WARWICKSHIRE WIAS
Industrial Archaeology Society

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NEWSLETTER

FROM THE CHAIRMAN

WIAS has recently received a Survey request (sent to all local affiliated IA societies) from Richard Vernon, the Local Societies contact for the Association for Industrial Archaeology.

He wrote: "Anecdotal evidence suggests that some societies are facing issues of declining memberships, an ageing membership profile and difficulties in recruiting younger committee members to run the societies, whilst at the same time others are prospering!"

I would like to think that we were in the latter group, although we are very conscious that we should not rest on our laurels. I outlined some of the successes of the Society, the crucial role played by our monthly meetings, and the importance of the website in spreading the word of WIAS.

Simple statistics were also requested:
Paid-up members 2019: 94
Paid-up members 2025: 93

This hides many fluctuations in numbers, particularly in the difficult Covid years, and Victor Lobb detailed these during his Annual Report at the 2025 AGM. What is certain is that the make-up of the membership in the two totals has changed considerably and we have been delighted to welcome new members, whilst at the same time obviously regretting the loss of others.

One statistic that relied on (considered) guesswork was a request for the average age of the membership and we opted for > 70 but < 75. Apologies if this is wildly inaccurate and that we have a lot more youngsters than I realised! One thing I could confirm was that the average age of the committee was closer to 80!

Attendance at meetings averaged for season ended June 2025: Hybrid 63; Zoom only (in the winter months) 46. Again, anecdotal evidence in comparison with other societies indicates that these are relatively large audiences.

A request concerning publications by the Society distinguished between hard-copy and online publications. Our response was:

"We have certainly produced hard copies of pamphlets/ booklets/ newsletters in the past but the vast majority is now published online e.g. our previously hard-copy Newsletter is now only published online. In line with our constitution, we do financially support the hard-copy publication of pamphlets/books on the industrial heritage of Warwickshire.

'Online publications' are difficult to quantify into a single category. We have an excellently-maintained website which is the main destination of all sorts of content from simple notes and news, to a database of over 500 entries, to more detailed articles, and to our regular Quarterly Newsletter containing a record of the monthly meetings held, with these meetings an essential ingredient of the Society's work"

And then the final question – "What are your Society's plans for the future?"

"We face many of the issues raised by other Societies but we intend to maintain momentum by seeking out fresh avenues of research and providing an interesting range of topics for meetings, held in a positive, welcoming atmosphere. We have had some very successful Hybrid meetings, with expertise on the Committee willing and able to master the technology. This is a great asset.

• One element we have developed since the availability of Zoom is to broaden the geographical coverage of our meeting attendees and to provide talks that are not necessarily confined to a very particular site of industrial heritage in Warwickshire.

• We also have a liberal interpretation of the concept of industrial heritage, and seek to maintain links with local history societies in Warwickshire that may explore industrial themes.

• We hope to develop stronger links with IA societies in adjacent counties with the possibility of shared activities

• Encourage more members to give short presentations on topics that interest them, or perhaps a talk based on family history or their work experience. As one of our meetings, we have 'Twenty's Plenty' with a series of talks by members (20 mins max). We feel that this participation is an essential ingredient of our programme and should be encouraged in the future.

• Maintain the regularity of Visits, either as stand-alone events, or as follow-ups/tasters for a scheduled speaker on the particular topic in the WIAS programme schedule.

The visits programme for 2026 has gathered pace thanks to the efforts of Alain Foote. One very successful visit was to the Gun Barrel Proof House Museum in Birmingham, with a second trip planned for March.

It will be interesting to read what conclusions emerge from the AIA Survey. It has also encouraged us to discuss in committee the possibility of a Survey of our own, such that we can reflect the preferences, interests and enthusiasms of our members in what we do.

PROGRAMME

12 March (live/hybrid):James Davies
Recording Coal and Gas Fired Power Stations in the UK - Plus Surprise Items!
9 April (live/hybrid): Michael Brown
Northcot Brick: Past, Present and Future.
14 May (live/hybrid): Quintin Watt
The Rise and Demise of the Bromsgrove Guild - An Illustrated History of the Celebrated Metalworkers to HM the King.
4 June (live/hybrid): Gary Wragg
The Making of Milestones. Hampshire's Living History Museum, from Conception to Completion

Meeting Reports

November 2025 (live/hybrid): Martin Green
Matterson, Huxley and Watson - Iron Founders, Ironmongers and Engineers Serving Coventry and beyond.

As a starting point, our speaker established the basic road lay-out of Coventry city centre, with the area bordered by West Orchard, Cross Cheaping, the Burges and Well Street – covering the valley of the River Sherbourne - as a focus. In 1750 this was largely orchard, gardens and tenters fields but by 1900 a cluster of manufacturing premises had developed, and Matterson, Huxley & Watson was one such enterprise, proving to be a long-term survivor.

Henry Matterson was born in London in 1825, and probably came to Coventry in his teens to start as an apprentice with ironmonger Joseph Bates, then as an assistant to Richard Brevitt, before becoming a partner in that firm. Matterson left in 1850 and opened up his own ironmongery business one year later In Smithford Street. Adverts for the business revealed the extensive range of items for sale – a recurring element in the history of MHW.

Meanwhile the Douglas family had been developing a flourishing business at the Lion Foundry. So when Matterson took over the this over in 1854, he was taking on a well-established concern – ironfounder, ironmonger and agent. This take-over was achieved in conjunction with partner Thomas Huxley, although one sensed he was the junior partner (or possibly financier) to Matterson.

Much emphasis was placed by our speaker on the assistance given to him by Coventry Archives in researching the talk, and the work of Matterson and Huxley's manufacturing arm were revealed by examples from an early catalogue in those Archives. These included the 'Cottage Range' designed "for the less opulent Classes of the Community", (whilst still - of course - matching ranges of grander design!). One surprising example was a tie bar in the wall of Spring Cottage, Berkswell, unlikely to be spotted by many!

Whilst always involved in services to the farming community, the inclusion of John Watson (a farmer) in the partnership in the 1860s probably reinforced this. Henry Matterson was married to Louisa Watson, but our speaker had not been able to establish a connection between these two Watsons, though he suspected it did exist.

In 1881 it was decided to create a new Agricultural Implement Depot in Hales Street, opposite the Smithfield cattle market. This was a major development and was to eventually to become the primary location for the firm's activities in the city centre, incorporating all aspects of that business. Cart shed, Carpenters Shop, and storage facilities lay behind the Implement Depot, itself resplendent with a plough perched above the entrance.

Henry Matterson played a leading role in the community, serving as councillor, alderman, J.P. and Mayor of Coventry in 1881, taking Coventry though some of its more difficult times via concern and assistance for the poorer sections of the community.

Examples of the output of forge and foundry were shown from catalogues – anything from pig troughs to tomb railings – together with early photographs of the West Orchard Lion Foundry site. This was supplemented by the Goad fire Insurance maps of 1897, which revealed the way MHW had gradually eased its way westwards towards the river Sherbourne with purchase of land and property, new building and occupation of former premises of others.

Henry Matterson died in 1897, to be succeeded as Chairman by John Watson, who in turn was succeeded by Thomas Bethell (an elastic web manufacturer by trade who had married Annie, Henry Matterson's daughter). Bethell led the firm through to 1933.

Wartime conditions 1914-1918 caused product mix to be altered to contribute to the supply of munitions, but the greatest changes had come, of course, with the emergence of the cycle and motor-cycle industries in the city, many in close proximity to the Lion Foundry. This proved to be a most valuable outlet for the firm, boosted of course by forgings and castings (cylinders, radiator heads, gearboxes) for the fledgling motor industry. Familiar Coventry names such as Calcott, Cluley, Daimler, Deasy, Humber, Lanchester, Rover, Swift were ito be added to their customer list. This emphasised once more the manufacturing side to MHW's work.

Advertising slogans took the theme of MHW's ability to supply anything to a range of sectors – Construction, Industry, Agriculture, Recreation, Domestic (home and garden). Adverts for the latter for 1921 focused on labour-saving domestic appliances – washing machines, vacuum cleaners, carpet sweepers, knife cleaners as well as those two essential garden implements - the 'Lion' garden roller, and the 'Warwickshire' lawn mower ("The best value of any machine in the world"). Construction for agriculture was developed considerably and examples were shown of MHW engineering in the form of barns still found in several farms in the county, including Little Willicote on the Gloucestershire-Warwickshire border.

The West Orchard site had become increasingly cramped and an opportunity for expansion occurred with the vacant 'M-L" building adjacent to the river Sherbourne. This was the original ribbon-weaving Victoria Mills, later Centaur Cycle Co., then the home of Morris-Lister magneto factory established in 1915. It became vacant in the 1930s and MHW took the opportunity to move in.

That move became of great significance in the Second World War. The night of November 14th. 1940 brought devastation to the Lion Foundry, but The Agricultural Depot in Hales Street (mostly) survived, as did the M-L building. Both these locations became crucial to recovery from the Blitz, and MHW responded rapidly to the challenge of re-construction and maintenance of product flows.

The archives included many photographs of employees, both at work and social events, but very few had names listed on the reverse. This offered the opportunity for much detective work, and the role of Edward Ward Holloway came to light. He joined the firm in 1898 and retired in 1956. He rose from a role as traveller to the position of Chairman (from 1933) and was instrumental in seeing the company through wartime and post-war recovery.

The 1950s became a period of radical change to the city centre as part of the Brave New World of post-war Coventry, and decisions were taken by MHW to focus on Hales Street, enlarging and modernising warehouse and showroom space, as well as developing facilities elsewhere e.g. Exhall and Kingfield Road. This meant Hales Street became the focus for domestic supplies whilst commercial activity rested elsewhere. This is what many from the current generation remember of their experiences of shopping in Coventry, with a generously stocked Mattersons, still primarily an ironmonger, but diversified into a variety of other retail options.

The change in shopping habits, the growth of out-of-town centres, the emergence of DIY superstores probably brought the inevitable decision to close the Hales Street store in 1995, with Mattersons Steel Stockholders (part of the Barrett Steel Group) still operating from Kingfield Road today.

In stages, the Hales Street premises became the Coventry Transport Museum, itself now under the possibility of moving location, and our speaker finished with some reflections on the radically changed streetscape of Coventry over time, with the efforts of the Coventry Historic Trust in renovating the east side of The Burges, including Palmer Lane, an isolated example of heritage preserved in the hectic world of modern Coventry.

December 2025 (Zoom): Dr Richard Marks
A British Industrial Giant That Never Was: The Story of British Rail Engineering Limited.

Dr Richard Marks's talk on BREL – British Rail Engineering Ltd could have been labelled 'The ups and downs of late twentieth century British engineering.

In 1960 the railways were changing, steam was being replaced by diesel and electric, which theoretically needed less maintenance, and the numerous railway workshops had less work.

The 1954 modernisation plan intended to reduce the operating deficit by 1962 had not really worked. It involved buying 174 diesel locomotives from six different manufacturers but most of these were unproven and many were flawed. Steam locomotives were still being built. It was a mess and something had to be done.

The government decided that British Railways was to be separated from the British Transport Commission and run by a new body, The British Railways Board (BRB). Operations, including engineering, would be operated by nominally independent companies wholly owned by BRB.

The railways had too many workshops and too much duplication. There were 29 and many were small and in inconvenient places. Between 1959 and 1968, before a new engineering company could be set up, sixteen workshops were closed, leaving just thirteen.

The remaining workshops were transferred to a new private company to be called British Rail Engineering Limited (BREL). However, the new company was only nominally independent as it was wholly owned by BRB who appointed all the Directors and had to approve all of the expenditure. BREL could, however, bid for external and export work. The new company came into existence in 1970 and all the staff were transferred on the same terms and conditions. BRB lent BREL £61 million at 6%.

BREL also inherited any labour disputes. Further, BRB insisted they bought in many components which they were perfectly capable of making themselves and this caused delays which were blamed on BREL. The perception that BREL was disorganized and badly run is not true, for example, they were the first in the country to adopt computerisation of manufacture.

Completion of the Mark II coach was delayed because materials and components were delivered in very small quantities. The Ministry of Transport was late in authorizing the project. BRB dithered and delayed ordering from BREL. The same issues would impact much of BREL's work but the media always seemed to blame BREL not BRB.

Richard illustrated this with examples including the Class 87 locomotives, Class 312 and Class 510 trains and most notoriously, the High Speed Train (Intercity 125) which were not only delayed by the late supply of engines by Paxman but also by ASLEF refusing to allow its drivers to operate above 90 mph in testing.

BREL had inherited industrial relations issues from British Rail. In the 1970s unofficial strikes became regular and BREL sent the personnel director to investigate, a move which was supported by the union general secretaries. He found that the local union reps were taking independent action and the workshop managers required people-management training. BREL attempted to implement a change in working practices across all workshops intended to improve productivity and increase wages but many of the workshops rejected the move and worked to rule. An unofficial strike broke out at Crewe in 1977 caused by retraining of men who were members of the NUR and the AUEFW had taken this as demarcation.

In the export market BREL had mixed success. They developed a locomotive for Railfreight which was intended to be the basis for export and Class 58 looks the way it did as a result of the need to be compatible with overseas railways. However, it never proved successful as an export offering. Compared with the American and German equivalents It was believed to be underpowered and the German manufacturers were subsidised by the government. In other areas BREL was more successful; wagons were made in large numbers for overseas railways and the 'export coach' developed by BREL was popular. Diesel and electric multiple units sold well and standard bogies which could be made to differing gauges were manufactured in huge numbers.

The company was always restricted in bidding for work by the need to keep capacity 'free' for BRB. BRB were late in confirming orders, cancelling them at short notice and was gradually reducing maintenance on locomotives to save money. The inability to fill the order books led to the closure of Ashford and Shildon once work on wagon construction and repairs for BR Railfreight collapsed.

BREL bid successfully for a number of army contracts. As an engineering company with broad expertise the company could offer a lot to the MOD. Contracts were won for conversion kits to rework Spartan Personnel Carriers into Sampson Recovery Vehicles and BREL also won the contract to make bodies for Armoured Personnel Carriers.

BREL had a comprehensive apprenticeship programme but retaining staff and recruiting skilled staff was difficult. The company was not allowed to set its own pay scales and had to use the pay grades assigned by British Rail which were lower than the market rate.

As part of the privitisation of British Rail elements were sold off in advance. BREL was earmarked for sale and tenders requested. The winning bidder was a consortium of Management, Trafalgar House and ABB. Eventually ABB bought out the other parties and in 1992 BREL ceased to exist.

On the 200th anniversary of modern railways Richard had given a comprehensive, if rather depressing, picture of British Rail Engineering Ltd.

Inter-City 125.

January 2026 (Zoom): Mark Temple
Britain's Last Bell Foundry.

Mark Temple introduced his talk by describing Taylors as the last purpose built bell foundry in Britain. It had started in the 1780s, not as far back as the Whitechapel, which had been started in 1570 but sadly closed recently.

The oldest bells known are in China where crotal bells, small spherical bells with a weight inside, go back to 2000 BC. The oldest bell still rung in Britain is at West Tytherly and is thought to date from 1260. Bells were believed to drive out demons.

As bells got bigger, they had to be cast on site and they could not be hand held. They might be hung in trees but from Norman times bell towers were built at churches. At first bells were rung simply by swinging them from side to side but by attaching a wheel to the frame the bell could be rung under more control. Tuning of bells began in England and this led to the introduction of change ringing. The sound comes from the lower part of the bell and is produced either by striking the outside with a hammer or the inside with a clapper.

The Arnold family began a bell making business in St Neots, in 1735; Robert Taylor joined in 1775. In 1784 Edward Arnold moved to Leicester and Robert Taylor had taken over in St Neots with his two sons William and John. In 1821the foundry burnt down and the business moved to Oxford. In 1839 John was asked to cast some bells in Loughborough and the business moved there, initially behind the Old Packhorse pub. John decided that Loughborough was a good site with good road connections; the Grand Union Canal and in 1840 the Midland Railway. However, in 1858 they had to move and they built a new purpose built foundry on the old Cherry Orchard. John died before it opened and his son, John William, took over. Taylors still had less than 20% of the market while the foundries at Whitechapel and at Gloucester had 80 %. In1882 the company expanded the works by building new furnaces, a much bigger casting hall and an area for casting handbells. The Taylor family continued until the last of the line, Paul Taylor, who took over in 1940, died in1981.

Mark then moved to describing the method of bell making, starting with the mould. This was in two parts, an inner or core and the outer or cope. A brief film showed the process of adding a subscription inside the cope tapping metal letters (in reverse) Into the loam to leave a depression which formed a text in relief on the finished bell.

The outer mould, the cope, is now normally cast iron but earlier they were ceramic, which led to accidents when they exploded. Large bells were often cast on the site, sometimes they were cast directly below the towers in which they would be raised, Great Tom of Lincoln cast in 1610 is an example.

Mark showed a picture of the immense Great Tsar Bell in Moscow weighing 202 tons made of 25% tin 75% copper (compared to Taylor's 22% tin 78% copper) which cracked when they tried to extinguish a fire in the casting pit using water. This cooled the hot bell too quickly.

The cope is lined with loam and then formed to give the exact shape required by scraping with a template and the core is perfected similarly. The loam is mixture of red sand, black sand, chopped hay and horse manure with a little water. The cope and the core are carefully dried before the cope is inverted and lowered onto the core and the space between is filled with molten metal at a temperature of 1100 to 1200 degrees. The bell is then left in the sand to cool for several days.

In 1891 there was a fire and following that the works were rebuilt. The yard in the old part of the works was roofed over to give space for the erecting and tuning shop; a new tower was built to house a set of 12 bells for demonstrations to prospective customers.

Using eight of these bells a world record was set in 1963 ringing the complete peal of 40320 possible changes in 17 hours 58 minutes. This record still stands.

At the top of an older bell is a complicated part of the casting called the 'canon' by which the bell is attached to the wooden headstock using iron straps. Modern bells are bolted directly to a metal headstock. When refurbishing an older bell, the canon is often removed unless the bell dates from before 1660 when it is described as a 'heritage' bell and the canon must be retained.

In England the headstock with the bell attached is fitted to a wheel which allows the bell to rotate through 360 degrees. The bell wheels are made at Taylors using steam to form the circumference.

'Rings' are a combination of four or more bells and of the 9,140 rings worldwide 94% are in England. These are mostly rings of six but occasionally ten or twelve. Liverpool Cathedral has the heaviest ring in the world at 82 cwt.

The art of tuning was pioneered by the Hemony Brothers in Holland but with their death the secret was lost for over 200 years. In the 1890s Taylors started experimenting with tuning methods, initially by chipping the rim of the bell and then on a vertical lathe, removing small shavings from inside .

The largest bell cast at Taylors was Great Paul, for St Paul's Cathedral in 1881. It is 9 feet high and weighs 16 3/4 tons. It took 11 days to deliver it by road from Loughborough to London.

In the First World War the Taylors lost three of their sons, leaving only the youngest son, Paul.

Taylors latest project is the Hope Bell commemorating those who died in the covid pandemic which has an electronic clock so the bells ring the quarter hours with Westminster chimes. This was part of the Loughborough Town Deal which provided some money for the foundry and some money for the town when the Bell Trust took over. The Bell Trust now looks after the Museum and the foundry visiting. The company runs the foundry but if anything should happen to the company the buildings are safe.

Mark had delivered a fascinating account of what is now a unique business and this was confirmed by a full half hour of questions