) had a 'life interest in a fulling mill and mill house at Brandon'. Fulling, as Dr. Langley explained, is a 'consolidating' process in cloth making. Towards the end of the 18th century, the *Coventry Mercury* newspaper advertised an auction of a paper mill at Brandon, and a few years later an estate map dated 1792 showed the millstream, the mill itself, floodgates and outbuildings. By 1828, a Trade Directory was listing George & William Herbert as 'silk throwsters' at Brandon Mills, and such entries continued for the rest of the century.

During that period, the mill was extensively developed, had various owners, and began to employ increasing numbers of workers, including young children. The 1851 census lists Hannah and Fanny Clarke, aged 10 and 13 respectively, living in Stretton-on-Dunsmore and working as 'silk winders'. Dr. Langley found evidence of continuing friction between local schools and local mills over the employment of children by the latter. In 1872, the Stretton school log reveals that two fatherless pauper children (one only 8 years old) were compelled to work at Brandon Mill as part-timers.

Five years later, a Stretton school teacher was writing to the Factory Inspector about children working at the silk mill, and at the same time sending a letter to their parents 'ordering them to send their children to school half-time'. By the 1860s, the workforce in the mill was over 100 and in 1867 it was sold by auction, with its particulars being given as 'of 3-storey construction with a 16-ft diameter iron waterwheel, a 12-hp steam engine, and quantities of spinning, winding and doubling machinery'.

In 1877 a Mr Iliffe was listed as a 'silk throwster', with mills at Brandon and Brinklow, employing 150 and 50 respectively, and was clearly running a

substantial business. However, by 1905 the Brandon mill is listed as 'disused' and today its site is the 11th green of the Brandon Wood golf course, with only a very few ruins remaining to be seen.

The June meeting concluded with a report by WIAS member George Sayell on the latest position regarding *Miranda*, the cast-bronze mermaid which once graced the forecourt of the AP factory in Leamington Spa and which mysteriously vanished one night. Apparently Monsieur Pierre Haneuse, a French documentary maker, is interested in filming a 'life' of *Miranda's* sculptor and as a result of his researches the file on her theft has been 'reopened'. M. Haneuse has traced the sculptor's widow, now in her 70s, and discovered that she still has the molds from which *Miranda* was cast. A campaign is being planned to reawaken interest in *Miranda's* disappearance with the hope that eventually she may be rescued from her kidnappers.

Society Website

Thanks to the efforts of our webmaster the Society now has a world wide web presence at www.warwickshireias.org. At the moment this is a fairly low key presence, but at least the Society now has a website. This is something which the committee were keen to develop, but lacking the time, and what is more important the necessary skills, our grateful thanks are due to Peter for taking the initiative and making an excellent job of creating the site.

The address was the subject of much trial and error to find something that flowed well, but was not already reserved. All the obvious variants have already been taken, although perversely, none seem to be in use. The *.org* suffix is generally used by charities and non-profit making organisations, so is entirely apt for the Society.

Content is one of the keys to a successful website, especially updating the content on a regular basis. It is initially hoped to achieve this by posting successive Newsletters and previous editions of the same and by keeping a changing gallery of photographs of local IA. Which is where members can help. A supply of images of Warwickshire IA is needed, either transparencies or negatives. If you can help with these please speak to webmaster or Mark Abbott. We can arrange the necessary scanning and would prefer to do so to maintain consistent picture quality. Thank you in anticipation.

Mark W. Abbott

Local Brickmaking Overview

July 2003 Toby Cave
Brickmaking in Warwickshire

It is a curious fact of brickmaking that from its beginnings, even up to the present, it has remained an industry based largely on the use of relatively simple technology. Despite the fact that today its output is measured in multi-millions, the brickmaking industry has largely either resisted, or has not proved to be appropriate for, the use of any of the really advanced technologies. Even its use of automation and mechanisation is fairly modest compared with other high-output industries.

This was the starting point for our President's address to the Society's July meeting when he took a broad sweep over his subject and reminded us that the origins of brickmaking lie in the basic application of sweat and muscle. 'Brick works' originally sprang up wherever a suitable supply of clay, however small, had been found. Clay was dug in the autumn to be used in the following spring, and when enough bricks had been made they were simply piled up in 'clamps', covered with brushwood, and the latter was then ignited. Some days, or even weeks, later (and following regularly replenishment of brushwood), the bricks were deemed to be 'done'. Consistency of quality could hardly be guaranteed!

Brickmaking was an occupation that carried very little prestige, and censuses show that those engaged in it often tried to disguise that fact by registering as maltster/brickmaker, farmer/brickmaker etc. In order to counter 'cheating', standard sizes for bricks were eventually needed, and by the early years of the 19th century something which was just about recognisable as a brickmaking industry began to emerge. Patents associated with the trade began to appear, most of them based on minor modifications to existing practice, and in 1841 a major step forward appeared in the form of wire-cutting to length clay which was extruded in standard section. One man and three boys could now produce a steady 1000 bricks per day.

Gradually brickworks proper began to appear, kiln development progressed, and with the arrival

first of the canals, and then what is more important, the railways, the national demand for bricks soared. A typical Victorian railway bridge would call for at least 300,000 bricks, and as the railway network expanded it proved to be a major customer for the country's brickmakers. Better furnaces were developed but the industry remained reliant to a very great extent on sheer muscle power. Clay mixing was still regularly performed by 'treading' and it was not uncommon for children to be given time-off school to work in the trade. In 1871, an Act of Parliament was introduced to regulate and inspect the brickmaking industry, the working conditions within which were officially described at the time as being 'hard for men and cruel for children'.

In the late 19th century, Websters of Coventry was considered to be the largest and most advanced brickworks in the UK, with five kilns operating and an output of a least 600,000 bricks per week. In fact, an output of 1,000,000 bricks per week was at one time contemplated. Finally, Toby gave a summary of the subsequent rationalization and changing structure of the British brickmaking industry. The meeting ended with a short video of the Oak Farm Brickworks in the Black Country where the various skills and crafts required in the production of specially shaped handmade bricks are still employed, and the only concession to mechanisation appeared to be the use of wheelbarrows!

Further Reading, *Malting in Ware, Continued:*

3. Brown, *Steeped in Tradition. The Malting Industry in England since the Railway Age* 1983
4. Parker, *Nothing for Nobody. A History of Hertfordshire Banks and Banking* 1986
5. C. Clark, *The British Malting Industry since 1830* 1998

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- ☉ Spring Programme

EDITORIAL

One hundred years ago this month man first achieved controlled powered flight in a heavier than air craft. Now, at the beginning of the 21st century, the aeroplane is an accepted part of life and a crucial component in the global economy. During those one hundred years, the speed of development in aviation technology has been rapid, in so far as the link between that first frail Wright Flyer and the modern high capacity airliner following a computer controlled course, would appear tenuous. Yet a link there is, however unclear.

That the history of aviation and its technology is a branch of industrial archaeology is unquestionable. However, how well industrial archaeology as a discipline has served the understanding of the development of aviation technology, is perhaps a matter of less certainty.

Those with an interest in aviation are no doubt aware that the aircraft enthusiast is well served by a continuous torrent of publications, and numerous museums. Yet serious original

research is not as common amongst all this material as might be imagined. The Society, for example, has a full set of AIA annual and quarterly publications dating back to 1997. A quick skim through these reveals no article on any aspect of aviation, apart from short abstracts of publications. The Society's complete set of *Archive* shows more promise, with a number of articles on aviation over the years. Specialist societies often do produce good work, for example the Society of World War One Aero Historians; Cross and Cockade, while some of the publications of the Smithsonian Air and Space Museum are exemplary; witness the books published about the restoration of specific aircraft by that Institute.

Perhaps, in truth, the research is done and published, but not under the banner of industrial archaeology. Why should this be? Aviation might be considered an upstart compared with many industries, although this should not make it any less worthy as a subject for academic study. There are too, plenty of historical tangible remains to investigate. The answer might be that the industry is extremely complex, encompassing aeronautics, engineering, manufacturing, civil engineering, architecture and social history. Therefore, of necessity any study of its historical aspects is fragmented and undertaken by specialists in fields not obviously related to industrial archaeology or even aviation.

Mark W. Abbott

SOCIETY NEWS

Programme.

The programme for the Spring meetings of the Society is as follows:

8th January

Dr. Anthony Streeten: *Industrial World Heritage Sites in the UK: Successful Nominations and Future Prospects.*

12th February

An Evening Led by Members of the Society: *The Stratford District.*

11th March

Dr. Alan Cooke: *Once Upon a Time - the World's Thickest Coal Seam. The Geological Story of the Warwickshire Coalfield.*

8th April

Mr. Ken Chapman: *Troth and Hillson: The Langley Ploughmakers.*

Subscriptions

Members are reminded that subscriptions for the 2003/2004 season are now due. The amount payable, as agreed at the AGM, is £10 per member. Cheques payable to *Warwickshire Industrial Archaeology Society* please. If you are in doubt about your subscription status please ask the Treasurer. Receipts for payments received by post will be available at meetings.

Speakers

The search is now on for speakers for the 2004/2005 season of meetings. With the Chairman's impending retirement from Warwick School and subsequent holiday, he is keen to have the programme arranged as soon as possible, so recommendations for speakers will be gratefully received.

NEWSLETTER

Meeting Reports *by Arthur Astrop*

September 2003 Dr. Michael Hodder
The Industrial Archaeology of Birmingham

Birmingham was once a 'new town' and a hive of industry long before it became famous as the 'workshop of the world', and certainly long before it became synonymous with metal-bashing. As Dr Michael Hodder, Planning Archaeologist with Birmingham City Council, pointed out at our September meeting, evidence of pottery manufacture as early as the 12th century has been uncovered in what is now the City centre, and in fact represents classic exploitation of the very few natural resources the area possessed. In its earliest times, Birmingham needed to rely heavily on only three raw materials, namely clay, water and wood (for firing), all of which it had in abundance. Pottery manufacture was therefore an obvious choice to maximise those three resources. Rope and textile manufacture, also tanning, were other early industries for which Birmingham's limited natural resources would later be used.

Dr Hodder has been exceptionally busy in recent years as the massive redevelopment of Birmingham's Bull Ring area has continued and almost every square-metre has been scanned for possible archaeological finds. During the Bull Ring's development in the late 1950s and early 1960s, developers paid little or no heed to the disturbance of archaeological remains, even if they noticed their existence in the first place. These days, site work cannot be started until the archaeological 'all clear' has been given, and the costs of the work needed to recover or preserve finds must be met by the developers. Finds of early pottery show the use of typical Birmingham yellow clay, together with the decorative use of white clay brought in from other areas. There was also, Dr Hodder explained, a very large and thriving brick, tile and pipe-making industry in Birmingham in the 18th and 19th centuries. From very early times, Birmingham had a cattle market and this was the source of raw material for its tanning industry, which prospered in the 16th and 17th centuries. Hides arrived at the tanneries with heads, horns and hooves still attached, which the tanners discarded. Other industries, however, soon found a use for them. The use of water in copious quantities is essential in tanning, as it is in rope making, and Birmingham's plentiful supply was used for those industries, also later for driving waterwheels.

Waterwheels were first used to drive small machines, for polishing buttons and coins for example, but later the entire machinery of Boulton's great Soho Manufactory was driven the same way.

Even when steam arrived it was initially used to lift water to reservoirs feeding waterwheels, and it was only later that Watt's engines were employed to drive Soho Manufactory's machines direct. Today nothing survives of Soho Manufactory (although thankfully Boulton's residence Soho House still stands), but in the gardens of residential housing near the site of the Manufactory evidence of how water was once piped to the works has been discovered. (Members may recall there was a TV programme in the *Time Team* series that featured a search for evidence of the Soho Manufactory).

Finally, Dr Hodder turned his attention to another of Birmingham's almost 'forgotten' industries, namely glass making. Flourishing in the 19th century, the glass makers made full use of the City's complex canal system as a mean of both bringing in their raw materials, and then 'gently' shipping-out their fragile finished products.

End of an Era

September marked the end of an era in aviation history. Overshadowed by the impending withdrawal of Concorde from service, another aircraft made its final flight; the LVG CVI owned by the RAF Museum and based at the Shuttleworth Collection. This too is a very special aircraft. It is a genuine World War 1 survivor of German origin, one of very few such machines left still capable of flight. That so cumbersome and vulnerable a device should even have survived the war is remarkable. Still to be airworthy 80 years later, makes LVG CVI No.7198/18 an extremely rare aircraft.

Sadly, the machine was only on extended loan to the Collection and has now moved to RAF Cosford to be prepared for museum display. The final official flight took place during Shuttleworth's Twilight Air Display of 20th September; strong winds preventing a sortie, as planned, at the October event, although the aircraft appeared on the flight line and had its engine run for the benefit of the crowd.

However, I was extremely privileged to see the actual last flight of the machine late on the evening of the 20th September. In the deep purple twilight, by the Collection's Hurricane, gently ticking as it cooled in the evening chill, I watched as Air Commodore Keith Dennison piloted the LVG into the air: his first and only flight in the machine. A fitting finale for a fascinating relic of aviation history.

Mark W. Abbott

Railway History

October 2003 John Boynton

Railways to Stratford upon Avon

Railway sidings and a wharf where the Stratford-on-Avon canal basin is today, and before that a very primitive horse-drawn tramway, were some of the milestones with which John Boynton started his talk on railways to Shakespeare's birthplace. Relics of the tramway, of course, remain on display in Stratford to this day; a wagon standing on a short section of track mounted on stone setts, rather than sleepers, so that the horses could walk in relative comfort. Some of the setts, John pointed out, can also be seen incorporated in the walls of the rose gardens in front of the theatre. The tramway bridge over the Avon remains too, now a footbridge. Principally, however, John concentrated on the Stratford & Midland Junction Railway (the SMJ). He traced the route of this line from its beginning in Birmingham and followed its meandering through a series of stations, some of which genuinely warranted that title whereas others were no more than either 'halts' or 'platforms'. He touched on the historic main line stations in Birmingham, mentioning their current restorations, and then took us on a wander down the SMJ calling at stations of particular interest *en route*.

The 'halt' at Earlswood for fishermen visiting the lakes; the station at Danzey with its elegant stone bridge designed to be 'in sympathy' with nearby Umberslade Hall; the use of pine trees to provide shelter for passengers on station platforms; and the Bearley aqueduct. All these and many others had honourable mentions and featured in excellent colour slides. John also stirred memories with shots of historic locos, signal boxes, station canopies, footbridges, and even station furniture, including a penny-in-the-slot platform ticket machine.

Newport Transporter Bridge

The meeting concluded with a talk by John Selby on the Newport Transporter Bridge over the river Usk, which he visited while attending this year's IA Conference in Wales on behalf of WIAS. Opened in 1906, the bridge has been the subject of a major restoration project, after many years of neglect, and is well worth a visit. It carries vehicles and foot passengers on a 'platform' which is suspended above the Usk on cables and is moved across the river by an overhead 'traveller', rather like that of a gantry crane. The motor house with its huge cable-winding drum is on the east bank of the river, while on the moving platform itself there is a charming control house the design of which is not unlike that of a Victorian ice-cream kiosk! John's

slides showing the structure of the transporter and its supporting columns outlined against a brilliant blue sky were quite memorable.

A Subject for the Tip?

A neighbour recently approached me explaining that, although her husband died over three years ago, she had only recently got round to sorting out his 'hobby'. The latter turned out to be a collection of books, photographs, slides and other items associated with the history of the airship. There was even a small section of the frame of R101!

Everything was carefully catalogued, and there was even a monograph he had written on lighter-than-air craft in the 1930s. She confessed to having no interest whatsoever in the subject, and neither, she added, had her children or her grandchildren. Did I think anyone else would possibly be interested, or should she just take the lot round to the tip?

Fortunately, I was able to put her in contact with someone who was delighted to take over the collection. However, the incident gave me cause to think. Most amateur industrial archaeologists have 'collections' of one sort or another. How many, I wondered, had thought to make sure there is some indication as to whom they might at least be 'offered' before they eventually end up in the skip?

Favourite IA

Continuing the recent Newsletter theme of favourite IA, members might like to consider a visit to the following sites:

Grassington Moor, North Yorkshire. Extensive and well preserved remains of lead mining including an impressive condensing flue and chimney. Follow the narrow road up through Grassington town centre and park on the verge where the tarmac stops, near a house called *Yarnbury*.

Cwm Bychan Copper Mines, North Wales. Remains of a concentration plant and aerial ropeway up the valley. The upper terminal of the latter is largely intact. Park at the Nantmor National Trust car park, near Beddgelert.

Menai Suspension Bridge. A classic, best appreciated by a walk from Church Island, Menai Bridge; along the Belgian Promenade; under the bridge approach viaduct and then up Cambrian Road to the Anglesey end of the bridge. Complete the excursion by a walk across the bridge and back.

Members' Presentations

November 2003 Members' Evening

Some Aspects of the Industrial Archaeology of Warwickshire

So great was the amount of material presented by members to the November meeting that it considerably overran its allotted time. The evening started with a rallying cry from Martin to the effect that surely the time had now come for our Society to stop hiding its light under a bushel and to publish some of its accumulated data, thus letting others have the benefit of its researches to date. Martin suggested that our Society should henceforth not just aim to list and record but should then go on actively to publish. And as far as the latter was concerned, he suggested that the release of its records of IA sites in the area defined as 'Warwick District' would be the ideal place to begin.

That there is an abundance of data for our Society to publish was made very clear when Roger Cragg stepped up to review the work already carried out by members on bridges, canals and water towers alone in the area. As always, Roger's unrivalled collection of slides on all three subjects splendidly illustrated the points he was making, and in addition served as examples to members of precisely the types of IA sites we all should be researching, photographing, and where appropriate recording in detail. Roger added a fourth category to his list, naming it 'miscellanea', and then showed several slides of the unusual roof structure which once covered the swimming baths in Leamington's Pump Rooms. Designed by de Normanville, it has been beautifully preserved, refurbished, and today it shelters the town's new library.

To give members some typical examples of the types of IA sites associated with railways in Warwick District, Peter Chater then dipped into his extensive 'library' of slides. He showed subjects as disparate as the London Illustrated News's 1844 picture of Kenilworth's station (part of which is now incorporated into Drummonds night-spot in the town!), to Leamington's Avenue station in 1861; and from the coal yard at Claverdon station to a loco picking up water from a between-the-rails trough.

To round-off the evening, Denis Crips concentrated on the splendid example of IA which lies within the walls of Warwick Castle, namely the electricity generating plant which was opened in 1894. Its inaugural task, which at first switch-on must have caused the Mill Engineer Mr Bissell great anxiety, was to light the Castle for A Great Celebratory Ball. The plant supplied current at 100 V DC from a massive array of batteries which, in turn, were charged-up by dynamos. The latter were driven either by the mill wheel or by one of a pair of gas engines. There was also an underwater turbine, driven by the river, which was used to charge a pressure accumulator that forced water up from approximately river level to serve the Castle. The subject of recent extensive restoration, the complete electricity generating plant is open to view by the public and, being extremely well presented, is highly recommended for a visit.

Warwick Gasworks

The distinctive structure that once housed the gas holders associated with Warwick Gas Works, and now converted to offices, has been empty for some time. Over the months it has gradually become more shabby, culminating recently in a more concerted attempt at vandalism. Windows were broken and a small fire started in the ground floor of the right hand tower that once housed a gas holder. Now, smoke stained, the building scarcely looks the important industrial monument that it is; probably the earliest extant gas works structure in the UK.

However, salvation is seemingly at hand. A sold board has appeared on the building, so hopefully it will soon be restored to its former self. The structure is of course of particular interest to the Society since it was the subject of the Society logo for a number of years.

Mark W. Abbott

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WARWICKSHIRE

Industrial Archaeology Society

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- ☉ Meeting Reports
- ☉ AIA Conference
- ☉ Bridge 129
- ☉ Summer Programme

EDITORIAL

I particularly enjoy walking and this year resolved to make more of an effort to get out into the countryside. Coincidentally, there were moves within the Society towards publishing some form of guide to the Industrial Archaeology of Warwickshire and this led me to realise how little I really knew of the IA of my local area. I have a few favourite locations that I visit regularly, but apart from these, I probably know more of the significant IA sites on Anglesey than I do of any in the area around Southam.

This is to do with familiarity I suspect. Anglesey is a regular holiday destination, somewhere different to be explored and photographed. Time is limited. In contrast, Southam is familiar and the surroundings can be visited at any time. There is always tomorrow, which of course never comes, while today there is always something more pressing to do. So with an impending change in personal circumstances, I decided to set aside a weekend afternoon as walking, thinking and exploration time, with walking all the canal

towpaths in my immediate area as an initial target.

So what have I discovered? Well, in truth, not much of real IA significance that is not already generally well known. Oxford Canal bridge 129 is written up elsewhere in this Newsletter, while the only other intriguing detail of note is a small long disused excavation and sleeper built wharf behind Wormleighton Grange. Any comments on this would be welcome.

However, I have come to appreciate the distinct atmosphere of the Oxford and Grand Union Canals.

The Oxford Canal, south of Napton Junction, retains its largely contoured course. It has an intimate atmosphere. Meadows slope down to the water, trees overhang the water and the canal feels part of the landscape; indeed with its meandering course it could be mistaken for a river. It seems to belong to an unhurried rural past.

In contrast the Grand Union Canal, heading off from Napton Junction, has a far more engineered feel. The impression is of a waterway cutting through the landscape, imposing itself upon the landscape on its engineer's terms, much like the later railways would do. One senses an industrial monument with a purpose.

As intended, I have learnt something. However, the most memorable occurrence had nothing to do with IA; it was the time spent near Marston Doles watching a barn owl hunting.

Mark W. Abbott

SOCIETY NEWS

Programme.

The programme for the remainder of the current season, to July 2004, is as follows:

April 8th

Mr. Ken Chapman: *Troth and Hillson: The Langley Ploughmakers*

May 13th

Mr. Mike Rumbold: *Some History of the Weedon Royal Ordnance Depot.*

June 10th

Dr. George Noszlopy: *The Public Sculpture of Coventry, Solihull and Warwickshire Some Industrial Connections.*

July 8th

Society AGM and Members' Contributions.

August

No Meeting.

A programme for the meetings from September to December 2004 will appear in the June Newsletter.

Subscriptions

Reminders have been sent to members who still owe their 2003/2004 subscriptions.

Thanks to all who have paid promptly upon receipt of the reminder. Please can any outstanding payments be made as a matter of urgency. Cheques payable to Warwickshire Industrial Archaeology Society please.

Thanks

The Committee would like to thank all those members who contributed to the February meeting, by speaking on aspects of the Industrial Archaeology of the Stratford upon Avon district of Warwickshire. It proved an informative and enjoyable evening.

NEWSLETTER

Meeting Reports *by Arthur Astrop*

December 2003 Dr. Barrie Trinder *The Industrial Archaeology of the Market Town*

The market towns of Britain were often the 'incubators' in which first crafts and then minor (and sometimes ultimately major) industries were born, nurtured and brought to maturity. It was this aspect of many of our historic market towns on which Dr Trinder concentrated in his December lecture to the Society.

The typical 'market town' often tended to emerge where any cluster of dwellings had some form of communal open space which lent itself to the display and trading of locally made goods and services. Next, around the periphery of this open space, began to be built houses in which the ground floor was a rudimentary form of shop. Some of these houses then began to be occupied by the professions, such as the law and banking. Later, the classic multi-storey merchants' houses started to border the market square, with the ground floor providing a proper shop, the first and second floors offering spacious living accommodation for the trader and his family, and the top floor housing the live-in servants. Many of these merchants' houses survive in market towns to this day and, where they have been conserved and cherished, are elegant additions to the environment.

Dr Trinder pointed out that some trades and crafts were to be found in almost every market town, including milling, tanning, malting, wheelwrighting, saddlery, brickmaking, brewing, shoe making, printing and so on. In other instances, areas centred on market towns tended to specialise, as for example with shoe making in Northamptonshire, furniture making in Buckinghamshire, and clock and watch making in Coventry. It was also important, Dr Trinder suggested, to distinguish between the products of crafts and trades intended principally to serve the town and its locality itself, and the production of 'manufactures', that is, products intended to be distributed and sold over much larger areas, and even in some instances to be sent overseas.

There were also instances where one trade or craft literally gave birth to others. The blacksmithing trade, for example, frequently led to the establishment of specialised forges and often to the start of an iron-founding industry in a given locality. In turn, the advent of the ironmonger as a thriving retail trade gave a boost to the trade of the forges and the iron-founders, and there were other instances of a similar kind. To illustrate his points, Dr Trinder showed a large number of excellent slides of market towns, and especially those where buildings originally used to house long-lost crafts

and trades can still be seen, albeit they are now used for quite different purposes.

To follow Dr Trinder's talk, it was appropriate that the meeting should conclude with the showing of a video of one of the oldest crafts of all, namely brewing. It dealt in considerable detail with the history and practice of the Hook Norton brewery which has been in the hands of the same family for several generations. In many instances, belt-driven equipment powered by a splendid horizontal steam engine is still being used but, as its present manager succinctly said, 'Hook Norton brewery lives with its history, but it does not live in its past'. Indeed, as he spoke a computer was visible on a desk in the background!

Oxford Canal Bridge 129

Amongst the slides shown by Roger Cragg at the February meeting, was one of a curious and very dilapidated wooden footbridge over the Oxford Canal at Wormleighton Grange; Bridge 131A. It can be confirmed that this bridge still stands and is one of a pair of similar structures in the area.

Here, at Wormleighton Grange, the Oxford Canal makes one of its occasional 180 degree changes in direction to detour around Wormleighton Hill and on the far side of the hill to Bridge 131A, stands Bridge 129. This structure is a modern version of its wooden neighbour. Carrying a concrete plaque with the date 1952, blue brick piers support a single girder across the canal, which in turn carries a wood plank walkway, reached by steep wooden ladders at each end. Strangely the girder is not one piece, but apparently jointed at the one-third / two-third span point with substantial riveted fishplates reinforcing the join.

It can further be confirmed that there are now no other such bridges on the southern Oxford Canal in Warwickshire, although broadly similar footbridges do occur elsewhere on the canal system; for example the so called **Black Bridge** behind Flavel's works in Leamington.

The purpose of these two Oxford Canal bridges is a mystery too. No public footpath directly communicates with either, so it is probably reasonable to assume they were built as occupation crossings, despite there being 4 other brick occupation bridges nearby. This is borne out by Bridge 129, where the access ladder on the towpath side crosses the boundary hedge into farmland.

UK Industrial World Heritage Sites

January 2004 Dr. Anthony Streeten

Industrial World Heritage Sites: Successful Nominations and Future Prospects

World Heritage Sites are places or buildings of outstanding universal value, and it is the duty of the international community to co-operate in order to protect them. Well over 700 sites have already been inscribed on the World Heritage List, covering cultural, natural and mixed locations, and new ones are being added each year. The first meeting of WIAS in 2004 welcomed Dr Anthony Streeten who spoke briefly on WHS's in general and touched briefly on the 24 listed in the UK, which range as widely as the Giant's Causeway and the Tower of London, to Stonehenge and Maritime Greenwich, and from Ironbridge Gorge to Saltaire.

He then focussed on *industrial* WHS's in the UK, and selected for detailed description the Derwent Valley Mills. This 24-kilometre stretch of the Lower Derwent Valley is rich in industrial sites of genuine world historical significance. The jewel in the crown is undoubtedly Sir Richard Arkwright's 1771 Cromford Mill, where so much pioneering work in the textile industry was carried out, but the string of mills and other buildings along the valley at Belper, Milford, Darley Abbey and Derby are of equal importance.

It was in the Derwent Valley in the 18th century that waterpower for driving manufacturing processes on an *industrial* scale was first truly harnessed, with innovators like Arkwright, Strutt and Evans pioneering the required technologies. It was the sheer scale of the mill buildings designed and erected by such men, together with the methods they developed and the numbers they employed, which transformed the manufacture of textiles forever, and introduced 'factory production' to the world.

The social effects of the new technology as it spread through the valley were immense, and examples are preserved as part of the area being listed as a WHS. The growth of communities of weavers, the use of 'top shops' by framework knitters, the rise in employment of child labour, the emergence of ancillary industries such as nail making, the growth of nonconformist religion and its associated chapels and Sunday schools, all these and other knock-on effects were described by Dr Streeten in his talk.

It is obviously an honour for any country to have its World Heritage Sites listed, but with that honour come responsibilities. Not least the burden to maintain each site and to have an approved management plan for the latter. Obviously, no

WHS can be completely cocooned in isolation. The host country, therefore, must also have a systematic programme of protecting each site against the adverse pressures and encroachments from neighbouring areas, where 'everyday 21st century life must go on' as usual.

Other industrial WHS's in the UK touched on by Dr Streeten in his talk included Ironbridge, Saltaire and Blaenavon. The UNESCO web site for World Heritage Sites is www.UNESC.org and members are recommended to visit it.

AIA Conference

Notice has been received of the 2004 AIA Annual Conference. This year it is to be held at the De Havilland Campus of the University of Hertfordshire, Hatfield, and will feature the industrial archaeology of the Hertfordshire and Lea Valley area. The dates are somewhat earlier than is usual; Friday 13th August to Thursday 19th August, with the main part of the conference occupying the weekend of 13th, 14th and 15th of August.

The provisional programme is varied and interesting, with emphasis upon the important local industries of malting and gunpowder. However, other less obvious industries are not forgotten with a visit, for example, to the Leighton Buzzard Railway; a once important transport system for local sand quarries and a lecture on watercress growing in Hertfordshire.

Aviation is perhaps the only local industry not well represented in the programme. Hatfield is of course the former home of De Havilland, who built the world's first commercial jet airliner; the *Comet*, a design that still lives on in essence in the RAF's *Nimrod* maritime patrol aircraft. Since there is nothing left of De Havillands in Hatfield, this is not surprising and a scheduled visit to the RAF Museum and its newly opened Claude Graham White building does something to redress the balance.

Full details and a booking form for the Conference are available from the Treasurer. Any WIAS Member, whether individual an AIA member or not, can attend the Conference, as the Society is affiliated to the AIA. However, it should be made clear that the cost to attend the full Conference on residential terms is high; almost £600, although there is this year a 'first timer's discount' of £25 for the conference weekend or £50 for the full week. A welcome innovation that will hopefully encourage new attendees.

Members' Presentations

February 2004 Members' Evening

Some Aspects of the Industrial Archaeology of South Warwickshire

Returning to the theme of the November 2003 meeting, namely the growing importance of our Society publishing data on its own behalf, chairman Martin Green reviewed recent decisions by the Committee regarding the Society's Gazetteer. Recognizing that the latter can never claim to be totally comprehensive it has been decided to re-title it accordingly, and it will now appear under the heading ***A Guide to the Industrial Heritage of Coventry and Warwickshire***. Its contents will be arranged by 'district' (as distinct from by industry) so that anyone can quickly and conveniently identify the sites to be found within a given area.

While it is obviously important to decide what to include in the Guide, it is equally important to know what to exclude. In the latter category will largely fall what may be termed 'social' archaeology, such as hospitals, prisons, schools, Town Halls, housing etc. Exceptions could be made, however, where any outstanding historical connections with such structures are found to exist. Practical help from Society members in compiling text for the Guide will be vital, and to assist in that respect the Committee proposes to prepare a typical sample 'paragraph', and a sample 'chapter', to show the type of format to be aimed at. Members are also urged to provide illustrations to accompany their text where appropriate, ideally in the form of colour slides but others formats can also be accommodated.

As an example of the type of 'guide to IA sites' which can be produced based on the use of relatively short paragraphs of text, Martin cited that compiled by members of the Alcester & District Local History Society. This piece of work covers IA sites to be found in the Lower Arrow Valley, Warwickshire, and in approach, format and coverage is very close to that envisaged by our Committee for our own Guide. For members without access to the Internet, printouts of this piece of work by the Alcester group are available from Martin.

The meeting then moved on to consider 'The

Stratford District' as one of the most important to be covered in our Guide. This area is surprisingly large, as a proportion of the County as a whole, and the diversity of IA sites within it is extensive, ranging from the rural/agricultural to the intensely industrial and including a variety of different types of transport and early forms of power generation. Contributions by members on sites to be found within the Stratford District included a talk by John Brace on stone field markers of the type used when ridge and furrow farming was practiced, and examples of different designs of 'sheep washes'.

Peter Chater contributed a talk on aspects of the Edgehill Light Railway which operated from 1919 to 1925. Covering the 5 1/2-mile stretch Burton Dasset/Edgehill, the line handled the output of an ironstone quarry and part of its route passed over what is today the site of CAD Kineton. Roger Cragg then took a broad sweep over selected bridge, aqueduct, windmill, watermill, rail and canal sites of archaeological interest in the Stratford District, illustrated as always by some of his excellent slides.

The meeting also saw a most interesting video on the Charlecote Mill which is still working and producing flour. This video included some fine close-up shots of the gear transmissions between the waterwheels and the millstones, also to auxiliary belt-driven processes, thus giving dramatic illustration of the immense power which can be produced by a controlled flow of water.

VuePrint

In response to questions about the slide shows run via an LCD projector at the February meeting, the application used is called VuePrint. This is an image viewer and basic image editor, with extra options to keyboard control, or automate, the showing of a specified selection of images on screen. VuePrint is available for download from www.hamrick.com. Unregistered, the programme runs in demo mode and applies a watermark to all images shown. The web site details the cost of registration.

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- ☉ Early Wooden Wheel
- ☉ Autumn Programme

EDITORIAL

This edition of the Newsletter appears a month later than the heading date of June 2004, so that an abstract of the May meeting could be obtained from the speaker, Mike Rumbold. The delay has also meant that it is possible to present a programme of speakers through to December 2004.

I trust that this delay has not caused any inconvenience or confusion to members. The next edition of the Newsletter will appear on schedule in September 2004. Members are reminded that, as usual, there will be no meeting in August.

Mark W. Abbott

Erratum

The reference to the Black Bridge, in the article about Oxford Canal Bridge 129 in the March 2004 Newsletter, was incorrect. The footbridge over the Grand Union Canal behind Flavel's works, is of course known colloquially as the Ladder Bridge. My apologies for the error and thanks to Roger King for pointing out the mistake.

Mark W. Abbott

* * *

NAPTON ENGINE

Water supply was often a problem for canal companies, a point exemplified by the summit pound of the southern section of the Oxford Canal, between Marston Doles and Claydon. This pound was dug deeper than usual to provide a reserve of water and three reservoirs were built: Wormleighton, Clattercote and Boddington, to replenish the water lost through the locks at Napton and Claydon. There was also a pumping scheme to back pump water up the Napton lock flight.

This scheme is little known and rarely mentioned in the Oxford Canal company records. However, much can still be traced in the field and it was these remains that Peter Chater, John Willock and I set out to investigate on the last Sunday in March.

Water was taken from the canal immediately below Napton Bottom Lock at GR458607 and conveyed by surface feeder to a point near GR463600. At the point the feeder crosses under the minor road between Chapel Green and Napton Holt; GR461601, it was observed to contain a strong flow of water.

Beyond the road, the course of the feeder is clear around an area of marshy ground, but eventually becomes indistinguishable from a small stream flowing in the opposite direction. Somewhere hereabouts a tunnel, some half a mile in length, took the water to the pumping engine at

Continued on page 2

SOCIETY NEWS

Programme.

The programme, through to December 2004, is as follows:

July 8th

Society AGM and Members' Contributions.

August

No Meeting.

September 9th

Mrs. T. Demidowicz: *The Birmingham Jewellery Quarter.*

October 14th

Mr. D. Fowler: *The History of Cheese and Cheese Making in Warwickshire* Includes cheese tasting!

November 11th

Mr. J. Boynton: *The London and Birmingham Railway.*

December 9th

Mr. J. Burton: *Ribbon-weaving and Hat-making in the Bedworth Area.*

A programme for the meetings from December 2004 into the New Year, will appear in the September Newsletter.

Web Site

Members with an Internet connection are reminded that the Society has a web site at www.warwickshireias.org.

The site is updated at least quarterly, with each Newsletter, and details of forthcoming meetings may also be found there. Occasional features on other aspects of Warwickshire industrial archaeology are also posted, most recently some pictures of the remains of the Cherry Orchard brickworks site, before its recent clearance. Other contributions are welcome, but please check these are in the correct format before submission.

NEWSLETTER

Meeting Reports *by Arthur Astrop*

March 2004 Dr. Alan Cooke

The Geological Story of the Warwickshire Coalfield

The Warwickshire coalfield, once the world's thickest seam, was laid down some 300 million or more years ago, when our County was lying a considerable distance south of the Equator! Over millennia, continental shift and drift has brought the coalfield to its present position on the globe but its seams were, in fact, the product of tropical rainforest-type conditions.

This fascinating slant on our County, and in particular on the coal fields of north Warwickshire, was the starting point of Dr Cooke's talk to the Society at its March meeting. The coal field stretches from approximately Tamworth in the North to Berkshire in the South, and as a result of the continental shift and drift mentioned above it has a number of major discontinuities in its run. Consequently, some seams are relatively close to the surface and others lie very deep, sometimes too deep to mine. Moreover, the discontinuities in seams mean that they can suddenly die out and, just as suddenly, can reappear some distance away.

Dr Cooke traced the exploitation of the coal field from its earliest days, when the available technology meant that virtually only the surface of the seams could be worked. Even in the 18th and 19th centuries, when pits could be dug to greater depths, the yield was still comparatively small, and the industry consisted of large numbers of very small workings. Flooding was a constant problem, and even the technological leap of Newcomen's atmospheric pumping engine was a mixed blessing. As Dr Cooke pointed out, these engines were so inefficient that sometimes they almost consumed coal at a greater rate than it could be mined!

It was the 20th century, and its quantum leaps in mining technology, which allowed the Warwickshire fields to be exploited properly for almost the first time. Automated and mechanised coal-cutting together with hydraulic pit props allowed pits to be dug deeper and seams to be worked virtually 100 per cent. Other industries grew up close to the pits, some very large and with considerable workforces. The Stockingford Brick & Tile Works, for example, occupied a very large site, had its own transport system connecting to main routes, and employed 1,400 people.

The decline of the coal industry is, of course, recent history and although mining as such has effectively ceased there are still massive deposits beneath Warwickshire lying untouched. Dr Cooke hinted intriguingly at modern research into extracting methane from the coal, a process which

would provide an energy source without the need to bring the coal itself to the surface.

Dr Cooke's main thrust, as the title of his talk suggested, was on the geological aspects of the Warwickshire coal field, which included the consequential effects of mining on surface topography. From time to time, old mine workings have caused sudden and serious subsidence in some parts of the County, and as a consequence dreadful 'planning blight' and 'inability to sell houses' have grievously affected some areas. It is only in relatively recent times that comprehensive, minutely detailed and highly accurate maps of mine workings in the County have been produced, and are now freely open to all for inspection.

Napton Engine continued:

GR467591. Although the tunnel appears on large scale Ordnance Survey maps of the 1930s, its entrance is not now visible. This map evidence shows the feeder apparently intercepting the surface stream near the tunnel entrance, presumably to augment the supply of water.

The site of the pumping engine is still obvious, at the end of a short arm off the canal, although the building remains have been heavily adapted for agricultural use. The original engine was a Newcomen design, installed about 1790 and in operation by 1792. In 1800, Boulton and Watt produced plans to replace it with one of their own 48 inch cylinder engines, but using parts of the original installation. However, this was probably not carried out as eventually only £150 was spent on improving the engine.¹ It is not known when the engine ceased work, although an Oxford Canal survey of 1840 notes the engine as "pulled down".

Anecdotal evidence points to a cottage on the site too, demolished in the 1970s. There is also a well, which is rather elaborate for a domestic water supply.

Beyond the engine house it is possible to trace the dry feeder, brick lined in places, to the nearby road. This it paralleled for a short distance, before heading off across the fields to reach the Priors Marston road at Marston Doles. It eventually emptied into the canal just above Napton Top Lock at GR465583, having passed under the garden of the canal side cottage (once a public house), although a modern back pumping outlet has obliterated the outfall.

Mark W. Abbott

1. Andrew Jim *Canal Pumping Engines* Industrial Archaeology Review XV 2 Spring 1993

Troth and Hillson

April 2004 Ken Chapman

Troth and Hillson: The Langley Plough Makers

Troth & Hillson was a Warwickshire firm of agricultural engineers which started life in the 18th century and survived well into the 20th, not finally closing down until 1964. The phrase "quite simply the finest ploughs ever made" was not an advertising claim dreamed up by T & H. It was the unsolicited opinion of plough users themselves, and they were all shrewd professional farmers given neither to making hasty judgements, nor to saying anything they didn't mean.

Ken Chapman has made an intensive study of Troth & Hillson, the Langley ploughmakers, and set the scene for his talk by showing a family tree to explain how successive generations of Troths, Troth-Hillsons and Hillsons led the firm and developed both the range and the designs of its products. The use of a family tree as a starting point was particularly helpful because, like so many 'dynasties' of the period, there was a propensity to replicate the same forenames, generation after generation. (In this case, there seemed to be a disproportionate number of Williams!).

Originally, T & H started by making two basic types of ploughs, the long-tail and the short-tail, suitable for Autumn and Spring ploughing respectively. Gradually, however, the Company widened its range and eventually three models were to become both the foundation and the key to its continuing success. Essentially, it made the type A1, the No 60 and the No 80 ploughs, each designed to handle specific types of soils and conditions, and over the years many thousands of each type were built. The T & H plough was distinguished by its clever combination of wood and iron construction, a design which exploited the unique qualities of each material to their maximum. Photographs and drawings of T & H ploughs shown by Mr Chapman also illustrated the beautiful lines of the wooden components, which were elegantly curved, tapered and shaped to make them things of beauty as well as of utility.

It was a proud boast of T & H that everything needed to manufacture their ploughs was made in-house, except for the paint! Great attention was paid to the selection and seasoning of the timber used for the wooden parts of the plough. Ash and pear wood predominated, and was taken only from the butts of pollarded trees and seasoned for two years on site before use. The potential of the Langley iron foundry in which T & H cast the metal parts for its ploughs was also progressively exploited. Iron parts for ploughs manufactured by

other companies were made at Langley, and over the years T & H widened its own range of cast products. These eventually included gratings, fire backs, fencing, manhole covers and guttering. Iron garden seats were also produced in the foundry, and T & H showed examples of the latter both at the Great Exhibition of 1851 and, 100 years later, at the Festival of Britain in 1951.

T & H also made horseshoes, and the Company was very proud of the fact that its products had been fitted to the hooves of winners of the Grand National in three successive years, namely 1884, 1885 and 1886.

An Early Wooden Wheel

Although not an avid railway enthusiast, I found the March 2004 edition of the *Railway Magazine*, which contained a special feature commemorating 400 years of Britain's railways, particularly interesting. In the Prehistory section, (1604-1803), of the feature article, a very early flanged wooden railway wheel was described and illustrated.

This split, and subsequently repaired, elm flanged railway wheel, was found by my maternal Great Grandfather in about 1900, during exploration of some very old mine workings at Caughley, Shropshire. Its precise age has not been established. However, Dr. Michael Lewis, in his work, *Early Wooden Railways*, published in 1970, tentatively ascribed to the wheel a date of pre-1729, and possibly even seventeenth century! It should be stated that the Coalbrookdale Company started to produce cast-iron flanged wheels in 1729, and these probably supplanted wooden ones quite rapidly. Several other early Shropshire flanged railway wheels were once known, but these seem to have disappeared over time, leaving the Caughley wheel the sole, and possibly the oldest, example extant.

The Transylvanian mine wagons with flanged wooden wheels, preserved in the museums of Berlin and Bochum, also described in the *Railway Magazine* article, are of a much later date than their English counterparts. Very early European mineral railways used a variety of curious guiding systems, but seemingly not the flanged wheel. Born of the humble coal mining areas of Nottinghamshire and Shropshire, the flanged railway wheel was a very simple, but elegant English invention, that went forward to conquer the rest of the world!

J. F. Willock

The Great Works at Weedon

May 2004 Mike Rumbold

Some History of the Weedon Royal Ordnance Depot

The most prominent structures at Weedon are the early nineteenth century Stores Buildings of the former Royal Ordnance Depot. Surrounded by a high brick wall, the eight original Stores are arranged in two lines on each side of a branch of the canal. The cut between the main channel and the Depot has now been filled.

When in 1803 war broke out with France again, it was realised that the storage of military supplies near to the coast was no longer prudent, and plans were made to set up a depot for the storage of arms and ammunition near to the centre of the country. A site in Weedon Bec was chosen, because of the proximity of the Grand Junction canal, which had reached Weedon in 1796, and Turnpike. An Act of Parliament of 1803 provided for the acquisition of 53 acres of land and the government later extended their estate to about 150 acres.

The military branch canal entered the Depot under a portcullis, set in a building known as the East Lodge, forming part of the surrounding wall, and still standing. At the west end there is a similar Lodge and the canal originally extended beyond to serve the Magazine, used in the early years to store gunpowder brought in by canal. The Magazine storage buildings, each separated from the other by a building filled with earth, can still be seen from the high ground within the Trading Estate off the Daventry Road (A45). From here can also be seen a ninth Storehouse standing isolated to the west of the main enclosure. Intended to relieve pressure on the existing Clothing Depot at Pimlico, caused by the South Africa War, it was completed in 1900, just as that War ended.

The Trading Estate stands upon the site of another of the former military establishments of Weedon, The Barracks. Built at the same time as the Depot, this comprised a group of buildings arranged about a Barrack Square. Some of these had stables on the ground floor, as the purpose of the Barracks was to house a Troop of Artillery and in those days,

guns needed horses to pull them. Between the two World Wars, the Barracks became the Army School of Equitation, and an extensive indoor riding school and further stables were constructed. The Barracks was demolished during the winter of 1955-6.

The other Government buildings in Weedon have led to one of the local legends. Constructed to house the Storekeeper and other principal officers of the Depot, these were three well-proportioned white brick buildings with connecting garden walls, presenting an imposing frontage to the east resembling a single structure. This led to the name, The Pavilion. Two of the buildings were divided into two dwellings, so that provision was made for five officials in all. These were civilian appointments of the Board of Ordnance.

It became popularly understood that these buildings were intended to house the King if there was a Napoleonic invasion, but there is ample evidence that this story is a myth. They were later used for the Officer's Mess of the Riding School. During the Second World War, together with the Barracks, they formed part of the Royal Army Ordnance Depot, when all parts of the military estate, together with other buildings in surrounding parts of the County were dedicated to the provision of weapons to the Army. The Pavilion buildings were demolished in the 1970s and replaced by Regents Park housing estate.

The Royal Army Ordnance Corps moved out of Weedon Depot on February 16, 1965. Following a period of use by the Ministry of Supply, the surviving Depot Storehouses passed into private hands in the 1980s and are now occupied by a number of small companies. These buildings and the perimeter wall are Listed Grade II*.

In late 1995, the Depot was bought by Cavalry Centre Limited, who applied for planning permission to change the use to an integrated heritage, tourist and commercial centre. Following a Public Inquiry, permission was granted in May 2000.

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- ☉ Meeting Reports
- ☉ Napton Engine Update
- ☉ IA and Landscape
- ☉ 2005 Programme

EDITORIAL

With this Newsletter entering its fourth year of publication, I feel the time has come to re-evaluate the layout and design. The one major change I would like to make is to use photographs. This always was a planned intention, but reproduction constraints: production is by photocopying which does not reproduce continuous tone images well, and cost considerations, have so far prevented this. However, software is now available to the Society that will yield masters that can be laser printed, a process that will reproduce photographs acceptably.

Therefore, I intend to print some proofs to see if photographs can be used in the future. This will require some major changes to the master pages that underpin each Newsletter, an ideal opportunity to make other changes to the design. I am happy with the current 'look', but would nevertheless welcome feedback from members as to any perceived shortcomings in the layout that might be rectified.

Mark W. Abbott

NAPTON ENGINE UPDATE

One feature of the Oxford Canal's Napton pumping engine scheme, described in the last Newsletter, which could not be located on site, was the tunnel that conveyed the feeder water the last half mile or so to the engine at GR467591. Assuming the tunnel was bored conventionally for the time, by means of working outwards from a series of shafts sunk along the intended line, some surface evidence of these shafts and the resulting spoil might be expected to remain.

The land under which the tunnel ran is farmland, so casual field research was not possible. However, the farmer of the land was fortunately encountered during the site visit and he confirmed there were occasional patches of lias clay in the fields over the tunnel, which could represent the remains of spoil raised from tunnelling shafts. This is the type of feature that could show as a crop mark, given favourable soil conditions, so it was thought that evidence of the tunnel might show up on an aerial photograph.

Getmapping plc photographed the whole of England from the air as a millennium project and images from this survey are available on the internet from a number of sites; for example www.multimap.com. Searching eventually located a good quality aerial shot of the required location at www.old-maps.co.uk. This proved to be a revelation.

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SOCIETY NEWS

Programme.

The programme to July 2005, is as follows:

October 14th

Mr. David Fowler: *The History of Cheese and Cheese Making in Warwickshire* (Includes a tasting of Warwickshire cheeses!)

November 11th

Mr. John Boynton: *The London and Birmingham Railway.*

December 9th

Mr. John Burton: *Hat Making and Ribbon Weaving in the Bedworth Area.*

January 13th

Dr. Mike Hodder and Mrs. Toni Demidowicz: *The Birmingham Glass Industry.*

February 10th

Mr. George Sayell: *The Old Mineral Line, West Somerset.*

March 10th

Mr. David Depledge: *Coventry Airport: Past, Present and Future*

April 14th

Members' Evening: *The Industrial Archaeology of the Rugby District.*

May 12th

Mr. Peter Cross-Rudkin: *William James: Father of the Railways?*

June 9th

Mr. Martin Green: *Aspects of the Industrial Archaeology of New Zealand.*

July 14th

Mr. Mike Buxton: *Milestones: Warwickshire and Beyond.*

Subscriptions

Members are reminded that subscriptions for the 2004/2005 season are now due. The amount due remains at £10.00 per person or couple. Cheques payable to *Warwickshire Industrial Archaeology Society*, please.

NEWSLETTER

Meeting Reports *by Arthur Astrop*

June 2004 Dr. George Noszlopy

Public Sculpture in the Midlands: Some Industrial Connections

There was a time when the first appearance of any piece of public sculpture was unthinkable without a solemn ceremony, a formal unveiling, a gathering of local dignitaries, and an outbreak of civic pomp (not to say pomposity). The public was expected to attend, but to restrict its participation to polite applause, and at the most to 'three (appropriately respectful) cheers'.

The second half of the 20th century has seen all that change, as has the subject matter which today is considered appropriate for a 'public sculpture'. Gone are equestrian statues of Dukes, generals and mayors and in their place have appeared sculptures which celebrate achievements, and not infrequently local industries. In his address to the June meeting, Dr George Noszlopy, Professor of History and Art at the University of Central England, illustrated this change in subject matter, and attitude towards, public sculpture with an outstanding selection of slides.

Professor Noszlopy has written two books on his subject (*Public Sculpture in Birmingham* also in *Warwickshire, Coventry and Solihull*), and further publications are in preparation. He started his talk with illustrations of 19th century public sculptures, some of which he suggested tried to pass themselves off as 'fine art', and the contrast with 20th century ideas for public sculpture was thus all the more marked. The beam engine, for example, which stands proudly on a ring-road roundabout in Birmingham, commemorates the vital part the City played in the development of steam power; and the sculpture of winding gear for a pithead, commissioned by the Nuneaton and Bedworth Council, celebrates the importance that mining once held for those towns.

Coventry, Dr Noszlopy pointed out, is particularly rich in examples of modern public sculptures, which commemorate many subjects from the arrival of the canals to the silk ribbon and motor car industries. In many cases it is an industry product which is represented, but for the waterways it is the splendid slightly larger than life-size bronze statue of James Brindley which dominates the canal basin in the City centre. Other examples of public sculpture in Coventry include: *The Journeyman*, *Children Playing* (which has echoes of Peter Brueghel the Elder), *The Coventry Boy* and, of course, the controversial *Ribbon Sculpture* which rears skywards on a traffic island in the Foleshill Rd.

Further afield, Professor Noszlopy illustrated a sculpture in Redditch which is a stylized water wheel

of the type used to power factories making the needles for which the town was famous. In Burton-on-Trent there is a powerfully realistic sculpture of a cooper making a beer barrel; in Dudley another of a man 'legging' a canal boat through a section of tunnel; and in Telford a striking sculpture in steel of a pit pony pulling a truck in a coal mine. His final slide, however, was perhaps the most impressive of all. In Newcastle-under-Lyme there is a sculpture of a coal miner pushing a loaded truck on rails in which every muscle is taut, and the 'effort' being applied to move the load is simply palpable. This slide alone showed the distance public sculpture has come in the second half of the 20th century.

Napton Engine Update *continued*:

Not only did it show a clear linear crop mark in the grass of uncultivated fields above the tunnel line, but also a number of small circular depressions along this feature, which might be interpreted as evidence of the tunnelling shafts. At its southern end the crop mark connects with the small enclosure where the engine was sited, while in the other direction, extrapolating the feature across cultivated fields gives an intersection with the small stream where the flow of this and the surface feeder were noted to meet.

If this crop mark does show the line of the tunnel, it does not match the line as drawn by the Ordnance Survey or the different line shown on the sketch map accompanying the article in *Industrial Archaeology Review XV 2* Spring 1993, previously quoted.¹ The crop mark line is closer to the latter map; including an intersection with the small surface stream further south and before the possible intersection point where the stream and surface feeder now meet (the stream has a right angled bend hereabouts, hence the two possible intersection points). However, anecdotal evidence suggests the tunnel entrance was at the pool where the water flows now coincide, although there is now no evidence of this.

Final proof of the tunnel line will require further field work in the future. Meanwhile, members with an internet connection may request a copy of the aerial photograph by email from myself, or visit www.old-maps.co.uk to view the photograph. Search for the map extract first and then choose the aerial photo option.

Mark W. Abbott

1. Andrew Jim *Canal Pumping Engines* Industrial Archaeology Review, XV 2, Spring 1993.

Members' Evening

July 2004

AGM and Members' Evening

Following the Society's 2004 Annual General Meeting* members settled down to enjoy a series of presentations by speakers drawn from within their own ranks. As always, this exercise served to remind us of the depth of knowledge which resides, often insufficiently tapped, among our members.

Mike James took us back to 1959 and the building of Leamington's reservoir, a major civil engineering undertaking with which he was intimately involved. Situated adjacent to Welch's Meadow, the reservoir was required to serve Leamington's expanding population, for which the supply coming hitherto from wells in the Campion Hills was no longer adequate.

Designed to hold 25 million gallons, the new reservoir presented a number of tricky problems from the start. Alluvial clay excavated to form the reservoir itself was unsuitable to be used for the earth banks around its perimeter, and an 'exchange' of more suitable soil from another area nearby, transported via a temporary Bailey Bridge over the Leam, had to be arranged. The alluvial clay beneath the earth banks was also unsuitable as a foundation for the latter, and advice on how that problem could be overcome was eventually provided by consultation with the Soil Mechanics Dept at Birmingham University.

Work continued throughout the winter of 1959/60 when the weather, and particularly a greater than average rainfall, produced some truly dreadful working conditions. Indeed, ground conditions eventually became so bad that the tractors and scrapers originally used for earth-moving were totally defeated, and drag-lines had to be brought in to replace them.

Following Mike's talk, Denis Crips explained how, on his return to England in 1999 from working in Saudi Arabia, he decided to start looking at some IA sites of interest in Warwickshire. As a result, he was able to show a variety of slides taken in the north of the County, notably around the Atherstone/Mancetter areas. Items of interest included remains of a granite quarry, canal facilities, watermills, and evidence of a tramway near Mancetter.

A topic on a totally different scale, namely the classic 'painting of the Forth Bridge' problem, was Roger Cragg's chosen subject. Following the introduction of the Health & Safety at Work Act, maintenance of the bridge in fact came to a stop for several years, because, of course, the practices used

so successfully and satisfactorily in the past were now totally 'illegal!' Under the terms of the Act, for example, no work could be undertaken except with the aid of scaffolding and, as many of Roger's slides showed, the amount and complexity of scaffolding needing to be erected looked almost like another bridge in itself!

Much of the surface of the steelwork needed to be sandblasted down to bare metal before priming and painting, and for this work huge curtains of plastic sheeting had to be stretched over the scaffolding. Roger was one of a very small number of those chosen by ballot to have a conducted tour of the work, and he made the most of his privileged position to take some truly spectacular colour slides, not least from the very top of one of bridge towers.

The evening was concluded by a series of slides presented by Martin Green and covering a wide variety of IA sites, including Bluemel's Wolston factory (now demolished); the workshops of Newman Bros, coffin makers in Birmingham; and the remains of the recently demolished Potterton boiler works in Warwick.

* For those not present at the July meeting, copies of the Chairman's and Treasurer's Reports, together with the presentation of accounts, can be had on application to the Secretary.

Publications

The following publications have been recently received by the Society, and are available for loan from the Treasurer:

1. Smith T. and Carr B. ***A Guide to the Industrial Archaeology of Hertfordshire and the Lea Valley***, Association for Industrial Archaeology, 2004.

This is the latest in the series of guides produced by the AIA to tie in with annual conferences. This year's conference was based in Hatfield and the guide not only covers the county of Hertfordshire but also the Lea valley from Luton to the head of Bow Creek in Greater London. As ever, a useful overview.

2. ***Archive***, Issue 43, Lightmoor Press, 2004.

The usual fascinating photograph-led selection of articles on aspects of industrial archaeology. Noteworthy for its local connection is an article about James Starley and the Coventry Sewing Machine Company. The lead article about the Hetton Railway and the operation of its inclined planes, is also particularly interesting.

Industrial Archaeology and Landscape *by Mark Abbott*

A Personal View of Industrial Archaeology in the Landscape

The term Industrial Archaeology can refer to many different things; artefacts, structures, sites, social history and even landscapes and it is the latter that I find of greatest interest.

My earliest introduction to industrial archaeology was as a landscape; a mining landscape, albeit on a small scale. During the late 1960's, family holidays were taken in a rented house at Praa Sands in Cornwall. Obviously the main attraction was the nearby beach, but fortunately my parents were also believers in walking as a recreation and a favourite route led eastwards along the coastal footpath to Rinsey Cove. Here there was an engine house. As often in Cornwall, it was perched impossibly close to the sea and in those less safety conscious times was complete with a crumbling open shaft surrounded by ramshackle wire, an open adit on the beach and a complement of tips full of minerals. I was fascinated. On numerous occasions I peered as closely as I dared into the shaft, scoured the tips for interesting samples, and wondered how something so industrial had come to be built in so remote and beautiful a location.

The mine was the Wheal Prosper and its workings are over 450 ft deep. The engine house dates from 1860 and housed a 30 inch engine which pumped to the adit level on the beach. However, the mine had worked earlier in the 19th Century and raised an average of 860 tons of ore per annum between 1832 and 1849. It finally closed in 1865.

Yet despite the engine house's industrial origin it did not, with hindsight, and from recent photographs, seem out of place. Its monumental presence added something to the landscape and built as it was from the local slate, known as 'killas', it had weathered to be part of the landscape from which it had been built. Far from being piece of industrial blight, it was a visual asset.

And this is the key to my personal perspective of industrial archaeology as landscape.

The remains of past industry can be a visual blot,

but often if left to gradually decay and weather, a distinctive and sometimes not altogether unattractive landscape will emerge. Something that, in its own way, can be as visually stimulating as the grand view or a mountain landscape. Those parts of the local flora and fauna that can adapt do so and gradually take over the remains, soften the harsh outlines and integrate the remains into the surroundings. As an example take the remnants of the lime and cement industry around Southam. While most of the concrete built works structures have gone, the quarries have flooded and the spoil banks have become overgrown. The result is a distinctive lime rich landscape, sometimes so distinctive that nature reserves and SSSIs have been designated. This would not have happened without the intervention of industry in the natural landscape.

Sometimes however, the remains are on such a massive scale that they are a landscape before the intervention of nature. Prime examples may be found amongst the remains of extractive industry. To stand high in Dinorwic Quarry amongst the barren wilderness of broken rock and low cloud is to experience an altogether alien landscape. There is nothing else like it. It has a smell, sounds and sense of place all of its own.

The copper workings of Parys Mountain or the lead workings around Grassington Moor have that similar alien sense of place that is exciting. Industry has created something that is unique. Something that is worth conserving for future generations to experience. Reclamation may not be satisfactory, even if it is viable or necessary. One of the most melancholy places I know is the former Allt Ddu district of Dinorwic Quarry where the admittedly dangerous workings and tips have been replaced by carefully graded but artificial looking slopes of anaemic grass and struggling stands of silver birch. Planning has created a soulless environment. Safer, but not a replacement for the original, or a gradual return of the industrial landscape to nature.

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WARWICKSHIRE

Industrial Archaeology Society

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THIS ISSUE

- ☉ Meeting Reports
- ☉ Napton Engine Update II
- ☉ Digital Archives
- ☉ 2005 Programme

EDITORIAL

In the September 2004 edition of the Newsletter I raised the idea of changing the design of the publication.

I also canvassed the opinion of members as to any shortcomings in the Newsletter. No comments have been forthcoming, so I assume that the current design meets with the approval of the readership. Therefore, I see no reason to change anything for the moment, and that includes the inclusion of photographs. Adding pictures to the Newsletter would entail considerable extra work and production of the established design is already a time consuming task, often requiring original material to be written by myself.

This additional material is something I do consider a possible shortcoming. There is a danger that, apart from the excellent meeting reports written by Arthur Astrop, the Newsletter reflects my personal interests rather than the interests of the membership.

There have been no complaints, but I would prefer a variety of material to draw upon, so written contributions from

Society members would be very welcome. Articles need not be long. 500 words is ideal, but shorter filler pieces are also needed, with as few as 100-150 words. Preferably these should be submitted on disc in rtf format, but I can transcribe printed work if necessary.

Mark W. Abbott

TOM CHARMAN

Tom Charman, who sadly died recently, was a long standing and loyal supporter of the Society. Therefore the Committee, after discussion with Tom's close friends, and taking into account the wishes of Tom's widow, have decided that a donation in Tom's memory would be appropriate.

Tom was a lover of the steam engine and a member of the Tal y Llyn Railway Preservation Society, for whom he acted as a volunteer train guard in the early days of that Society. Therefore, the plan is that the Society and the Warwickshire Steam Engine Society, of which Tom was a founder member, will make a joint donation to a specific Tal y Llyn project. Ideally this will be a small project associated with the Narrow Gauge Railway Museum at Towyn, that will be identified as sponsored in memory of Tom.

Peter Coulls has agreed to liaise with the Tal y Llyn Railway with the aim of identifying a suitable preservation project and a contact with whom to raise the idea of sponsoring the project in Tom's memory. The amount considered as a suitable donation by the Society is £50.00.

SOCIETY NEWS

Programme.

The programme to July 2005, is as follows:

January 13th

Dr. Mike Hodder and Mrs. Toni Demidowicz: *The Birmingham Glass Industry.*

February 10th

Mr. George Sayell: *The Old Mineral Line, West Somerset.*

March 10th

Mr. David Depledge: *Coventry Airport: Past, Present and Future*

April 14th

Members' Evening: *The Industrial Archaeology of the Rugby District.*

May 12th

Mr. Peter Cross-Rudkin: *William James: Father of the Railways?*

June 9th

Mr. Martin Green: *Aspects of the Industrial Archaeology of New Zealand.*

July 14th

Mr. Mike Buxton: *Milestones: Warwickshire and Beyond.*

Details of the programme for the new season of meetings starting in September 2005, will be published in the June 2005 Newsletter.

Subscriptions

Members are reminded that subscriptions for the 2004/2005 season have been due since September. If you are unsure about your subscription status please ask the Treasurer. The amount payable remains at £10.00 per person or couple. Cheques payable to **Warwickshire Industrial Archaeology Society**, please. Prompt payment would be appreciated.

NEWSLETTER

Meeting Reports *by Arthur Astrop*

September 2004 Mrs. Toni Demidowicz *The Birmingham Jewellery Quarter*

From about the middle of the 18th century a relatively small area just north of Birmingham city centre began to emerge as the focal point for the manufacture of what were then known as 'toys'. Not toys in the sense of children's playthings but quite small items such as buttons, brooches, knick-knacks, fashion accessories and ultimately jewellery in precious and semi-precious metals. Such goods were eventually to be produced in very large numbers, and the trade was extremely labour intensive. At its peak, the 'jewellery quarter' as it was to become known, was employing some 70,000, many of whom were women whose natural dextrous skills were ideally suited to the intricate work involved.

Today, the jewellery quarter (which still employs some 3,000) is an important focus for conservation efforts in Birmingham's city centre, and it was to this aspect that Mrs Demidowicz chiefly addressed herself at our September meeting. The origins of Birmingham's jewellery quarter lay in the wide use of 'home working' with manufacture being sub-contracted to scores of small in-house workshops, often the top rooms in back-to-back dwellings. Natural light from windows, so necessary for the close intricate work involved, was of the essence and this imperative remained even when eventually small 'factories', purpose built to suit the industry, began to appear. Nonetheless, the design of these small manufactories, intended for multi-occupancy, still maintained a flavour of the earlier 'home working' traditions.

In the 1770s, the Birmingham canal system was extended to serve the jewellery quarter and even though the French wars of the 1790s slowed the industry down it still continued to be vital to the City. By the 1830s it was really booming, and sufficiently well-established to merit the official title of 'Jewellery Quarter'. Specialization of manufacture was appearing and any plot of land large enough to site a manufactory for a few score workers (and it did not need to be very large) was soon snapped up and the density of jewellery firms in the City increased rapidly.

Mechanisation never really made much impact on the industry, which remained stubbornly labour intensive and heavily dependent on manual skills. However, simple machines such as hand-operated flypresses, and small power presses, were eventually employed. The electro-plating processes for depositing gold, silver, cadmium, chromium etc were also required, with the result that specialist

plating companies soon sprang up to serve the trade.

Mrs Demidowicz showed some excellent slides of small domestic manufactories in the jewellery quarter which have already been successfully preserved, and the drive to save others, in the face of intense pressure from property developers, is being firmly maintained. Birmingham's jewellery trade reached its peak in the immediate post-war period but then gradually, and inexorably, began to decline. This decline was caused by many factors, but chief among them was intense competition from overseas. Nevertheless, the conservation of Birmingham's jewellery quarter is extremely well established, many unique properties have been permanently saved from the bulldozer, and the impetus to save more is undiminished. Indeed, as Mrs Demidowicz pointed out, the strictures which the City has imposed to preserve remaining properties, and on the design of any new properties proposed for the quarter, are so severe as to make developers think very hard before even a single brick is moved!

Napton Engine Update II

Thanks to Hugh Compton, further snippets of information about the Oxford Canal's Napton Pumping Engine have become known.

According to the Oxford Canal Company's Distance Book in the National Archives at Kew (Ref: RAIL855/148), the $\frac{3}{4}$ mile canal arm to the engine site had Bridge No. 117 over its entrance. There is no bridge extant at that location now. Further, the arm is described as terminating at a wharf near a pumping house with a brickworks adjacent.

The reference to a brickworks is interesting. There is a flooded excavation across the minor road that now runs close to the engine house site, that could be a source of clay for bricks for the pumping scheme. That there was a documented brickworks at the end of the canal arm makes it more likely that this pit was the source of the brickmaking clay.

The canal arm is now used as residential moorings and tails off into a marshy area near the engine site. The Getmapping aerial photograph that shows the possible feeder tunnel line, does not show any crop mark that might indicate the site of a brickworks. However, the nearby excavation is small, so if it was a clay source it would suggest the brickworks was short-lived; possibly only established to provide the bricks needed by the pumping scheme.

Mark W. Abbott

Warwickshire Cheese

October 2004 Mr. David Fowler

The History of Cheese and Cheese Making in Warwickshire

There are mentions of cheese-making being practiced as far back as 8,000 BC, and many references to the industry are also to be found in the Old Testament. But at our October meeting we heard of the activities of Fowlers of Earlswood, proudly able to boast of being the oldest family based cheese-makers in England. Founded in 1840, the company still produces hand-crafted cheeses and David Fowler, grandson of the founder and current head of the firm, explained the basic stages in cheese manufacture and their importance in the maintenance of quality.

His family started as milk suppliers and at a time when it was merely the surplus milk which was used to produce cheese and butter rather than allowing it to go to waste. Today, the situation is the complete reverse, and the Company produces nothing but cheeses. It has a 110-head herd of cows, offers a range of 14 different types of cheeses in four ranges of 'strength', and it has approximately 5 tons of cheeses in store, at various stage of maturity, at any one time. In cheese manufacture, 'strength' of flavour is a product of time. Cheeses marketed as 'mild' are matured for about 4 months. Others mature for seven to eight months, and the extra-extra mature cheeses are kept for as long as 20 to 24 months before being marketed.

Many of the multiple processes involved in the hand-crafting of cheese are 'time and temperature' dependent and much of the equipment and controls employed are more akin to a laboratory than to a food-processing plant. Control of the processes, and of the procedures at every stage, are most rigorous and are also subject to strict audit by independent inspectors who can demand access to all stages at any time. They also expect to be shown the 'traceability' records of all materials used in cheese making, so that any batch can be tracked back to its origins.

Fowlers of Earlsdon have a countrywide distribution of their cheeses but it was noteworthy that today some 18 per cent of output goes to Farmers' Markets and approximately 20 per cent to the supermarkets.

Digital Archive; A Misnomer?

The term 'archive' might be defined as: A collection of documents or records or the place where such a collection is kept. Further, the term implies a collection that is conserved for use as a historical study resource.

Techniques of preserving existing paper and artefact archives are well proven and one might reasonably expect to access such collections in the future. However, a trend towards digital archives, especially amongst amateur researchers, is perhaps less welcome. The term digital archive is really a misnomer, and a better term might be digital record management.

The digital archiving of material typically occurs in one of two ways. First, there is the digital record of an existing collection. This uses digital technology as an extension of existing record management methods. The original material remains intact, while access to it for study or research is made easier. Further, the problems of conservation of the original material are eased, as it rarely needs to be removed from storage. As technology advances all that needs to be ensured is that the digital management of a collection keeps pace with technology to maintain efficient access.

Second, there is the true digital archive. This is a technique that is common amongst amateur researchers. The documents and records are stored only in a digital form. Whilst this is exceptionally convenient in the short term, it is really only digital asset management. It is an archive in the sense that it is a collection of documents, but if 'archive' also implies conservation, then a digital archive falls short of this aim.

Anyone who has owned a computer will testify to the ephemeral nature of digital data. Corruption and loss is commonplace and only avoided by systematic back up of data. This in itself is not straightforward for archival storage and access.

CDs are often recommended as a means of archiving files, but these are not a proven long term solution. Currently, ten years is thought the likely life of laser written CDs and DVDs. Also, it is unlikely that devices to read data CDs will be available in as little as ten years.

Removable hard drives are another option. However, long term stability of such data remains unproved and a change in technology could render the data unrecoverable.

So for the amateur researcher, what might be a solution to archiving information? Realistically, the answer is to keep paper copies of everything and use film for images. This will ensure a lasting record that does not rely upon technology for access. View the computer only as a means of record management and transmission.

Mark W. Abbott

Rails to Birmingham

November 2004 Mr. John Boynton
The London and Birmingham Railway

Undeterred by the fact that there was effectively a substantial 'gap' in the rails, large numbers of people in Birmingham nevertheless queued in 1838 for tickets on a newly opened railway in order to be in London on 28 June that year for the coronation of the young Queen Victoria. The discontinuity in this historic line, the construction of which was masterminded by Robert Stephenson, was caused by delays in completing the 1½-mile long Kilsby tunnel, a mammoth civil engineering undertaking at the time. To span the 'gap', passengers *en route* from Birmingham to London had to de-train north of the tunnel and travel by coach before rejoining the railway some distance further south.

The 110-mile London and Birmingham railway, John Boynton reminded us, was historic in a number of ways. It was certainly the most important in Britain at the time, could claim to be the first long-distance railway in the world, and it laid the foundations of a nationwide railway network in the UK. Unlike Brunel's Great Western railway, the route of the L & B line lay 'across the grain' of the countryside's topography and so, besides the challenge of the Kilsby tunnel, numerous cuttings and embankments also needed to be built. John's description of the excavation of the cuttings, using only picks, shovels and wheelbarrows and with the spoil being hauled up steep slopes by roped donkeys, made them seem an inconceivable, if not an impossible, task today. A major obstacle encountered in driving the Kilsby tunnel was unexpected ingress of water, which was a serious cause of delay. John pointed out that more than 30 different contractors were involved in the tunnel, and at least 10 of them were bankrupted by the project before it was completed.

At its London end, the line had Euston station, with its proud Doric entrance arch incorporating 45 ft high pillars. At the Birmingham end of the line stood Curzon St station, equally impressive in its

way and with its pillars just 12 inches taller, at 46 ft John also pointed out that the L & B line was extremely concerned with safety and security of passengers, and was the first to have 'railway police'. Men stationed along the line could signal to each other when necessary, and were in fact the forerunners of the railway signaling system we know today.

Two years after the L & B line opened, Bradshaw published the first edition of his railway timetables, which was an attempt to integrate the services offered by all the routes in the UK. A copy of the first 'Bradshaw' can be seen in the Birmingham City Library, and is noteworthy for the number of advertisements for 'quack medicine cures' which it contains! To round off his talk John showed a fine collection of slides, tracing the L & B line northwards from Euston to Birmingham, and including many early photos of stations, locos and rolling stock in the Midlands.

Publications

The latest edition of *Archive* has recently been received by the Society: *Archive*, Issue 44, Lightmoor Press, 2004. Steam locomotives and railways feature heavily in this issue, in celebration of the 200 years since Trevithick demonstrated his Penydarren locomotive, thereby showing the way forward for railways and industrial railways in particular.

However, perhaps of more interest to members is a further article in a developing series on Coventry's industrial history, on this occasion an account of William Arthur Weaver and the Coventry Victor Company Limited. The Victor Company specialised in horizontally opposed IC engines and made a range of motorcycles and cycle cars between the Wars. An excellent selection of photographs accompanies the article.

The journal may be borrowed from the Treasurer.

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- ☉ Bill Gibbons
- ☉ 2005 Programme

EDITORIAL

Elsewhere in this edition is a short article about Warwick Gasworks, included for two reasons.

First, the remains of this works are of great historical importance. This led the Society to use a drawing of the street frontage buildings as its first logo, and many in the Society retain an affection for the structure. So I hope this opportunity to add a little to members' knowledge of the site is welcomed.

Second, this style of article is exactly what is required for the planned guide to Warwickshire IA. So the article is also included to serve as inspiration to any members contemplating contributing to this guide.

Mark W. Abbott

2005 AIA CONFERENCE

Notice has been received of the forthcoming 2005 Annual Conference of the AIA. This year the location is Derbyshire, with accommodation at Nottingham University. The main programme runs from Friday 2nd September to Sunday 4th September, with a full additional programme of visits

and lectures through to Thursday 8th September.

First-time attendees are entitled to a discount of £25.00 off the main weekend programme (full price £150.00 residential), or £50.00 off the complete week package (full price £450.00 residential). The Treasurer holds details of the programme and a booking form. The deadline for bookings is 6th August 2005.

TOM CHARMAN

After a short delay, the proposed memorial to the late Tom Charman has been finalised thanks to the efforts of Peter Coulls. Funds donated by Warwickshire Industrial Archaeology Society, the Warwickshire Steam Engine Society, and some of Tom's close friends, will be used to sponsor a restoration project at the Tal y Llyn Railway's Narrow Gauge Railway Museum. As mentioned in the last Newsletter, Tom was a supporter of the Tal y Llyn Railway Preservation Society from its early days, so sponsoring a project at that Society's museum was considered to be a fitting tribute.

The specific project that is being sponsored is the restoration of a narrow gauge slate wagon from the Tal y Llyn Railway. This is already underway. When placed in the museum there will be an accompanying plaque stating that restoration was sponsored in memory of Tom Charman. Members will be advised of the completion of the project.

Mark W. Abbott

SOCIETY NEWS

Programme.

The programme for the remainder of this season, to July 2005, is as follows:

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NEWSLETTER

Meeting Reports *by Arthur Astrop*

December 2004 Mr. John Burton

Hat-making and Ribbon-weaving in the Bedworth Area

As revealing as a fingerprint is the telltale presence of a disproportionately large window frame in an otherwise rather humble building. It's a sure sign that at one time its inhabitants needed all the natural light they could get, because their livelihood depended on it. None more so than the outworking weavers who clustered in and around Bedworth and its environs.

John Burton has made an extensive study of the ribbon-weavers who once flourished north of Coventry, and his ability to spot the clues to their previous existence in even the smallest of villages made for a fascinating evening. The faintest of outlines on the outside walls of cottages which suggest there was once a larger window installed is enough for John, and if its outline cannot be detected on the outside then sometimes traces on the inside of the building can give the game away as well!

John's presentation started with brief reference to weavers' top-shops in Coventry, including those in Hillfields which are already recorded in some detail. The Coventry industry is, of course, closely bound-up with the arrival of the Huguenots, but there is evidence that ribbon-weaving in the Bedworth area predated that time. It was based on the use of small hand-loom installed in cottages in the villages around Bedworth, such as Shilton, Bulkington, Ansty, Barnacle etc. But in due course, from one-third to one-half of the population of Bedworth itself depended for its livelihood on ribbon weaving, notably in the Spitalfields area.

It was the development of the power loom, and not least the 'automation' made possible by the Jacquard punched-card system, which eventually finished the out-workers and their hand-loom. Weaving mills employing steam power and hundreds of workers took their place, and they in turn merged and amalgamated until the industry rested on a small number of large companies. One such, Toye Kenning & Spencer, survives in Bedworth to this day, has a Jacquard loom still in use, and is an important manufacturer of caps as well.

Hat-making was the second part of John Burton's talk. There is an important link between ribbon-weaving and hat-making, for practically every hat or cap has some sort of ribbon on it as well. Hat-manufacture is very labour intensive, and John explained the basic manufacturing stages involved, some of which survive fundamentally unchanged to this day. Slides of the insides of hat-making factories in the late 19th century showed

the conditions under which the workers laboured, including unprotected exposure to many chemicals which would be forbidden today. His slides also showed that the workforces included children as young as 10 to 12, who worked long hours in clearly hazardous conditions.

One of the most prominent hat-makers in Bedworth was Pickering's, which was founded in the 1880s and became a major employer. It had the most up-to-date machinery for its time, including steam-raising plant. The once-splendid factory was demolished in the mid-1950s, and on its site stands a Tesco supermarket.

W. G. (Bill) Gibbons (1921-2004)

It is with great sadness that we report the death, at the age of 83, of Wilfred George ("Bill") Gibbons.

Although not a member of WIAS, Bill was well known to many within the Society and will be fondly remembered by all those who knew him. He was a great local historian, whose profundity of knowledge on Leamington and its environs was unsurpassed.

He was born in Leamington and, apart from his wartime service in the Royal Navy, lived all of his life in the town. Although Bill only rarely talked of his wartime experiences it is known that he served on the escort carrier HMS *Unicorn*, and saw action with the Fleet at Salerno, in 1943.

Bill will probably be best remembered for his numerous publications on Leamington and other related local history subjects; there being far too many to enumerate here in this brief summary of his life. His annual calendars, usually featuring photographs of Leamington through the ages, were also extremely popular. In addition, Bill was a gifted photographer and it is believed that his considerable collection of pictures, particularly those relating to Leamington, has been secured for posterity.

Ever generous, Bill would willingly provide information on local history matters, whenever requested and if, unusually, he did not know the answer, he would endeavour to find out very quickly. He also supplied information to many organisations, including the All England Club at Wimbledon, whose museum of Lawn Tennis benefited from his local knowledge.

Although in some respects a very private person, Bill was a very congenial man, whose passing will be greatly mourned by many.

J. F. Willock

Birmingham Glass

January 2005 Dr. Mike Hodder & Mrs. Toni Demidowicz

The Birmingham Glass Industry

In 1997, Mrs. Toni Demidowicz and Dr. Mike Hodder researched the now defunct glass industry in Birmingham to see what tangible (if any), remains have survived and to pinpoint the most important sites. In presenting the results of their work, they approached the subject from two angles, namely, investigation of the documentary sources, in the form of maps, trade directories, adverts and catalogues; and secondly the hard physical evidence, such as the remains of walls, foundations etc.

Toni kicked-off with the documentary evidence which revealed at least 18 discrete glass house sites in Birmingham, and evidence that the first glass manufactory appears to have been that of Mayer Opnaim in 1757, in the Snow Hill area of the city. Important clues came from the various 'prospects' (steel engravings) of Birmingham, where the telltale 'brick cones' of glass houses appear in increasing numbers through the 18th and 19th centuries.

These cones, which fundamentally were massive chimneys, were very large in diameter and tall, and stood out unmistakably among other important buildings such as churches and steeples. Brick-built, the cones were large in diameter because they housed not only one or more furnaces but also provided enough space around the furnaces for numbers of skilled glass workers and their assistants (often no more than children) to pursue their crafts. In addition, arranged internally around the periphery of each cone there were separate spaces for ancillary glass-making processes, such as holding and annealing furnaces. The temperature in which the craftsmen laboured, the air they breathed, and the overall effects of working long hours literally 'inside a huge chimney', can only be guessed at today.

The products of the Birmingham glass industry were predominately small items, typically for instance the large numbers of individual plain and coloured glass 'drops' which went to build up the complex chandeliers so beloved of the Victorians. It was the glass-makers of Birmingham who produced the 20-ft high glass fountain that was the centre piece of the Great Exhibition of 1851, and which survived until the Crystal Palace fire of the 1930s.

Mike Hodder's presentation, as mentioned earlier, focused on the physical evidence of glass making remaining in the city. Parts of several sites have been excavated but many more lie beneath modern developments and, as a result, might be considered unreachable. But as Mike pointed out, these days modern buildings of the types found on

industrial estates, for example, have relatively short lives before they are demolished to make way for more modern types. Moreover, the sites on which they stand were often prepared by simply clearing down to ground level, so that important subterranean features of glass houses, such as the underground caves and tunnels which fed air to the furnaces, were not disturbed. Today, therefore, those applying to redevelop sites on which the city's glass houses once stood are subject to onerous conditions before planning permission is granted.

Warwick Gasworks

The following entry appeared in the recently received *West Midlands Archaeology*, 46, 2003 and is reproduced here by kind permission of the editor, Sarah Watt and of the authors, Catherine Coutts and Christopher Jones of Warwickshire Museum.

Warwick Saltisford Gasworks (SP 278 653)

A survey was carried out on the street frontage buildings of the former Gasworks in September-October 2003 on behalf of Jayson Hollier, prior to their proposed conversion to flats. The gasworks is a Grade II Listed Building and includes a pair of octagonal gasholders dating from 1822, possibly the oldest surviving examples in the world and therefore of international importance. Six major phases of building work were identified. The initial phase includes the two octagonal gasometer buildings and what may be elements of the original central gateway. The gasometer buildings were constructed of hand-made bricks, while all subsequent works used machine-made bricks. Wings running on either side of the central gateway were developed by at least 1851. By 1905 the central gateway had been blocked by a single-storied structure and the two gasometer buildings were thus linked by a continuous structure. Little further major development took place until the central single-storied structure was raised to two stories in the 1970s and the whole of the frontage re-fenestrated to give a unified appearance. During the later 20th century the interior was partitioned off into rooms and corridors by stud walling. The building is currently derelict.

The original article is accompanied by front and rear view elevation drawings and interested members may borrow the relevant Society copy of *West Midlands Archaeology* from the Treasurer.

As of February 2005 the building remains derelict. Some work seems to be underway to the rear of the structure, presumably in connection with the eventual conversion to flats, but the street frontage is fire damaged and boarded up.

Some Somerset Industrial Archaeology

February 2005 Mr. George Sayell

The Old Mineral Line

One of the most pleasing ways of presenting a talk on an aspect of industrial archaeology is to use illustrations which show alternately 'the way it once was' followed immediately by 'how it is now'. WIAS members George and Liz Sayell used this approach very effectively at the February meeting, when their subject was the railway line originally built to carry iron ore from mines in the Brendon Hills, Somerset, to Watchet on the coast, whence it could be shipped to South Wales. The line also carried passengers, of which more will be said later.

The systematic way the Sayells researched the line, which had a relatively brief working life, is an excellent example of what the amateur archaeologist can achieve, armed only with enthusiasm, a camera, a notebook and an enquiring mind. This combination, the Sayells found, also invariably evoked a sympathetic response from the locals, who went out of their way to share their knowledge of (and pride in) their area.

Important milestones in the rise and fall of the line included the initial formation of the Brendon Hills Mining Co in 1852. This venture did not prosper and was succeeded, a year later, by the Brendon Hills Iron Ore Co in partnership with The Ebbw Vale Co. In 1855, an Act of Parliament sanctioned the building of a standard gauge 13 1/4-mile long railway which included an incline from Comberow to the top of the Brendon Hills. Vestiges of this incline, opened in 1858, can still be seen. It was designed by Rice Hopkins, was 1,100 yards long, had a gradient of 1 in 4, and climbed 800 ft in the process. At the time, it was the longest and steepest standard gauge incline in the country. If passengers elected to remain on the train as it negotiated the incline then they did so, they were informed, 'strictly at their own risk'!

Empty trucks were originally pulled by cable to the top of the incline by the weight of trucks loaded with iron-ore descending, a system which worked

well until the mines ceased to be economically viable, and in 1883 were closed. To continue operating a passenger service, therefore, an engine house and Robey steam engine driving cable drums were installed. But by 1898 even that venture could no longer be sustained, and the line was closed. The Robey steam engine was removed and transferred to Washford, where it operated an ore-briquetting plant.

In WW1, the railway lines were ripped up and sent for use in munitions manufacturing and, as George wryly observed, must now be dispersed over the fields of France. Evidence of the 'Old Mineral Line' can still be seen in Somerset however, including the remains of the winding house, parts of stations and platforms, level crossing gates, and remains of bridges. And examination of the harbour at Watchet, including the west pier, can also yield evidence of the 'mineral line'.

Particularly recommended is the Watchet Museum, a guidebook by Sellick *The Old Mineral Line* and a visit to the *Raleigh's Cross Inn* on the Brendons where there is a splendid display of photos. The Sayells can recommend *The Well House* in Watchet (01984 634514) for overnight stay.

Subterranea Britannica

Subterranea Britannica (www.subbrit.org.uk) is an organisation dedicated to the study and investigation of all man-made and man used underground places. Their web site contains a well produced resource of site studies, the majority of which are industrial archaeology related.

Added in January 2005, is a short article about Newbold Tunnel on the old line of the northern Oxford Canal. Unfortunately there are no underground views, but otherwise this is an excellent short piece, illustrated with a map and good photographs. The only other Warwickshire site covered is Rugby Radio Station.

Mark W. Abbott

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Industrial Archaeology Society

NUMBER 19 June 2005

PUBLISHED QUARTERLY

THIS ISSUE

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- ☉ Warwick Gasworks
- ☉ Early Steam Engines
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EDITORIAL

I am compiling this Newsletter during one of those periods of major change and resulting stress that sometimes crop up in life.

One of those changes is one of change of address and while the exact details are not settled as this is written, what is certain is that by the time this Newsletter is published, my contact details on page four will be out of date. I also anticipate a short period when I will not have a telephone line. Thus, I will not be able to collect email from the Society account. Any emails sent will remain on the server until I am able to download them, but please do not expect an immediate response. I would also ask that members *do not* use the phone number given for me at the end of this Newsletter.

Members who have provided the Society with their email address will be informed of my new details when they are available. Otherwise, I hope to have the information available at the July meeting and it will of course be published in the September Newsletter.

Mark W. Abbott

SOCIETY NEWS

Programme.

The programme through to December 2005, is as follows:

July 14th

Mr. Mike Buxton: *Milestones: Warwickshire and Beyond.*

September 8th

Mr. Hugh Compton: *The Oxford Canal.*

October 13th

Dr. Michael Harrison: *Highlights of Recent Annual Conferences of the Association for Industrial Archaeology.*

November 10th

Mr. David de Haan: *Ironbridge*

December 8th

Prof. Marilyn Palmer: *Technology in the English Country House and Estate*

Details of the programme for the first quarter of 2006 will appear in the September 2005 Newsletter. Please also note that Prof. Marilyn Palmer is not confirmed for December 2005. Her other commitments may mean that this talk is deferred to a date in 2006. Members will be advised at the November meeting of any change to the December programme.

Subscriptions

So that the AGM fits within this year's planned programme of meetings, it has been brought forward one month from the usual July date, to the June meeting. However, as in previous years, subscriptions for the next season of meetings will become due from September.

Web Site

The Society Web Site, which may be found by tapping in

www.warwickshireias.org, has been running for nearly two years under the care of webmaster, who recently decided that an update was needed. The redesigned site is now on line and has a much more streamlined and professional look than the previous incarnation.

The content includes back copies of the Newsletter; recent ones in the published format as pdf files for which Adobe Reader is needed (a free download from www.adobe.com or via the link on the Society site homepage), as well as the current published programme of meetings, some aspects of Warwickshire IA, and an excellent links page.

Summer Walk

This year sees the reinstatement of the annual Society summer walk under the guidance of Peter Chater. Peter will lead a short excursion from Marston Doles on the Oxford Canal (OS Landranger 151 GR 466583), on Thursday 16th June, at 7.15pm, to the site of the Napton Pumping Engine (as featured in recent back editions of the Newsletter) to look at the remains of the engine house and its watercourse. The walk will only be about a mile in length. Limited parking is available by the roadside, immediately over the canal bridge on the Southam to Priors Marston road.

Peter has an excellent knowledge of local history and his guided walks are always interesting and informative, so please support him and the Society in this venture.

NEWSLETTER

Meeting Reports *by Arthur Astrop*

March 2005 Mr. David Depledge *Coventry Airport: Past, Present and Future*

In 1906, only three years after the Wright brothers had demonstrated controlled flight, Coventry took its first tentative steps into the aviation industry. The firm of Morton & Weaver (later to become Coventry Victor), designed, built and flew a monoplane*. Eight years later, by the outbreak of WW1, Siddeley-Deasey was already building planes and engines in very large numbers. The planes were flown off Coventry's very first airfield, at Radford.

The city's second airfield was established in 1920 at Whitley by Armstrong Whitworth (that Company having taken over Siddeley-Deasey), and in 1923 a flying school was opened there. The Whitley airfield was not ideal, however, either for size or for location, and in 1933 Coventry decided to follow the national trend and to have its own Municipal Aerodrome. The site chosen was at Baginton, where 237 acres of a 1,300-acre site already belonging to the City were made available.

There is often an element of 'prestige' attaching to a city having a Municipal airport but, as David Depledge explained, they are also nearly always financially precarious undertakings. Because the fixed overheads of any airport are relatively high it depends critically on the number of aircraft 'movements' (i.e. takeoffs and landings), it can attract. Few civic airports are able to reach the required number consistently, and over the years Coventry airport has been no exception to that rule.

Between the wars, Armstrong Whitworth established a large factory next to the airport, and Alvis were also building aero engines in large numbers nearby. The second world war years saw both Companies, and the airport, thriving and new large hangars were rapidly erected. AWA was soon producing aircraft at a prodigious rate. Over 1,800 AWA Whitley bombers, over 1,300 Avro Lancasters and nearly 300 Avro Lincolns were built. As the war continued, Baginton airport played a vital part in the formation and commissioning of fighter squadrons which, in due course, departed for other airfields.

In 1946, the airport was handed back for civil use, under the management of AWA, and in 1948 its first control tower, destined to be used until the mid-1990s, was built. Two years later, in 1950, Coventry City Council took over running the airport, a responsibility it was to carry for the next 47 years. There followed a long period of uncertain futures, ambitious plans, short periods of profitability, longer periods of unprofitability, and a general striving to find a viable role for the airport.

Its first use for scheduled passenger work came in 1952, when DH Dragon Rapides of Jersey Airlines came into service. Other hopeful ventures included hosting the King's Cup Air Race and the Lockheed Aerobatic Championships. In 1960, a 5,300-ft hard runway was built, part of an ambitious 4-stage expansion plan the rest of which never transpired.

As the years passed freight services seemed to be the answer to the airport's problems, and for a period were successful. In 1998, however, the Council handed the airport over to the Atlantic group who, in 2003, persuaded TUI (UK) that passenger services could be run profitably. In 2004, in fact, over 460,000 people flew from Baginton to a variety of destinations, and at present it would appear that low-cost airline operation may be the viable future for the airport.

* *Issue 44 of Archive, available on loan from Mark Abbott, carries an article on Morton & Weaver with details and a picture of this aeroplane.*

Warwick Gasworks Addendum

Following the reproduction of the *West Midlands Archaeology* report on the remaining Warwick Gasworks buildings in the March edition of this Newsletter, Peter Chater has kindly supplied the following description of how coal was supplied to the Gasworks:

About sixty years ago when I was working on the footplate my mate and I used to shunt Warwick Cape Goods Yard and this included setting the wagns of coal in a siding for the Gasworks.

This siding where the coal-wagns were set was adjacent to the Down Mainline just west of Cape Road bridge, and would hold about ten wagns. At a point near this siding was a narrow gauge railway, which took a curving course on a falling gradient to the Gasworks.

To unload these coal wagns the Gasworks used one open topped manually propelled truck. This was positioned close to the coal wagns and a man would shovel the coal out of the wagn into this truck until full, possibly about a couple of tons. As it was a falling gradient, once the brakes were released, this truck would start to roll and the man in charge would step onto the back of it and ride to the Gasworks, a distance of about 150 yards.

I would guess that the Gasworks used about forty tons of coal a day.

Does any member know the period over which this narrow gauge line operated? It was almost certainly not an original feature of the works and does not appear on the 1889 1 inch OS map.

Rugby District

April 2005 Members' Evening

The Industrial Archaeology of the Rugby District

The area of Warwickshire designated the 'Rugby District' is among the smallest in the County but among the richest in industrial archaeology, much of which still needs recording. Indeed, as Martin Green pointed out, it is a veritable 'mine' waiting to be dug. As such, it is a splendid prospect for members of WIAS to tackle with notebook and camera, and Martin urged members to think seriously about what they can do to increase our records of the area.

To set the scene, he gave an overall view of the subject, touching briefly on the wide variety of IA topics to be found both in the town of Rugby itself and in its environs. As far as the town is concerned, three features dominate historically, namely: the railways and their associated activities; engineering works, some of which operated on a very large scale; and of course the manufacture of cement. Rugby featured prominently in the railway 'fever' which gripped Britain in the first half of the 19th century. The London & Birmingham line was the first to affect the town and among others which followed were the Midland Counties, the Trent Valley, the LNWR and, at the end of the 19th century, the Great Central. Rugby had no fewer than three rail stations over the years.

Heavy engineering started in the town when Willans & Robinson transferred there from Thames Ditton, and eventually came to be dominated by such giants as English Electric, British Thomson-Houston, GEC, AEI and, today, Alstom. The Boughton Rd works of BT-H had associations with Frank Whittle's early experiments with jet engines. Modern manufacturing technology means, of course, that the giant factories of Rugby's past, employing many thousands of workers, are no longer needed. But residual evidence of their existence still survives and should be recorded.

The Rugby Cement Works is to be the subject of a talk by our President, Toby Cave, later in the year, but other topics touched on by Martin included the factories of Lodge Plugs, Bluemels, Peugeot (at Ryton, in the Rugby District), the Rugby Radio Station and its masts, also the town's cattle market.

To augment Martin's talk, Peter Chater and Roger Cragg then gave presentations which reinforced the view that Rugby District is rich in IA subjects. Peter showed slides of a number of fine houses and other items of architectural and technological interest in the vicinity of Rugby town, including Newbold Lodge, the gates to Newham Paddocks, and Pugin's splendid Princethorpe Priory.

Roger Cragg dealt with 'civil engineering aspects' of Rugby District, especially examples of its canals, railways, roads and bridges. As far as roads are concerned, Rugby can boast two by the Romans (the Fosse Way and Watling Street), and of course Telford's Holyhead Road. A perennial problem in the recording of IA topics is trying to decide what merits a passing mention, what warrants extensive detailed recording, and what really doesn't need recording at all! So Roger concluded his presentation by looking at the criteria which The Institution of Civil Engineers (ICE) uses for assessing and 'grading', the significance (or otherwise), of an industrial archaeological 'find'.

Roger's presentation of that subject is too extensive to be included in this report, but is a system which member's could obviously use to advantage in their own investigations. It will be detailed further at the June meeting.

The Construction History Society

The Society has recently been supplied with details and membership application forms for the Construction History Society, an organisation that may not be familiar to members, despite its field of interest having links to industrial archaeology.

The CHS is a registered charity founded in 1982, the aims of which are: To disseminate research findings and general information about historical buildings and construction techniques, mainly, but not exclusively concerning Great Britain; to encourage contemporary industry to pay more attention to the safe keeping of its records, and to demonstrate the fascination and cultural value of construction history through an active programme of visits, lectures, symposia and conferences.

The CHS is not solely concerned with famous monumental buildings and major construction projects, but with all types of building and building methods as evidence of the material culture of a people. The Society is open to everyone with an interest in construction history, irrespective of their professional specialism. An annual journal, supervised by a specialist editorial board, is published to international academic standards.

Further information about the CHS may be found at their web site address at www.constructionhistory.co.uk, and an information leaflet and membership application form is available from the Treasurer.

Mark W. Abbott

An Early Railway Engineer

May 2005 Mr. Peter Cross-Rudkin

William James: The Father of the Railways?

The son of a Henley-in-Arden solicitor, William James (1771-1837) initially followed his father into that profession and began his practice in the same town. But William was not long content with the humdrum work of a country lawyer and was soon casting his eye on wider horizons. In a very well-crafted talk to our May meeting, Peter Cross-Rudkin drew a picture of James as a man whom today would be undoubtedly be recognized as an **entrepreneur**, a visionary and, some might say, also as something of a social climber.

His first 'step-up' came in 1801, when he was made Land Agent to the Earl of Warwick, an appointment which subsequently gave him the **entré** to such luminaries as Lord Redesdale, the Earl of Dartmouth, the Duchess of Dorset and the Archbishop of Canterbury. Through successfully advising such clients how best they might exploit the mineral resources of their huge land holdings James began to build up his personal wealth, and by 1816 he owned several coal mines. His career advanced through further prestigious public appointments, but he had also caught, through a meeting with Richard Trevithick, the 'railway' bug. Later, after meeting with George Stephenson, James became convinced that the steam locomotive was to be the motive power of the future.

He was now set on a different course, namely the vision of a rail network spreading across Britain, and turned his enormous energy to planning, and actually surveying, a variety of potential routes. He had already played a part in the Stratford Canal and the Moreton tramway, and his early work on railways proper included schemes for lines between Canterbury and Whitstable, Chatham and Portsmouth, and Padstow to Fowey.

His most significant venture, however, was the projected 35-mile long line between Liverpool and Manchester, for which he produced a highly detailed survey. He now had an agreement with George Stephenson for the supply of steam locos for this

line, but perhaps for the first time in his career James was about to meet with obstacles to what had so far been a series of successes. Financial problems arose, not just in raising money for the venture but also deriving from a family feud, and there was the difficulty of getting the necessary Acts through Parliament. Suffice to say that in 1823, at a critical point in his career, James was declared bankrupt and even spent some time in gaol.

Disputes also arose over who should be in overall charge of the Liverpool-Manchester work, with Stephenson or the Rennie brothers being alternately 'on top', but with James now necessarily in the background. He eventually settled with his creditors and retired to Cornwall, where he died. James has been rather sidelined in the histories of 'great Victorians' but some claim he was the real 'Father of the Railways'. An important figure of his time certainly, in Peter's view, but not quite up to the claim 'the man who invented passenger railways'.

18th Century Steam Engines

Members in search of a day out with an Industrial Archaeology bias, might like to consider a visit to Julie and David Hulse's Eighteenth Century Steam Engines in Miniature. This collection of working model stationary engines comes highly recommended by John Selby and consists of seven model engines ranging from Newcomen's Dudley Castle Engine of 1712 to a typical beam engine of 1860. The models represent over 20 years work and employ the same materials and construction techniques as the originals.

A preview of the engines is available at www.btinternet.com/~historical.engines and David Hulse may be contacted on 01785 818773 or at david.hulse1@btinternet.com. The address of the collection is Quern House, 133 Oulton Road, Stone, Staffordshire, ST15 8DS. Visits are strictly by appointment only.

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- ☉ Mystery Tramway
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EDITORIAL

First, I would like to apologise for the slight hiatus in the administration of the Society affairs that fall to my responsibility and in particular for the failure of the Annual Accounts to be prepared in time for the AGM. Other pressures and commitments meant that something had to give way and inevitably that something was voluntary responsibilities, in particular WIAS commitments.

However, by the time this Newsletter appears, the accounts will have been prepared for presentation at the September meeting, and my Society administration should be back on track. Again my apologies for any inconvenience caused to members.

One item of administration that was overlooked was the mailing of the July Newsletter to members who were not present at the meeting and to outside agencies. If you missed a copy, just ask. There are back copies available. If the Newsletter normally reaches you by post, the July edition should accompany this copy too.

I can also now provide new personal contact details, which are as follows: Mark W. Abbott, 3 Holmes Court, Bridge Street, Kenilworth, CV8 1BP; Telephone 01926 540114, Mobile 07890 485190. My email accounts are also being accessed regularly again and the addresses remain as before: WIAS@photoshot.com for Society business and mwa@photoshot.com for personal contact. Members are asked to please ensure that they **do not** attempt to contact me using my previous address and phone number.

Mark W. Abbott

SOCIETY NEWS

Programme.

The programme through to March 2006, is as follows:

October 13th

Dr. Michael Harrison: *Highlights of Recent Annual Conferences of the Association for Industrial Archaeology.*

November 10th

Mr. David de Haan: *Ironbridge*

December 8th

Prof. Marilyn Palmer: *Technology in the English Country House and Estate*

January 12th

Mr. Roger Cragg: *Thomas Brassey.*

February 9th

Mr. Tim Booth: *Emscote Mill*

March 9th

Mr. Jeromy Hassell: *White and Poppe*

Please also note that Prof. Marilyn Palmer is not confirmed for December 2005. Her other commitments may mean that this

talk is deferred to a date in 2006. Members will be advised at the November meeting of any change to the December programme.

Subscriptions

Members are reminded that subscriptions for the 2005/2006 season are now due. Provisionally, and subject to agreement by the membership at the September 2005 meeting, the amount payable will remain 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.

Disposals

Due to a house move the Treasurer has a quantity of model railway equipment for disposal. This is mainly 4mm narrow gauge kits, all unmade, but also a small quantity of Roy C link 7mm narrow gauge equipment, including an unmade Ruston LAT rail tractor kit. There are also a number of Wills Finecast 4mm scale building kits and a quantity of detailing accessories such as Grandt Line nut and bolt mouldings scale wood sections. All is available as one lot for inspection and a reasonable cash offer.

NEWSLETTER

Meeting Reports *by Arthur Astrop*

June 2005 Mr. Roger Cragg

A Scheme for Industrial Monument Assessment and Grading

The formal business of the Society's AGM having been speedily dispatched, the June meeting of WIAS then turned its attention to the question of how to assess, and to grade, the importance of industrial archaeological sites in our County. As promised at the May meeting, Roger Cragg explained in detail a system devised for such work on a national scale and suggested that, with little if any modification, it could equally be applied on a local scale. In particular, it could be of assistance in selecting those IA sites suitable to be included in the Society's Gazetteer.

The system is based initially on a set of seven assessment criteria, namely: Landmark, Rarity, Age, Size, Engineer (or Contractor or Architect), Aesthetics and Condition. For a given IA site, each of these criteria is allocated a grade, from **A** through to **D**. The next step is to extract the three 'best' grades from the seven, and to use these to allocate a final grade, in the range 1 through to 4. The four final grades are: 1 = **AAA to AAB**; 2 = **ABB to AAC**; 3 = **ABC, AAD and BBB**; and 4 = **Others**.

To illustrate the process, Roger gave some examples. One was the Bearley (Edstone) Cast Iron Aqueduct, and his assessment of this site was as follows:

Landmark: No. Of 'old-fashioned' design.	D
Rarity: Several CI aqueducts in Warwicks.	C
Age: 1816, second oldest in the County.	B
Size: The longest in England.	A
Engineer: W. Whitmore (W. James).	A
Aesthetics: Not considered.	
Condition: In full use, and restored.	B

Selecting the 'best' three grades, the aqueduct earns **AAB**, and is therefore **Grade 1**.

Another example was the cast iron bridge at Hampton Lucy, which Roger rated as follows:

Landmark: No. Of 'standard' design.	D
Rarity: Few CI bridges in Warwicks.	B
Age: 1829, probably oldest in the County.	B
Size: 60 ft span, thus 'quite large'.	B
Engineer: William Mackenzie (?)	A(?)
Aesthetics: Not considered.	
Condition: In full use, and original.	A

Selecting the 'best' three grades, the bridge earns **ABB**, and is therefore **Grade 2**.

Roger concluded his presentation with a caution. The system works effectively only if each criterion is

judged objectively, and independently, of each of the others.

The meeting concluded with a presentation by WIAS member George Sayell. It was in 1957 that George entered the Willans Works of English Electric, Rugby, as a student apprentice, and Dunchurch Lodge, the main EE apprentice hostel, became his 'home' for the next five years. There were some 100 apprentices in his year and George described both the official regime they followed, and gave some insights into the unofficial pranks they also got up to! At that time, EE was designing and building steam turbines and large, slow-running diesel engines, and it was with the latter, both in building and installing them on site, that George gained much of his early experience. His slides included many shots of EE diesels installed in pumping houses in north London and other locations in the UK.

Cherry Orchard Brickworks

Kenilworth's Last Brickworks is the title of a recently published volume from Dialhouse Press of Kenilworth, featuring the photographs of WIAS member Derek Billings.

This 24 page booklet contains a collection of black and white photographs taken by Derek about a month after the Cherry Orchard Brickworks closed in June 1977. Then the site existed in a time warp, before clearance began a month or so later. The claypit was subsequently used for landfill and the perimeter of the site for housing and light engineering. Once a familiar sight to the people of Kenilworth, with the chimney something of a landmark, today there is virtually no trace of the site where manufacturing took place as far back a Roman times.

Recently, the last vestige of the works has been cleared, with the closure and demolition of the light engineering works on the site, to be replaced by yet another housing development. Some pictures of these final remains prior to demolition are posted on the Society web site.

There are now only about 40 copies of the booklet left, so any members who would like a copy are advised to act fast. The price is £2.50 to WIAS members and £3.50 to non-members. Contact Richard Storey at the Society bookstall in the first instance, or visit Peter-Richard Books at www.peter-richard.co.uk.

Mark W. Abbott

Milestones

July 2005 Mr. Mike Buxton

Milestones: Warwickshire and Beyond

To move their soldiers and their supplies quickly and efficiently across their Empire, the Romans put down a large cylindrical stone to mark every 1,000th 'double marching-step' along the roads they built. Thus they established the idea of 'milestones' and, according to Mr Mike Buxton, National Co-ordinator for The Milestone Society, 117 of these Roman stones survive in the UK to this day.

The Milestone Society* was founded in 2001, currently has over 300 members, and has established a network of County Co-ordinators to '*identify, record, research, conserve and interpret, for the public benefit, the milestones and other waymarkers of the British Isles*'. In his talk to our July meeting, Mike Buxton conveyed not only the enthusiasm he feels but also the depth of knowledge he has for the wide variety of designs of milestones to be found in our islands.

Earliest milestones were, as their name suggests, made from stone on which was cut, sometimes quite crudely, basic information on distances to and from towns and villages. Indeed, the data on these stones suggests that some of the carvers were close to being illiterate, but their work is of no less historical importance for that. Mike traced the effects of the shifts in responsibility for maintaining the nation's roadways on the design of milestones. Initially local parishes bore the burden of road maintenance, and in this period understandably an extremely wide variety of different designs of milestones, including their shapes and the amount of data they carried, emerged. Gradually, however, as a result of various Acts of Parliament, responsibilities for roads changed, as did the road markers themselves.

One of the major changes came when technology allowed flat plates to be cast in iron and to carry more elaborate, and finely detailed, data than could be carved in stone. Such plates were first simply attached to the fronts of existing carved milestones, but eventually the complete marker itself was produced as a one-piece cast-iron casting. Moreover, as speeds of travel along roads increased, it was necessary to present the data 'angled' towards the oncoming traveller, and markers which are vee-shaped (in plan) were cast in very large numbers.

In an excellent slide presentation, Mike Buxton showed examples of milestones from some of the very earliest to the end of the 19th century, from which point milestones as we know them gradually ceased to be made. From 1945, indeed, their very survival became largely a matter of chance. The passion of Mike Buxton, and of The Milestone

Society, is to see that those 'stones' which do survive are cared for, conserved, and do not 'disappear' from time to time, ultimately to reappear in auctions, on e-Bay, or in someone's private garden collection! Mike was able to quote various instances where such 'disappearances' have occurred in recent times, but was also able to point to cases where, through the vigilance and initiative of members of The Milestone Society, Local Authorities have been prevailed upon to conserve and protect these fascinating relics of days gone by.

One wonders whether today's white on blue motorway 'milestones' will eventually be the cause of such laudable concern!

* Website at www.milestone-society.co.uk

'Cuttle Tramway'

An intriguing item of local industrial archaeology near Southam, is what I have termed the 'Cuttle Tramway'.

Modern maps still show embankment features running roughly north from the present railway houses on the Southam to Coventry road, to the Grand Union Canal behind Cuttle House and downstream of Itchington Bottom Lock. Early editions of the OS 1 inch series mark 'Old Limekilns' here, and my assumption has been that this was an early lime works; the tramway bringing limestone from the vicinity of the disused Rugby Cement works with the downgrade favouring loaded wagons, and the canal providing coal and a means of transporting the final product.

However, I recently visited Warwick Buildings who now occupy this site and discovered that the canal is embanked 2 to 2.5 meters *above* the lime works site. This is not unreasonable if off loading coal, but not a situation that favours the loading of lime. Furthermore, despite OS map evidence suggesting the tramway was disused before the railway to Daventry was built, there is, or was, evidence of brick bridge abutments where the tramway would have crossed this newer line. Yet the LNWR railway houses obscure the course south of the branch and what was to become Kaye's lime and cement works was already working before the standard gauge branch was built.

So the history of this obscure relic seems more complex than first thought. Can any members add anything that might help unravel the mystery a little?

Mark W. Abbott

Canal Wharves

The Warwick and Napton Canal

A list of wharves that existed in the year 1910 at Warwick and Leamington Spa

To give some idea of the location of these wharves, the following bridges are located at these mileages: Coventry Road 23m.34c, Tachbrook Road 25m.40c, Clapham Tr. 25m.78c, Radford Road 26m.71c. The miles are counted from Birmingham.

<i>Miles</i>	<i>Name</i>	<i>Type</i>	<i>Length in feet</i>	<i>Owner</i>
22.57c	Cape	Brick walled	144	Public
23.30c	Packmores	Not walled		Private
23.50c	Guyscliffe (Brewery)	Brick walled	67	Private
23.51c	ditto	Basin		Public
23.53c	ditto	Brick walled	327	Public
23.60c	Emscote Lime	Brick walled	219	Semi public
23.70c	Nelson Dale	Brick walled	350, 284, 126.5 71.5 & 164	Private
24.10c	Emscote Old Wharf	Brick walled	135	Semi public
24.15c	Emscote Mill	Brick walled	76	Private
24.15c	Electricity Works	Brick walled	138	Private
24.70c	Myton Road	Brick walled	83	Public
25.50c	Nelson Lime	Brick walled	143	Private
25.50c	Leamington ?	Brick walled	156 & 77.5	Private
25.50c	Priors Gas Works	Brick walled	84.5	Private
25.70c	Ranelagh St	Brick walled	119.5	Private
	Eagle Mills Foundry	Brick walled	302 & 157	Private
25.75c	Corporation of Leamington			
26.10c	Malt House, Clapham Tr.	Brick walled	184	Private
26.10c	Newbold, Clapham Tr.	Brick walled	162	Semi private
LEAMINGTON BASIN, WHARFAGE FOR EIGHT BOATS				
26.54c	Gullimans Lime	Timber	100	Private
26.54c	Gullimans Leamington	Timber	98	Private
27.50c	Butt Lane (Radford)	Brick	42	Semi public.

This information was taken from a survey that was done on the Canals and Inland Navigations of the United Kingdom by Sir John Wolfe Barry and Partners in 1910.

Peter Chater.

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