

WARWICKSHIRE

Industrial Archaeology Society

WIAS

NUMBER 42 September 2011

PUBLISHED QUARTERLY

FROM THE CHAIRMAN

Thanks

I would like to thank members of the committee (particularly Peter Coulls, Victor Lobb and Dennis Crips) for running the Society so efficiently whilst I was away cycling from Land's End to Lowestoft, and also to thank all those who kindly contributed to the charities we were supporting.

Land's End to Lowestoft

The lasting impression of the route from Land's End to Lowestoft was the wonderful diversity of the English landscape and the pivotal role that transport and industrial heritage plays in it. We rarely had time to pause and spend time exploring the various sites, but it acted as a timely reminder of the need to return to these locations in the future, perhaps, next time, by motorized transport!

Sustrans have established a series of National Cycle Routes, and we were struck by the degree to which these employed former track-beds of railways and mineral tramways and (variously surfaced) canal towpaths. National Cycle Route 3 runs from Land's End to Bristol and Route 4 from Bristol to London's Putney Bridge. The gentle gradients of these train and canal routes were a welcome respite from some of the more challenging sections!!

In the early stages of route 3, the 'Camel Trail' from Padstow to the flanks of Bodmin Moor and The 'Tarka Trail' from Meeth via Torrington and Bideford to Barnstaple reminded one of the halcyon days of the Atlantic Coast Express when it was possible to leave Waterloo and reach these destinations on the northern coast of Devon and Cornwall by train. Both these former railway paths were enjoying intensive recreational use, with some sites portraying past glories of the line such as the converted station at Fremington

Quay. Access into towns and cities was also facilitated by the use of former railway lines e.g. the route from Whitchurch to Temple Meads, Bristol and the subsequent route out of Bristol and on to Bath.

Canals also featured heavily – even in the south-west - where two sections were incorporated in the route from Tiverton to Bridgwater – the Great Western Canal from Tiverton to Taunton, and the Taunton and Bridgwater Canal. How different an atmosphere – and history – these canals had compared with the industrial canals of the Midlands and the north. Most significant of all was, of course, the Kennet and Avon Canal from Bath to Reading, combining magnificent architecture and engineering to produce what must be England's most attractive canal route. Enjoying the intimacy of the canal as it passes through Bath, crossing the Dundas and Avoncliff aqueducts, viewing the pumping stations at Claverton and Crofton, and climbing the Caen Hill flights of locks into Devizes on a beautiful summer's evening surely stirs the spirit in anyone!

We followed the Thames Path into London and exited via the Isle of Dogs, on to the Regent's Canal and Hertford Union Canal, and then headed up the Lea Valley, a very fertile area for the industrial history of east London. Sadly, thunder, lightning and torrential rain kept us focussed on getting to our destination rather than stopping to explore the sites!!

We then entered (largely unfamiliar) Essex with unanticipated delights such as the Tiptree jam museum and the port of Maldon (complete with pie and eel shop) and then on to final sections in Suffolk including Woodbridge tide mill, Snape maltings and the Adnams brewery of Southwold.

Not all locations and industrial sites could be described as worthy of celebration, and there were many

instances where industrial decline and decay had taken a firm grip, with no obvious exit strategy. Current economic conditions were clearly not buoyant in our final destination – Lowestoft – and at the end of the trip it caused much reflection on the economic and social inequalities that are still so prevalent in our country.

Even so, what this trip demonstrated was that at every stage of the route, there seemed to be so much of interest – and so often the transport and industrial features were an integral part of that landscape, contributing to the unique character of our country. The over-riding feeling at the end was a desire to revisit, to explore and to learn more of England's industrial heritage and to press the case for care and preservation.

Martin Green

PROGRAMME

September 8th 2011

AGM and 'Industrial Shorts'. A programme of short presentations from members, each lasting no more than fifteen minutes.

Co-ordinated by Martin Green

October 13th 2011

Sally Hoban:

The history of The Birmingham Assay Office.

Sally Hoban is the newly appointed curator of the Birmingham Assay Office.

November 10th 2011

Roger Bailey:

Coventry Transport.

Roger Bailey is an expert on the history of Coventry's bus transport, and has published two books on the subject.

December 8th 2011

Peter Lee:

Nuneaton and Bedworth: coal, stone, clay and iron.

Peter Lee's expertise on the history of the Nuneaton and Bedworth areas is well known, and his talk will draw on his latest publication on the collieries and quarries of the area.

NEWSLETTER

Meeting Reports

April 2011: Tim Booth

Warwickshire Mills, news of research and updates on the state of various mills in the county

Tim Booth's encyclopaedic knowledge of Warwickshire's wind and water mills provided a most interesting evening. Behind the descriptions of many diverse mills we learnt much of the often conflicting requirements of restoration and conservation. Is it better to leave alone or to compromise originality in order to have a working example?

Whilst these criteria certainly apply to the machinery of any mill, there is also the issue of the buildings. Conversion into an 'interesting' and no doubt expensive house may preserve some features but to 'prettify' machinery is surely a step too far. Better to keep the old machinery if only as wall-hung decoration.

Sadly, Warwickshire has lost more mills through demolition than almost any other county. Will it be possible to halt this trend? Unfortunately, as with many other parts of our industrial heritage, the answer is uncertain. What are the prospects for replacing a miller when the incumbent retires? There has to be some hope from the increase in the numbers of trained millwrights now emerging, but the future remains unclear.

As a former chairman of the Midland Wind & Watermills Group, Tim Booth has experienced most aspects of all these issues since he started to record Warwickshire's mills in 1969. He has now moved west into Shropshire where he has leased a mill.

Tim set the tone for the evening with two evocative illustrations; the now lost watermill at Weston under Weatherly and the Baxterley windmill which is sadly in decline. Retracing his early survey work revealed that in many instances little had been done in the intervening years, but it did allow Tim to explain some of the technology behind the mills and their development.

For example, the Blackford mill on the river Alne in Henley in Arden has a unique iron support frame for the machinery and millstones supplied by R Summers of Tamworth in Arden, a name unfamiliar to many members but which was to recur on a number of occasions during the evening.

Robert Summers started a millwrighting business in Tamworth in the 1830s. The buildings are now used as a garage but have also housed a foundry and a blacksmith. A trove of papers were found some years ago in an old desk; letters, time sheets and other material that would merit closer study and ideally, publishing. By the same token, other local businesses including Lampitts in Banbury, Glovers in Warwick and Bull & Horton in Stratford upon Avon all need work to be done on their records.

Another facet of water mills is the usefulness of their associated weirs and sluices as part of the river management system. If allowed to deteriorate or be demolished then the flood risks increase, surely a good reason for keeping them in a good state of repair.

Tim's catalogue of lost heritage and broken promises included Rock Mill, Milverton, where an agreement to leave the wheel extant on conversion was not honoured. The flour and provender mill at Broom Hills, which was a good example of mill growth through the 18th and 19th centuries, has been demolished. Maxstoke Mill was

complete but is now demolished, as is Murcott Mill which had a Summers wheel. Arbury Mill is still standing but is of no interest to the George Eliot Society and so may well not be recorded as it should be. Henwood Mill in Solihull has had a genteel makeover with the ironwork painted a baby blue! But the wheel has been repaired.

Tim gave us some more interesting details about Chesterton Windmill. He shares the opinion of many that it is a most important site. He believes that the Edward Peyto building has always been a mill from its 17th century beginnings, although there has been debate over its possible use as an observatory. The machinery was replaced during the 19th century. During the last survey by the Mill Group some graffiti was found of a windmill that could have been the forerunner of the present mill.

Chesterton Mill is a good example of the dangers of over-restoration and the need for proper maintenance – the serious accident in 2006 exemplified the perils of using incorrect materials. Tim would like to see dendrochronology used to date the Hurst frame to confirm, or otherwise, the believed construction date of 1632. Members might care to refer to Newsletter 35 for an earlier presentation on the mill.

Another windmill under threat is the one at Berkswell which contains some rare 18th/19th century timber gearing. The cap has been removed for some time and there is fear that this work may not be completed. Interestingly, there is evidence from the carpenter's joints in some reused timbers that they were originally supports for a post mill.

Wellesbourne mill was thought secure although in need of repair, but the millwright has moved on after a dispute leaving the future in doubt. Norton Lindsey has a mill with important features such as a very rare governor system that must be preserved, preferably by being left unrestored but protected.

Not all Tim's news was bad, The New Hall Mill in Sutton Coldfield, which was restored by Alfred Owen in the 1970s, remains a good example of a working mill. Similarly, Charlecote mill which was restored for the TV production of Mill on the Floss remains working but the miller is retiring and its longer term future may not be secure.

Some mills have been relocated: the Dansey mill from Tamworth has been rebuilt at the Avoncroft Museum but the mill from Temple Balsall also moved to Avoncroft has yet to be rebuilt. It is currently being assessed by the Midlands Mill Group but some parts are missing. However, the Museum Director would like to get a wheel rotating if funding can be found for the project.

Tim ended with an anecdote that summed up the perils of cold calling in the interests of surveying an interesting mill. The saga of Burton Hastings, which went something like: 'Me mother isn't in', 'I'll have to ask Jack', 'Jack says to research off', eventually led to the discovery of an 17th century mill inside a 19th century shell which, despite the terrible state of the machinery and a dreadful clutter of other equipment was still producing animal feed.

Tim made it clear that there was no sense in trying to replicate today the original Mill Group survey that had been done in the 1970s. So much has changed and it would be disheartening to try and rewrite the Warwickshire survey.

May 2011: Members' Evening

Dennis Crips opened this members' evening with the topological mystery of Bridge 126 on the Oxford Canal at Wormleighton. Before getting to the mystery, Dennis reminisced over 25 years spent walking the local canals and the IA paradise that they offered. The Napton to Banbury section of the Oxford Canal being a particular favourite and one which included Bridge 126.

The Canal reached Napton in 1774 and Dennis graphically outlined the problems facing the surveyors and builders in overcoming the watershed at Priors Hardwick, given the disinclination of James Brindley and his successors to undertake cuttings or embankments. By following the contour line between Napton and Fenny Compton the canal wanders through the countryside. Dennis highlighted the accuracy required in its construction – 1:700,000 plus an allowance for the earth's curvature in order to maintain a nearly level course.

It was thus a great surprise, and cause for mystification, to pause at Bridge 127 and to look back across the fields to Bridge 126 and apparently be looking down on it. The camera cannot lie but his slide clearly showed the track immediately beyond the crown of the bridge. The subsequent discussion failed to provide any clear explanation and the mystery persists.

New member John Berkeley introduced us to the 150 year old Brandauer company, founded by his wife's many times great grandfather who had fled from persecution in France and set up a 'Toy' business at 7 High Street, Deritend in 1782. Within two generations the business, now trading as Ash & Petit, was specialising in pens (nibs to the uninitiated) and prospering. In 1862 an arrangement was reached with Charles Brandauer of Vienna for additional finance, a condition of which was the adoption of the Brandauer name for the business.

A new factory was built in New John Street and expanded in the 1880s, by which time Brandauer had become one of the leading pen manufacturers in the UK with an output of over 1 million pieces a day and a thriving export business. The manufacturing processes were labour intensive (largely female and on piecework) but required tooling of great precision which then as now was produced in-house.

Brandauer was an early proponent of celebrity endorsement for its products. John showed examples of early advertising posters with splendid engravings featuring popular authors including Dickens, Collins and Thackeray.

The company operated from the same factory until 2000 and little had changed in 140 years, except that pens had been replaced by other high precision metal pressings made to tolerances of 2 to 3 microns. The old factory has been sold for redevelopment but a new factory in Bridge Street West, still in Birmingham's Jewellery Quarter, continues to serve a wide range of customers from push-fit plumbing parts and micro-switches to the Large Hadron Collider; indeed from pens to particle physics.

Roger Cragg talked about two innovative structures in Leamington by William de Normanville, the Mill Road Bridge and the Pump Room Swimming Bath Roof.

The 100 ft span of the Mill Road Bridge was unusual for its time. Not a conventional suspension bridge but a forerunner for today's cable stayed bridges with three rods on each side terminating on handrail uprights and forming trusses to support the roadway. The New Bridge at Ironbridge was cited as an example of a modern cable stayed structure.

The Swimming Bath, now Library, roof was completed

in 1890. It is 120 ft long and 60 ft wide, hipped at one end and with a five-sided apsidal structure at the other. The latter leads to complicated trusses elegantly resolved in timber and wrought iron. Two 2 inch diameter rods running the full length of the building relieve the outward thrust forces.

A move to dismantle the roof as part of the redevelopment process was resisted and, with Roger's involvement, it was registered as an historic engineering structure and remains in place today.

John Brace took a wry look at the improvements to the Stratford upon Avon Water and Sewage System between 1848 and 1906, if the term system can be applied to what passed for a service at that time. As with most mid-Victorian towns, Stratford had no water supply nor drainage; cesspits contaminated wells and cholera was never far away in the time of the 'Great Stinks'.

The 1848 Public Health Act precipitated many conflicts of interests between Parish, Town and Borough Authorities, any one of which could outvote the Local Board of Health. Public enquiries were held to try and establish needs, practicability and, not least, affordability for the proposals.

A source of soft water was needed for domestic and laundry purposes but the landowner of a potential spring source in Wilmcote refused to sell. Authority was granted to build a new sewer but not to put anything into it, and when this was resolved an attempt to tap the canal for water to flush the sewer was unsuccessful. The brewery also discharged waste into the sewer system clogging it up with 'cake'.

John traced the routes for various water supplies to Stratford and reminded us that wasted resources are nothing new; in 1890 the Trinity Church organ had an hydraulic motor fed by a 3 inch supply pipe. In its first year it used 900,000 gallons. Stratford's needs were only properly met when artesian wells were sunk and purification plant installed in 1923.

After the break, Richard King presented another Warwickshire Miscellany. He opened with the construction of the Meer End Mission Church, The Coventry Ordnance Works in Red Lane with its 1,000 ft bay used for the manufacture of naval guns but sold to English Electric in 1919, and the construction of the Leamington railway bridge in 1906/7.

A collection of lapel badges made during WWI by local companies for their workers in reserved occupations hopefully prevented the receipt of white feathers. A similar set from WWII reminded us of long lost local companies, including Warwickshire Aviation and Helliwells Aviation together with ARP and First Aid identification.

Other WWII reminders included derelict sluice gates in Coventry for a fire fighting pound, patched holes in a canal bridge where gun ports had been knocked through, bar and rod mesh roadway reused as fencing and concrete drums, some still with wooden runners, ready to be rolled into place as anti-tank defences.

Richard had found a series of painted signs on buildings including the Willes Road Corn Stores, the George Inn at Barford and the 1884 sign of W F Gossage on a Clemens Street pub for Chops & Steaks and Carriages.

To conclude the evening Martin Woolston reviewed a recent Newcomen Society conference in Manchester on 'The Piston Engine Revolution'. Some 22 papers were presented ranging from early attempts, unsuccessful, to use gunpowder as a fuel to a description of the first free piston engine. This last paper was presented in Italian but sadly the interpreter's attempts to explain the workings of the engine were a dismal failure.

The conference provided the opportunity to visit the Anson Engine Museum and a dinner was held in the Power Hall of the Museum of Science & Technology with running engines – a memorable experience.

June 2011: Damien Kimberley, Coventry Transport Museum *The Coventry Motor-cycle Industry*

Damien Kimberley gave us a wide ranging survey of the 114 known businesses that produced motorcycles in Coventry over the 87 years from 1895 to 1982. Damien joined the Coventry Transport Museum staff in 2005 following a placement at the Museum whilst completing an MSc at Ironbridge and writing a thesis on the redevelopment of Coventry after WWII. His presentation complemented that given by his colleague, Steve Bagley, in October 2009 on the cycling pioneers Starley, Hillman and Singer whose names are inextricably linked with Coventry and its heritage.

The presentation was based on the collection of motor cycles at the Museum and on the research that Damien had undertaken to produce a book on 'Coventry's Motorcycle Heritage', sponsored by the Museum and the British Motorcycle Charitable Trust.

The archive material used to illustrate the talk together with the restored machinery on display will have made members aware of the wealth of material fortunately preserved for present and future generations. Industrial archaeology is about much more than the corner of a wall of some forgotten factory, although Coventry has a significant quantity of such material. Many of the illustrations were of buildings remembered by some but unknown to many and are now only an illustration in an old catalogue or advertisement. Probably very few could remember but a handful of the makers or the machines that were shown, but how evocative they were of the early days of powered personal transport.

The evolution of the cycle trade followed an interesting path. The early pioneers exploited a demand that seemed to cross barriers of sex and class for personal transport that allowed greater freedom of movement. As Damien notes in the introduction of his book; Coventry was the birthplace of bicycle production in England and at its peak in the early 1890s was producing some 300,000 units a year and employing around 40,000 people or around two thirds of the working population.

As soon as small, light petrol engines became available (Gottlieb Daimler fitted a vertical single cylinder petrol engine into a reinforced boneshaker frame in 1885) the smaller bicycle manufacturers began to disappear to be replaced by others producing motorised cycles. It was interesting to see that many of the early examples shown in the presentation incorporated both pedal and motor power.

Inevitably, commercial success depended upon the funding available. Those fortunate to secure substantial backing, for whatever reason (and one supposes that then as now the right contacts were important), prospered. The names Humber, Singer, Triumph, Swift, Rudge and Francis-Barnett are all associated with large, purpose-built factories and their names survive, whilst the opportunistic firms such as Aurora, Kingsway, Lancer and Wigan-Barlow flourished briefly and then failed after a few years.

We learnt about some more of the early personalities, not least Henry (Harry) John Lawson who, not satisfied with some pioneering bicycle designs, went on to try and dominate the nascent car industry by acquiring controlling patents. However, after a success with forming the Daimler company in England he was eventually found guilty of fraud and went to prison.

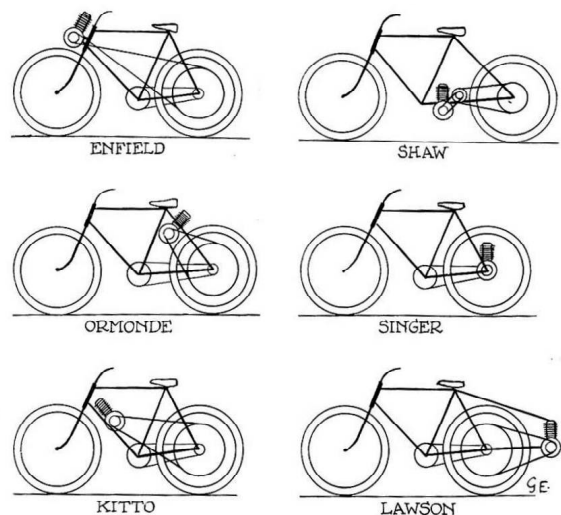
An eccentric American, E J Pennington 'talked the talk' and had some wild ideas for fire engines and armoured vehicles. He also advertised a powered bicycle that had 'jumped 65 feet over a river' startling onlookers.

Much more down to earth was Agnes Muriel Hind, reputedly the first woman in Britain to own and ride a motorcycle. She competed in national trials and races with great success, often overshadowing her male competitors. She also became a noted journalist. This led to contacts with the Rex Motor Manufacturing Company which wanted to break into the motorcycle market catering for ladies. Collaboration led to the 'Blue Devil' machine and marriage to Richard Lord, a senior manager of the company who was also active in motorcycle competitions. They lived for many years at Wall Hill Hall in Corley, a house that still stands today.

In 1928, a Rudge sales agent, Stanley Glanfield, embarked on a world tour on a 499cc Rudge motorcycle combination with sleeping facilities incorporated into the sidecar! Eight months and 18,000 miles through sixteen countries in four continents was some tour for the time, and excellent publicity for the reliability of the Rudge machine which is now a prized exhibit in the collection.

The archives of the Transport Museum provided a varied range of illustrations which charted the development of the cycle industry in its many manifestations. Of equal interest were some rarely seen views of early factory and office interiors. It was sad to see how little of these manufacturing sites remains today. Damien had searched diligently but found little. Coventry's cemeteries contain the remains of many of the industry's pioneers but the flamboyant Harry Lawson rests in a modest North London grave in Hendon.

Looking at the many photographs of motor cycles it was notable how similar were the designs of frames and fuel tanks although engine locations showed more individuality, as is seen below. Illustration courtesy CTM.



The associated component industry was only briefly touched upon but it clearly flourished as a result of the demand from many quarters.

The list of 114 Coventry manufacturers so far traced ranges from Accles to York with many familiar names in between. It is a tribute to the invention, industry and commercial acumen of many individuals, few of whose names are recognised today.

Warwickshire Industrial Archaeology Society Newsletter: Number 42