WARWICKSHIRE Industrial Archaeology Society

WIAS

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NEWSLETTER

FROM THE CHAIRMAN

Two plaques: two causes for celebration of Warwickshire's industrial heritage

It was quite a coincidence that two plaques celebrating different aspects of Warwickshire's industrial heritage should be unveiled within 48 hours of each other. On Wednesday November 16th., the mayor of Leamington, Councillor Alan Wilkinson, unveiled a blue plaque commemorating the residence of Sidney Flavel (1819-1892) at his former home in Newbold Terrace, Leamington Spa. Sidney Flavel was the driving force behind the development of the firm of Flavels, specialist designers and producers of kitchen ranges.

The unveiling was attended by many local dignitaries, local history enthusiasts, representatives of Rangemaster (the modern successor to Flavels) , Sidney Flavel's great grandson, Mike Wilmot, as well as a liberal sprinkling of members of the Warwickshire Industrial Archaeology Society. As the crowd gathered there was some debate about exactly which Sidney Flavel we would be commemorating, for father and son were both called Sidney and both had a significant impact on the company and the town!

Local historian, Dr. Christine Hodgetts, who had completed the research on the Flavel connection to the house, gave a short presentation before the plaque was unveiled, and subsequently in the Town Hall gave a fuller description of the Flavel company's history, raising some issues that she felt could merit further research. William McGrath, chief executive of Rangemaster, also spoke on the role of Sidney Flavel in bringing the name of Leamington to the rest of the UK and other parts of the of the world via his 'Leamington Kitchener'. Several items of Flavel memorabilia had been brought from the company's headquarters to add to the occasion. We hope to be able to arrange a talk to WIAS on Flavels next year, possibly by an outside speaker, or by a group of members who have had a long interest in the company.

Two days later at Alstom in Rugby, John Willock and myself were fortunate enough be invited to the ceremony marking the presentation of the Institute of Mechanical Engineers Heritage Award to the pioneering work of Peter Willans, and in particular, to the Willans Central Valve Steam Engine. This was the 68th. occasion that the award had been made, and the booklet containing the details of the other 67 recipients revealed what a prestigious award it was.

Alain Foote – Manager of Steam Turbine Service Engineering at Alstom, Institution of Mechanical Engineers' Industrial Liaison Officer, and a member of WIAS – organised the event, and began the day with a presentation on the importance of the Willans Central Valve Steam Engine in the history of steam technology. The development of the Willans engine was fundamental to the growth of electricity usage in Britain in the second half of the nineteenth century - in homes, factories and even ships - and was a crucial step in the country's ongoing industrialisation.

We then moved to the Training Centre where the presentation of the Award was made by John Wood, former President of the Institute of Mechanical Engineers, to Roger Beaumont, Managing Director of the Steam Turbine Product Centre at Alstom. John Wood spoke about the engine's significance and reminded us that so much of the work of these engines remained out of public view, working incessantly to maintain electricity supplies in a manner seen only by a few engineers. A beam engine or a water wheel are viewable items with the simplest of technologies which can be easily understood by the interested observer. The Willans engine was a far more complex, far less accessible item, but no less important in the history of technology.

The particular engine (recently refurbished by Alstom employees) was built in 1901 in Rugby, and the 140 horse-power, three crank compound engine was in service for 57 years. In 1892 generators of this type accounted for 68% of all electricity generated in Britain.

These two examples reinforced the fact that Warwickshire does indeed have a varied industrial history, and the time spent in Rugby reminded me that the town has much to offer the industrial history/ industrial archaeology enthusiast. We have hardly any members from the Rugby area and this is a matter we need to address, initially perhaps by trying to attract more speakers with expertise of Rugby's industrial history to make presentations at our monthly meetings. The next stage might be to take our message into Rugby – and indeed other parts of the county – to build up support for the importance of researching, recording and maintaining Warwickshire's industrial heritage.

PROGRAMME

December 8th 2011
Peter Lee:
Nuneaton and Bedworth: coal, stone, clay and iron.

January 12th 2012
Christina Evans, Archaeological Project Manager, WCC:
Warwickshire Environment Record and the 'Imaging Past & Present' project.

February 9th 2012
John Bedington:
Charlecote Mill

March 8th 2012
Graham Fisher MBE:
Jewels on the Cut (Stourbridge Glass Industry & the Stourbridge Canal.

April 12th 2012
Sam Collenette, Archive Service Manager, Warwickshire County Record Office:
From Bolton to Warwick.

May 10th 2012
Derek Hurst:
Droitwich Salt Production: the technology.

June 14th 2012
Jeromy Hassell:
Coventry Machinists & Coventry Victor.

Meeting Reports

September 2011: Members' Evening
A programme of short presentations from members.

Chris Barney opened the evening with a review of the recent AIA Conference held in Cork, Eire. Some 80 delegates, including others from WIAS, attended the event held on the campus of the University of Cork, an interesting mixture of old and new architecture.

The visits programme opened at the now defunct Jameson whiskey distillery, once home to the largest still in the world and empty since production was moved in the mid-80s. Today it seems to be in an unchanging time warp with the huge corn store that once received annually the 5,000 tons of barley grown on 15,000 acres lying empty but fully maintained. A visit to a gunpowder works, in itself a pretty dull site, was enlivened by the guide's entertaining blend of social and historical comment. The copper mines at Bantry, visited via a quaint selection of the local house painting shades, showed a landscape familiar to Industrial Archaeologists. Copper had been mined from 2,000 BC, with production peaking in Victorian times and ending in the 1920s. A tour of Cork included the waterworks with its ornate brickwork chimney stack, the old lunatic asylum, the largest building in Ireland and the Shannon Hydro-electric works where an old insulator was being used as a flower vase. The works with their 100 ft penstocks were built by Siemans in the 1920s at a cost of £5 million as a statement of the Republic's independence. Finally, the huge natural harbour at Cobh, home to the old transatlantic liner terminal, the last port of call for the Titanic and the site of the sinking of the Lusitania.

John Berkeley then introduced us to 'The Flying Standards', reviewing the long history of aircraft building by the Standard Motor Company after setting the scene with the replica Bleriot monoplane at Birmingham Airport – a Spitfire was wanted but rejected as 'it might upset some passengers'!

Standards' Canley works were built specifically for aircraft construction during WWI when all significant motor car and furniture manufacturers were required to produce aircraft. Standard had other sites for sub-assemblies including one in Dormer Place, Leamington and one in Cash's Lane. Aircraft built included the BE12, not a pretty machine according to Lord Trenchard, and the exquisite little Sopwith Pup, regarded by many as the greatest aircraft of the period. Standard built some 850 Pups or half of all those made. After the war some went to Australia to found the RAAF. Standard also built 500 'Harry Tates', the RE8 2-seat reconnaissance aircraft designed at Farnborough, and just under 100 Bristol Fighters at the end of the war. In all 1,474 aircraft were produced by Standard.

The Company returned to aircraft manufacture in WWII. 750 Airspeed Oxfords were built at Canley and shipped by road to Anstey for final assembly and flight test. The road transporter for the fuselage complete with wing centre section and engines must have been a familiar sight to Coventrians, and something of a moving road block for the few motorists then around. The Oxford was followed by the wooden wonder, the De Havilland Mosquito, one of the great and very versatile aircraft from that stable of which 1,066 examples were built.

There are few survivors of the 'Flying Standards'. None complete, but a few remnants of a Standard-built Mosquito are in Australia's Camden Air Museum and some restoration is under way.

Martin Wolston continued the story from the March meeting of the free-piston engine from the Newcomen Society conference in Manchester. In an era of technology a 'chalk and talk' presentation was nostalgic. The gas-powered engine under discussion was an interesting if fruitless diversion from the mainstream of prime mover development. As presented, the engine is upside down. A cast iron cylinder, which is bolted to the floor has a fuelling valve and ignition system at its base. A free piston, which has a long rack extending from it, runs inside the cylinder and meshes with a pinion that includes a freewheel mechanism and is attached to the driven shaft which carries dual flywheels either side of the cylinder. The expansion of the gas charge forces the piston up the cylinder. A partial vacuum is created below the piston which sucks the piston down on its power stroke, turning the driven shaft which can continue to turn between strokes thanks to the freewheel mechanism. Another ingenious but ultimately flawed concept to add to the list of engineering might-have-beens.

Rosalind Bolton next entertained with a self-confessed 'holiday snaps' tour of Sheffield's industrial past. Today, there is little to remind the visitor of industrial smoke and grime since the clean air acts of the 1950s led to the restoration of many buildings. Nonetheless, there is plenty to see around the City of old and new factories with some remarkable survivors, including some individual workshops as well as their successors.

Peter Bolton then led us towards Manchester Airport via Eccles where the remains of an arch of the Bridgwater Canal Aqueduct is built into a wall, and the swing aqueduct over the Manchester Ship Canal continues to operate. In fact we went to the first Manchester Airport at Peel Green, not the present one sited at Ringway. Peel Green, in 1922, was the site of the first flying club in the UK and soon Manchester Corporation acquired the land for the second municipal airport after Croyden. Today, only private aircraft operate at Peel Green but the control tower designed by Manchester City Architect, Mr Hill, remains standing as do a run of buildings that formed the earliest passenger terminal in the UK together with early hangars of various designs.

Peter also showed a pair of large hangar-like structures in Pucklechurch, Gloucester which purported to be WWII barrage balloon sheds, unless anyone knows differently.

Peter Coulls concluded the evening with a selection of photographs from the County Records Office of the products of Eagle Engineering of Saltisford taken between 1920 and the 1950s. Not only were the products interesting in themselves, but the backgrounds showed many local scenes of nostalgic interest to members. The Warwick Gas Works featured in a number of the pictures.

Eagle Engineering specialised in trailers and commercial vehicle coachwork with an emphasis towards municipal waste machinery, dust carts, street cleaning and gulley emptiers being typical. The trailers ranged from a 2-wheeler for Shipways Timber Merchants through a variety of pole trailers to a 100 ton, two-bogie monster for Norman Box Heavy Haulage Contractors. More specialised were a brush sweeper for RAF runways and tower wagons, the forerunners to today's hydraulic platforms. A unique, small-wheeled waste collection vehicle could negotiate narrow alleys and a row of side-loading Austin dust carts were remembered by many.

All in all, a very full evening that well demonstrated members' wide ranging interests and expertise.

October 2011: Sally Hoban
The history of The Birmingham Assay Office.

A very well attended meeting, including 10 visitors, learned much about the history and present activities of the Birmingham Assay Office from its newly appointed Heritage & Training Officer. Sally Hoban has brought a wealth of experience, both academical and practical, to her part-time role where she is responsible for bringing together the history and heritage of the Assay Office with its future development as a provider of high quality education and training for the professional jewellery trade and members of the public. Sally specialises in the history of design, especially the Arts & Crafts movement, and is currently conducting a research project at the University of Birmingham on 19th and early 20th century women jewellers and silversmiths in the City. She has also found time to author Millers Collecting Modern Designs and to Chair the Heritage Committee of the Birmingham Civic Society.

The Assay Office today is an integral part of the still flourishing Jewellery Quarter where in the 1880s, with no Guild restrictions, all that a budding jeweller needed was a leather apron, a bench, some modest capital and talent. The newly reopened J W Evans factory, left exactly as it was on its last day of trading, illustrates the will to preserve the heritage of the Quarter.

And what a heritage it is. Against the background of the history of hallmarking from its inception with the London Assay Office in 1327 and the development of the various marks for office, maker or sponsor, date and quality, we learned that the protection of both consumer and trader and law enforcement is ensured by hallmarking all items of gold, silver, platinum and palladium offered for sale. All such pieces are made of an alloy with, usually, copper added to the precious metal to give strength. The proportion of the precious metal cannot be determined without laboratory analysis and this can only be undertaken at an Assay Office. Interestingly, whilst this analysis used to take some three hours, the introduction of spectroscopy has reduced the time to a few minutes.

Sally was at one with many members in her enthusiasm for Matthew Boulton and his pioneering achievements in so many fields. Following the growth of his silverware business in the affluent years of the mid-18th century Boulton became increasingly unhappy with the need to send his pieces 70 miles to Chester, the nearest Assay Office. The risk of damage and robbery during the slow journey together with the opportunities for his designs to be pirated and the ‘feckless carelessness’ of the Chester Office all led Boulton to lobby for a Birmingham Assay office. In London Boulton lodged at the Crown & Anchor Inn in the Strand in the company of representatives from Sheffield on a similar quest. Both were successful and the story goes that a coin was tossed to decide which city should use the crown or the anchor as its mark. Birmingham took the anchor.

Whilst talking about Boulton, Sally interjected a fascinating possibility that his activities included pioneering work in photography. She is jointly researching with Jon Wood of Aston University for evidence. One suggestive clue is a picture of Soho House in Birmingham, owned by Boulton, which seems to show the building as it was before alterations in the late 18th century. Further information may be hidden in the massive archive of the Lunar Society papers in Birmingham Library.

The Birmingham Assay Office opened in 1773 on 31st August in a room over a tavern. It moved to its present location in Newhall Street in 1877. Today, it is the largest assay office in the world marking a peak of some 13 million items in 2003/4. This figure has subsequently halved due to the recession and the rise in the gold price.

The Assay Office holds a remarkable collection of ‘Birmingham Toys’: snuff boxes of high quality, vinaigrettes often carrying topical local scenes, card cases, caddy spoons, toothpick and patch boxes from all the major Birmingham silversmiths. The second half of the talk reviewed these personalities and their wares as represented by some of the 3,000 items in the Assay Office collection.

Samuel Pemberton, who was also the Guardian of the Office from 1793 until his death in 1803, was renowned for his use of filigree, especially in spoons. Nathanial Mills, first registered in 1803, specialised in card cases with stamped topographical scenes. His business was very successful and his son left a fortune of £30,000.

The Victorian grand style was exemplified by Elkington & Co, founded in the 1830s by Josiah and George Richards with their nephew G R Elkington and specialists in electroplating. A large factory opposite the Assay Office was complemented by a stylish showroom dedicated to marketing excellence. Leading designers used by Elkington included Schlick (Danish) and Christopher Dresser.

The Arts & Crafts movement, spearheaded by Ruskin, Morris and Burne-Jones, has deep Birmingham roots. The Birmingham Municipal School of Art was fundamental to its development and is now part of the City University. Edward Taylor introduced the concept of including practical skills as part of the course and his ideas were taken up and developed by the Glasgow School of Art whose alumni include Charles Rennie Macintosh. Training for girls was actively encouraged at Birmingham, so much so that in 1900 there were more girls enrolled than boys. Prominent amongst them was Florence Stern who was noted for her spoons. A major force in merchandising Arts & Crafts products was Arthur Liberty with his iconic Regent Street store, Liberty & Co which still trades today.

Elsewhere, Arthur Stansfield Dixon, who was a friend of William Morris and Philip Webb and an accomplished silversmith and copper worker, was prominent in the Birmingham Guild of Handicrafts and designed its building in Great Charles Street. The Guild provided workshop space on a co-operative basis similar to and rivalling Charles Ashbee’s efforts in Chipping Camden. Another stalwart was Albert E Jones, the ‘Metal Craftsman’ of St Dunstan’s Works.

The twentieth century saw the craftsman-based industry that had grown up over the previous 150 years begin to coalesce into larger units, typified by Adie Bros who produced the largest piece ever assayed in Birmingham with an 18ct tea set for King Farouk of Egypt. However, there is now a reversion to the traditional craftsmen such as Martyn Pugh who was commissioned to make a pair of 18ct water jugs to mark the Queen’s Golden Jubilee. With such commissions the Assay Office is investing its profits to support Birmingham manufacturers and encourage young artists.

The Assay Office has also diversified and now comprises three main divisions: Safeguard, the largest jewellery valuation service in the UK, AnchorCert, for independent diamond and gem valuations and certification and the Laboratory at the Birmingham Assay Office – experts in precious metal analysis, but able to undertake a wide variety of test procedures from the fire-resistance of a teddy bear to textile colour fastness. Matthew Boulton would surely feel that his efforts to establish the Assay Office have been well rewarded.

November 2011: Roger Bailey Report by Arthur Astrop
Coventry Transport.

Many UK cities began to establish their own public transport systems in the late 19th century, and Coventry was no exception. This was the era of 'Corporation' transport bearing distinctive 'liveries', and while the designs of trams and buses changed radically over the years many of the 'colours' they proudly displayed survived well into the second half of the 20th century.

All aspects of the history of public transport in Coventry have been a life-long interest for Roger Bailey, our speaker at the November meeting. Indeed, 'interest' is perhaps too bland a word to describe Roger's involvement with the trams, buses and coaches owned by Coventry, for his devotion to the subject ranks little short of a passion, as was immediately evident in his talk to our November meeting.

Roger's parents dedicated their working lives to Coventry's public transport system and Roger was thus involved with the subject from a very early age. So began an interest which today lies as much with the social history of the development of Coventry's transport system as it does with its technical aspects. The story starts in 1894 with the appearance of small steam-driven 'tugs' each pulling a passenger-carrying trailer, capable of speeds up to 5 mph and providing a public service between Bedworth and the City centre.

A few years later, the Corporation's first electric trams made their appearance on the City streets, open-topped, and taking current from overhead conductors by means of a swivelling arm. Soon, however, a very important modification to tram design proved to be absolutely necessary. In the interests of public decency screens were swiftly fitted all round the upper deck so that the ankles of lady passengers were no longer visible to voyeurs at pavement level!

As the tram services expanded, a network of tracks grew throughout the City and its environs, and while most roads had twin tracks the spaciousness of the Broadgate area allowed a 3-track layout to be installed. The outbreak of the first world war, and transfer of so many men to the fighting Services, saw the introduction of women to Coventry's trams. Working as 'clippies', they brought about a social change which was to be repeated in WW2. Tram design was also advancing, with more weather protection for drivers as well as for passengers, but as the network grew the narrowness of many of the City's streets increasingly presented problems. Many of the slides shown by Roger revealed just how close some of the trams were when passing each other.

The tram system remained dominant after WW1, and continued developing in scope and design well into the 1930s. But the shape of things to come appeared when, as a service for outlying districts, six feeder buses (by Maudslay), were provided to bring passengers within reach of the nearest tram routes. But an end to dominance of the electric tram as Coventry's principle means of public transport was in sight. The devastating air raids which the City suffered in the early years of WW2 did so much damage to the tracks and the conductor systems that, when the war ended, it was in fact impractical financially to restore them.

During WW2, buses of all types and makes, some drafted-in from other parts of the country, were used to maintain a service for the City, and especially for the factory workers who were so essential to the war effort. Thus the once all-powerful and proud tram service was largely replaced by a somewhat motley collection of buses, all suitably modified to comply with blackout requirements. Headlights were fitted with beam-constricting grills, and white bands were painted on body work to improve visibility for pedestrians in the blackout. At one time, even the proud logo 'Coventry Transport' on the sides of the City's buses had the word 'Coventry' painted-out, lest any descending Nazi paratrooper should have no difficulty in discovering where he had landed!

But once the war ended, the re-development of the City on a massive scale was planned, and the era of the omnibus had truly dawned. It was at this point that Roger really hit his stride. His knowledge of the evolution of the bus services in Coventry must be unparalleled, as also must be his personal collection of photographs (extending to very many thousands), together with other public transport memorabilia, from tickets to ticket punches, from transport posters to route maps. He inherited the passion and loyalty to public transport of his parents and has preserved for posterity much of his knowledge and understanding through the publication of books on the subject.

His photographic collection alone, of which we saw only a brief selection, is a one-man archive of inestimable value, and not just to the City of Coventry. And it is not simply a dry record of trams and buses of different designs and liveries, with subtle differences in design which are of interest only to the single-minded expert.

Most, if not all, of his photographs contain 'backgrounds' which show not only areas and buildings once prominent in Coventry but now long gone, but also crowds of people, with dress and demeanour that are today only a memory. It is those aspects which Roger values as much as the numerous different trams or buses which take centre stage in each of the shots. The operating staff of the Coventry public transport system, especially from 1945 onwards, was close-knit and contained many different nationalities and cultures, sometimes including even erstwhile wartime enemies. All were very successfully integrated into what became a 'family', with loyalty to each other as strong as their loyalty to 'public service'.

Post-war, it was Daimler who gradually began to supply the majority of Coventry's bus fleet, and initially some problems were encountered. An early design had, in the driver's cab, what appeared to be somewhere for him to hang his coat. In fact, it was actually the starter control and when a coat was hung on it the engine fired up!

In another instance, one bus was inadvertently delivered with an 'ungoverned' engine, with the result that it was much sought after by drivers as the fastest in the fleet! The arrival of the first buses with the engine located at the rear also caused problems. Drivers familiar with the traditional 'engine at the front' had to get used to not hearing it running, and were thus unable to judge its revs.

The City also at one time ran coaches for longer trips, including those offering a 30-mile sight-seeing circular tour of Coventry and its surrounding areas aimed at providing 'afternoon outings for all the family'!