WARWICKSHIRE Industrial Archaeology Society

WIAS

NEWSLETTER

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FROM THE CHAIRMAN

The 77th. edition of the WIAS Newsletter will be the last to be edited by Mike Hurn. He is handing over the computer keyboard after 15 years as editor, having produced 45 Newsletters over that period. The Newsletter is primarily a record of all the meetings held by WIAS, and Mike's ability to accurately reflect the content and flavour of these meetings, whilst at the same time adding his own editorial style, have always made these reports a pleasure to read - as well as being a most valuable record for the Society. I am sure you would wish to join with me in offering our sincere thanks to Mike for all his efforts over the past 15 years. He should be very proud of what he has achieved in creating a lasting record of the activities of WIAS.

From the Editor

First, an apology. The reports in this Newsletter should have appeared much earlier. They should also have been longer. However, for various reasons I was unable to produce them sooner.

I hope that, as presented, they will be a sufficient reminder to members of the meetings which themselves were a mixture of live, hybrid and zoom that reflected the strange events of the last few years.

Secondly, this will be the last Newsletter that I shall write for the Society. My first, Issue No. 32 in December 2008 seems a very long time ago and it is with much regret and no little sadness I have had to decide to stop.

It has been a privilege to have been able to make some contribution to the Society and to support Martin's tireless efforts to promote Warwickshire's Industrial Heritage.

I am sure that my successor or successors will continue to record the Society's activities for many years to come. I hope, too, that I will be able to read them, and to attend the occasional meeting as well.

Mike Hurn

May 2022: Allan Jennings
Bonniksens and Gordon Evans

The story of the Bonniksens and Gordon Evans as told by Alan Jennings illuminated a number of strands in local history that may well have been little or unknown to many in his audience.

The lives of a Danish horologist and inventor and his aviator son (who owned an airfield) together with an ex-Chindit illustrator of talent came together in a fascinating story with many local connections. The story only came to light when Alan met the daughter of Gordon Evans who asked him to examine some papers found in the loft.

Julius Edward Bonniksen was born in Kenilworth in 1896. At the outbreak of WW1 he was visiting relatives in Germany and was interned. He escaped to Denmark and thence to the UK where he joined the RFC, later the RAF.

Amongst the wealth of documentation unearthed was his application for a permanent commission which listed his extensive military career. He ended the war with the rank of Major with an OBE and Italy's Silver Medal for Valour. His interest in aviation lasted for the rest of his life.

In 1930 he bought 30 acres of land off Harbury Lane to use as an airfield and founded the South Warwickshire Light Aeroplane Club, later the Royal Leamington Spa, Warwick and District Light Aeroplane Club.

Contemporary photographs charted the development of local flying including the visits of Sir Alan Cobham's National Aviation Day with its associated entertainments. Visitors suffered long delays on crowded roads. Details of the aerodrome and its facilities came from the AA's airfield map. The wide variety of aircraft possessed by Club members showed how popular flying had become amongst the better-heeled.

The aerodrome was requisitioned in 1939 for use as an emergency landing ground. A notable emergency landing was by an 'Ensign' that blocked the road.

Turning to Gordon Evans, we learnt of a lifelong enthusiast for all things to do with aviation coupled to a talent for drawing. An engineer, he worked at the aerodrome as a maintenance mechanic. His duties included shepherding sheep off the field for landings and take-offs. He learnt to fly in 1939 under a government scheme. He never spoke about his wartime activities but amongst his memorabilia are sketches of a jungle scene and a Chindit cloth badge that suggest an interesting, but unrecorded, episode together with detailed drawings of RAF aircraft.

The aero club never reformed after the war and Gordon worked at Flavels in Leamington for over 25 years. However, he never lost touch with light aviation and found an outlet for his artistry through cartoons and humorous illustrations for the 'Moth' a magazine devoted to the evergreen training aeroplane.

Alan concluded with some details about Bahne Bonniksen, Julius's father. A Danish horologist who came to England to further his education and became naturalised in 1910. He settled in Coventry and is known for two particular inventions. First, the Karrusel watch wherein a tourbillon mechanism is replaced by another patented design and particularly for an isochronous speedometer that was particularly accurate and welcomed by the new motorist. The rights to the speedometer were sold to Rotherams but cheaper versions of speedometers soon dominated the market.

But for an attic find and a chance meeting we might never have learnt of these three men's contributions to Warwickshire's history. Such is serendipity!

PROGRAMME

13 April (live/hybrid): Peter Hoath
A View of Computing History - 22,000 Years in 60 Minutes.

11 May (live/hybrid): Max Hunt
Herbert Austin and the Longbridge Story.

8 June (live/hybrid): A WIAS Presentation
The Aluminium Works, SONA and Stratford Produce Canners.

Additional Zoom Meetings may also be placed in the calendar.

June 2022: Andrew Baxter
The Edge Hill Light Railway.

It is tempting to ask why waste an evening on three and a half miles of railway that was regarded as a dead duck from its inception? In the event we learned a lot and some members subsequently enjoyed a scramble amongst the remains on Edge Hill.

So why such a railway? The demand for iron and steel during WW1 soared and some 30 million tons of iron ore lies just South of Edge Hill. In 1917/18 German POWs laboured to extract it, building the no longer existing German Bridge in the process.

Planning for a mineral railway to link the ironstone quarries with the Stratford and Midland Junction Railway near to Burton Dassett began in 1917 and construction of the EHLR started in 1919. The line operated only from 1922 to 1925. The demand for iron fell off a cliff and with it the fortunes of the EHLR.

Andrew Baxter is a consulting engineer who has lived near Edge Hill for some 50 years and knows the area intimately. His researches have unearthed a wealth of pictorial evidence which he used to great effect together with maps and layouts of the various junctions. The OS map of 1935 shows the line from its junction with the SMJR (near to the M40) to Edge Hill near to Ratley. Two miles from the junction there was a rope-worked incline up the escarpment to be followed by three branches serving different parts of the ore field which were never fully completed. Subsequently, the development of CAD Kineton covered part of the route.

To avoid the time and cost of an Act of Parliament the EHLR was built under the 1896 Light Railways Act which limited it to 12 tons/axle, 25 mph maximum and 8mph on bends. Thus, only requiring light weight rails and modest bridges, no gates or grids and standard gauge.

Most of what remains today relates to the rope-worked incline, which was also the most interesting part of the railway. A great deal of thought and detailed design work had been given to making its operation as simple as possible. It was a balanced cable railway with up to six wagons having a payload of 60/70 tons. A passing loop used a three-rail system so no points or operator gave a cost saving.

When the line closed much equipment was left where it stood as evidenced by several photographs. Notably a steam excavator was left at Ratley for some 25 years as were 3 locomotives abandoned in the lower sidings.

What remains today? Some rails are in place and the complex Burton Dassett junction remains. There is evidence of the bridges that once spanned Gosport Lane and Arlescote Lane, but more can be seen at the top of the incline. The cable brake drums have yet to be discovered but there is evidence of the signal box. In Ratley Lane the remains of a bridge and a hump in the road mark the end of the line.

the extensive photographic record used by Andrew includes a remarkable collection of maps detailing the routes, both as planned and, with many illustrations, of the track as built from the junction through the sidings to the ropeway plus the bridges. There are also enough examples of rolling stock and locomotives to delight the enthusiast. (visit Andrew's website www.ehlr.rocks to view them).

As the members who visited the site can attest, these photographs made it much easier to envision the working railway. Especially over a beer at The Castle.

September 2022: Peter Coulls
The Photographs of Derek Billings.

After the AGM for September 2022 the members were treated to a presentation by Peter Coulls entitled 'The Photographs of Derek Billings'. Peter had been given access to Derek's considerable slide and digital collection by Pat his widow and Sarah his daughter, both of whom were in the audience.

Peter started by explaining how his friendship spanning some forty years had started with membership of the now defunct Warwickshire Steam Engine Society. The families had holidayed together in various parts of the country but more often than not Tywyn in mid Wales was the preferred location.

Derek was a printer by trade having worked for A. Tomes Ltd in Bedford Street, Leamington Spa. On one of their holidays in Norfolk Peter described how delighted Derek was when they discovered that the town square in Fakenham had been paved with printer's type blocks. Derek's father was employed as a driver for the Midland Red, establishing a lifelong interest in all aspects of that Company.

He had the ability to take photographs of everyday scenes, thereby literally providing a snapshot of the common place activities lost forever. He was photographing industrial buildings and processes with examples shown of the Ford Foundry when molten metal was being poured, not witnessed by many unless you were an employee.

Peter went on to describe their shared passion for traction engines and fairgrounds. As an example he would pick up Derek in Whitnash about 5.30 am to drive to the Great Dorset Steam Fair, arguably one of the greatest gatherings of the range of steam traction engines and their variants in the country. The early start was to enable them to park up close to the in gate usually before it opened. Once inside the priority was to go for a full English breakfast to set them up for the day.

Derek was a diligent researcher prior to visiting an area, he would remember items of interest he had read about, as testified when on holiday in Norfolk in the town of Thetford, we were taken to see a bridge manufactured by Charles Burrell and Sons, more usually associated with building traction engines.

Cornwall provided Derek with a range of locations whereby he could indulge his interest in industrial archaeology, photographing engine houses, stationary steam engines and other subjects of industrial interest.

Peter recounted the story of how Derek had been taken on a mystery trip to Dorridge Station, before revealing that as a 70th birthday present he was to ride behind 'Rood Ashton Hall' to spend sometime in London, needless to say Tower Bridge was on the agenda.

Their shared interest in the Talyllyn Railway was shown along with images of museums, canals and historic buildings. Derek was very proud of having his photographs of the demise of Cherry Orchard Brickworks in Kenilworth published in a booklet entitled *'Kenilworth's Last Brickworks'*.

Peter concluded by thanking Pat and Sarah, hoping that his talk had demonstrated the passion that Derek had for photography and the subjects he chose. The evening had certainly been a delight for the audience, from a unique collection of photographs, and was a suitable testimony to a lifetime's interest in transport and industrial heritage (and much more besides). It also demonstrated the bond that existed between Peter and Derek and their families and the obvious pleasure they had derived from times together, with camera always at the ready.

October 2022: David Fry

The Coventry Canal: 5 1/2 miles of History.

It is always a bit of a surprise to learn how much history can be uncovered along a short stretch of an old railway or, in this case, a canal. David Fry has uncovered a great deal of Coventry's history over the years and shared his discoveries with us. His research is meticulous and his use of a wide range of materials, especially old postcards, is exemplary.

His last talk to the Society dealt with the Foleshill district of Coventry and he commented in his introduction that the canal was an integral part of the district – he could not get away from it.

The Coventry Canal, a hidden history in plain sight, is but five and a half miles long stretching from the Canal Basin in Coventry to Hawkesbury Junction and the Oxford Canal. From its inception in 1769 the canal had a major impact on the development of North Coventry. Sadly, there is little visual material to be found about the early years but plenty for the later ones.

The development of the Canal Basin was elegantly shown in a sequence of overlays onto an aerial view. Some of the warehouses from the 1770s remain and what were once thought to be lime kilns are, in fact, the coal vaults for the gas works.

An 1809 map of the whole 38-mile-long canal allowed the detailed examination of the canal route in North Coventry, its relationship with the road system, notably, with narrow lanes and small bridges, and its impact on communications and settlement patterns. Newspaper illustrations of the old bridges at Cash's Lane, Alderman's Green Road, Foleshill Road and Black Horse Lane were instructive.

Where the canal crossed main roads commercial opportunities arose. At the Foleshill and Stoney Stanton Roads arose wharves, boat and wood yards, pubs (such as the Prince William), shops and workers' cottages.

It was at Longford that one of the clearest impacts of the canal on the Foleshill district can be seen. Lady Lane to Exhall was blocked requiring a new road, pubs and non-conformist chapels sprang up, smithies, yards and wharves surrounded the original junction with the Oxford Canal.

Many old photographs showed the changes along Sydnall (Station) Road to Hawkesbury in the late 18th and early 19th Centuries.

The second half of the 18thC saw the value of the canal to the expansion of Coventry's industry away from the city centre and the domestic systems of the ribbon weaving industry. Cash's Kingfield factory, Wilkins brick and lime works, the Cotton Mills at the Canal Basin are but a few examples.

The rise of a variety of other engineering industries at the turn of the century really boosted the use of the canal both for transport and for water extraction. Where the canal loops around the Foleshill Road we find the Daimler works with its powerhouse then the Coventry Electricity Station and various cycle and car manufacturers before Cash's factory, many with water extraction licences. Elsewhere, Nelson's Cement Works, Courtaulds, the Ordnance Works, Longford Gas Works and finally Longford Power Station added to the load. The last alone had a contract with the canal company for 111 weekly boatloads of coal.

Britain's canals were nationalised as British Waterways in 1948 but with the creation of the Coventry Canal Society in 1957 and with the Canal and River Trust superseding British Waterways in 2012 it has new friends and perhaps another future.

November 2022: Roger Cragg

The London & Birmingham Railway.

The lingering effects of the Covid outbreak required a re-shuffling of the WIAS programme of speakers for November 2022, and Roger Cragg kindly stepped into the breach with a talk on the earliest railway to enter Warwickshire – the London and Birmingham Railway.

Roger began his talk by describing the lengthy process of selecting a route for the line. This process started in 1820 when Sir John Rennie surveyed a westerly route vis Oxford and Banbury. Later proposals were for routes further to the east. At this stage the aim of the two companies involved was to terminate the line in east London, close to the docks. George and Robert Stephenson were engaged to design a route and by 1831 a line had been fixed passing through Leighton Buzzard, Bletchley, Rugby, Coventry and terminating at Curzon Street in Birmingham. By this time, it had been decided that the London terminus would be at Hampstead Road, just north of the Regent's Canal. Later an extension south to the present terminus at Euston was adopted although this would require a steep gradient down to Euston.

The London & Birmingham Railway Company secured an Act of Parliament in May 1833 and construction of the line began in early 1834. Roger illustrated a tour of the route of the railway using many of the contemporary drawings of the construction of the line by John Bourne. Thirty contracts were let for the 112.5 mile line but due to the pioneering nature of the work, in eight cases the Contractor failed and the work was taken over and completed by the Company. Although the total tender price was £1.7 million, the final total cost was £2.3 million, much of the extra cost being due to the engineering difficulties at the 1.5 mile long Roade Cutting and in particular, Kilsby Tunnel (2416 yards) where the tender price of £99,000 became a final cost of £290,000.

The line was opened in stages, from Euston to Boxmoor in July 1837, Euston to Tring in October 1837 and between Rugby and Birmingham in April 1838 but was not finally opened throughout until September 1838, the delay being due to the aforementioned problems at Roade and Kilsby.

Roger highlighted to two architectural glories of the line, the two terminal stations at Euston and Curzon Street. Unfortunately, the Euston building did not survive the rebuilding of the station in the 1960s but happily the original building at Curzon street has survived and is now preserved.

The original train service was nine trains daily in each direction, the fastest trains taking 5 hours and the slowest 8.75 hours. Train control was by the time system with 'policemen' stationed at intervals along the line to give flag signals to the train drivers. The early locomotives were very small, being of 0-4-0 or 2-2-0 wheel arrangement. A locomotive works was established at Wolverton, the half-way point along the line. Later this became a carriage works after the London & Birmingham became a part of the London & North Western Railway in 1846.

Roger concluded by reminding members that the line still formed a major part of the West Coast main line.

As usual, Roger's talk was characterised by careful preparation, attention to detail and his own intimate knowledge of features of the line. It provided insight both for the heavily committed rail observer as well as the more general enthusiast. The Society was indeed fortunate to have such an able speaker on such an important topic.

December 2022: Dr Kate Round

The History of Stourbridge Glass.

The Red House Cone, built in 1790, is the only surviving intact example of a working glass oven. Once there were 30 along the 'Crystal Mile' between Stourbridge and Wordsley. Today, it is the focus of a visitor attraction opened in 1980 and rated one of the best small museums in the country. A new museum on the former site of Stewart Crystal, the White House, is now complete. It replaces the Broadfield House and other collections, bequests and gifts totalling some 10,000 items of which 2,000 will be on display covering all types of glass from studio pieces to large industrial equipment.

Kate Round is an engineer who found a retirement interest in the Glass Museum and its outreach programme and so was well equipped to lead us through the history of Stourbridge glass.

Glass makers came to the area for familiar reasons. Fuel (of which copious supplies are needed) and raw materials were readily available. Other compatible but not competitive industries were established locally and could be a source of suitable labour. Finally, the nearby canal and river systems provided their usual benefits.

WIAS has sometimes pondered the merits of leaving our county but never thought that 8th century BCE Assyria would feature. However, the history of glass needs to start somewhere, and it was there. The Alabastron or vase of Sargon II was made by enslaved artisans, possibly Israelites who were, nevertheless, happy to move to new places. They had a mobile skillset and their descendants migrated West to found the glass industries in Persia, Murano, Bohemia, Moravia, Russia and further west.

Glass makers operated in family units with skills and knowledge passing from father to son but not to daughters. Of great importance to Stourbridge were Les Gentileshommes Verriers of Lorraine. These noble glassmakers had close ties with Bohemia and enjoyed considerable privileges in France but were, like other skilled craftsmen, Huguenots and thus had to flee Catholic France for religious freedom in England and hence to Stourbridge.

Glass making techniques have little changed over the centuries, as the comparison of a set of tools from the 1930s on display in the Red House Cone with a drawing of 17th C glassmakers tools showed. But we learned much about the hot side, pot making, blowing and moulding, followed by the cold side decoration by cutting, engraving and etching. We were introduced to the unique interior of a glass cone with its central furnace surrounded by the pots holding the molten glass about whose simple constituents of sand, soda or potash, calcium and lead oxides we also learnt.

Moving on to decorating a whole other set of skills came into focus. Engraving and cutting use broadly similar techniques – the glass vessel is presented to a cutting wheel fixed to the bench. The size and composition of the wheel varying with the desired finish. Highly skilled craftspeople include a few ladies. Intaglio work is similar to copper wheel engraving and produces 'sunken pictures' of great delicacy. The Portland Vase of Roman origin featured long lost techniques that took six years to rediscover. It was copied in glass by John Northwood after Wedgwood's ceramic version. Further stunning cameo pieces followed.

Stourbridge now has a Glass Quarter, The Red House Cone, The Ruskin Glass Centre, factories and studios and an International Festival of Glass. There is no shortage of talent to carry the story onward.

January 2023: Dr Ian West

Advancing the Work of Prometheus: The Impact of Artificial Light in the Workplace and Beyond.

Our present society takes much for granted. Artificial daylight at the touch of a switch is regarded as normal in much of the world. It is not that long ago when life was very different for everyone.

Ian West, with his industrial background and as a key figure in Industrial Archaeology, was the ideal guide to the latter day Prometheans who introduced artificial light both industrially and domestically.

Life was governed by the light of the sun. After dark activity was very limited. Candles or oil lamps were for the wealthy. Fears of the darkness, whether rational or not, abounded. The working day was dawn to dusk and people went to bed at sunset.

Early efforts to improve lighting used 'intensifiers' for candles. Glass globes clustered for lace makers in Olney and a goldfish bowl filled with water in Cumbria are examples. Such methods would have had adverse effects on eyesight and with the Craft Guilds influence little work was done at night. Furthermore, candles were expensive and taxed. Hence, 'not worth a candle'.

Unsurprisingly, the Industrial Revolution saw developments in artificial light technology. Around 1775 the French 'Argand' oil lamp found favour amongst the wealthy and was used in works such as the Cromford and New Lanark Mills. However, light output was low and only suitable for lower grade work and maintenance tasks. Moreover, there was a considerable fire risk with cotton dust and machine oil which led to refusals to insure the risks.

Early experiments in gas lighting were led by Lebon and notably by Murdoch then working for Boulton and Watt in Redruth and Leigh at the Salford Twist Mill. The cost was half that of Argand with less risk. The process for producing coal gas was developed which included the valuable by-produce of tar. B&W sold some 20 installations. Winsor demonstrated gas lighting in the Lyceum Theatre and Clegg built gas plants and an early gas holder. A gas holder (not a gasometer) was needed to smooth the output. Early ones were housed in buildings, which could be a danger, and Warwick's example is now the only survivor in the UK.

The use of gas for street lighting was widespread and improved safety; by 1948 there were over a thousand public undertakings in Britain and over 2,000 private gas works. Notable restorations can be found at Sudbury Hall and Ditherington Flax Mill.

Despite these advances, the evidence is inconclusive as to the improvements in productivity from extended working hours at the same time as the Factory Acts were reducing children's hours.

Domestic adoption came later as costs and pollution dropped and with the crucial invention of the incandescent gas mantle to give better light. The pre-payment gas meter helped the introduction of the gas cooker.

Electric light followed slowly. Only the wealthy again could install the necessary plant – such as Armstrong at Cragside, Swan's incandescent bulbs were instrumental and within 25 years over 500 country houses had their own plant. Gas lighting was pioneered in industrial settings whilst electricity was led domestically.

The debate over individual or centralised plants with distribution networks is for another occasion as is the 'current war' in the USA between Westinghouse, Edison and Tesla. Perhaps, one day, Ian will enlighten us.

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