WARWICKSHIRE Industrial Archaeology Society

WIAS

NUMBER 72 March 2021 **PUBLISHED QUARTERLY**

NEWSLETTER

FROM THE CHAIRMAN

ONE YEAR ON …

It is a year ago that the Committee was agonising over whether to hold the March 2020 meeting of WIAS at the Halse Pavilion, Warwick School, with Ian Whittle talking about the life and achievements of his father, Sir Frank Whittle. Very few of us dreamt that we would still be under lockdown conditions in March 2021, and the intervening twelve months has indeed been a challenging one for the Society. With the hard work of the few and positive response from the many, we have managed to sustain regular monthly meeting via Zoom, whilst the extent of e-mail contact and frequency of website visits has given WIAS a greater public presence.

You will note at the end of this piece that these Zoom meetings continue into the summer, and that the opportunity has been taken to book some speakers from outside Warwickshire. We remain conscious that those without internet connections have been disadvantaged, but were left with little alternative.

Thoughts now turn to the way ahead – I hesitate to use the term 'road-map'! Without wishing to repeat points made in previous Newsletters, we are now faced with a number of different categories of contact with the Society and we are keen to learn the views of these different groups. The monthly meeting held at Warwick School has always been the bedrock of the Society, and the most obvious option would be to return to this format for the future, beginning, hopefully, in September 2021. We do have to consider, however, that some might have found the Zoom option preferable to an evening out in the month particularly during the harshest winter months. We would also hate to lose those supporters who might be unwilling or unable to travel to Warwick, so perhaps the regular e-mail contact would be a feature to be retained and to be encouraged.

Our survey seeks to explore these views and I do hope you will be willing to complete the survey either online or by post. Any survey or poll with a low turn-out is of very limited benefit, and may even be counter-productive. Your views are vital to us in taking the Society forward. We have regarded the project as 'blue-sky' thinking within the committee so feel free to fully express your views and suggestions. You may have ideas that we have not considered, and fresh observations on existing patterns and procedures or new initiatives could mark a new direction for the Society.

We shall then, of course, have the unenviable task of plotting the route forward, and of deciding the relative weight to attach to the various views expressed. As a precautionary measure, discussions have been taking place with Warwick School and a number of speakers remain on the list of potential invitees, whether for Zoom lectures or in-person meetings.

WIAS is, of course, not alone, and evidence and experience from other societies – whether in IA or local history - produce much the same sort of conclusions. Indeed, the AIA Newsletter contains a section which recounts the efforts of Berkshire IA Group to deal with the Covid crisis and some examples of the efforts of other Societies to do likewise.

WIAS has clearly done well with its long-established website and regular e-mail contact. Whatever happens, the internet will continue to be the most valuable mechanism for spreading the word of WIAS's existence and of our work.

One personal example illustrates this. I was invited by the Old Warwickian Association (the Old Boys of Warwick School) to give a ZOOM talk entitled 'Warwickshire's Industrial Heritage and Warwick School' and I related how Industrial Archaeology had been encouraged at the School from the 1960s, and that, from 1989 right through to the present day, it had been the home of WIAS. I relayed information concerning the Society's website and the following day, from a daily average of 85 visits, we had 269 visits, with 218 first time visitors.

I – and the Committee – very much look forward to reading your responses, and to taking the Society forward into the 2021-2022 season.

PROGRAMME

11 March 2021: David Fry
Eighteenth Century Coventry Silkmen: Masters of the City's Industrial Universe.
8 April 2021: Dr Mike Nevell
The Salt Archaeology of Cheshire.
13 May 2021: Dr Ray Wilson
Gloucestershire's Industrial Heritage.
10 June 2021: Dr David Eveleigh
The History of the Kitchen Range.

Meeting Reports

December 2020: Liz Woolley **Report by Martin Green**

The Industrial Architecture of Victorian and Edwardian Oxford.

The restrictions of lockdown allowed the Society to explore the possibilities of Zoom lectures on sites that might lie beyond the Warwickshire boundary. Such was the case in the invitation made to Liz Woolley to speak on the industrial architecture of the City of Oxford.

Not many of us will have considered this aspect of the city's history and fabric, and it was a delight to witness the extent to which Liz had explored the industrial buildings and their history, wonderfully illustrated by some excellent photographs, drawings and maps. She provided something for everyone's interest with a focus on the remaining sites in the city, giving context both to industrial history and architectural styles.

Many English towns and cities experienced rapid expansion in the second half of the nineteenth century, and Oxford was no exception. This placed considerable pressure on the provision of public utilities, and gas, water and electricity all experienced considerable investment. The gas works was an early example, founded in 1818, in St Ebbe's (an area to the south-west of the city centre) on the north bank of the river Thames. Successive improvements and extensions were made to the site, including a fine Retort House built by F.J.Evans, who later achieved far greater fame with his designs for the gasworks at Beckton, Woolwich. Extensions on the south bank necessitated a spur from the railway directly into the works, and the Thomas Hawksley designed railway bridge that crosses the Thames is the only remaining evidence of the site. The history of Oxford's railways is, of course, a fascinating topic of its own, including the surviving Rewley Road Swing Bridge. Perhaps Liz might turn her attention to this for us in a future presentation?

Another river-located site was the Electricity Works at Osney, relying on a plentiful supply of water for cooling, and the works established in 1892 remained in operation until the 1960s. The fine river frontage remains and in now being converted to serve the expanding needs of the Saïd Business School.

The adequate supply and treatment of water was another consequence of the city's expansion, and a number of initiatives were taken, including Lake Street Waterworks located in Hinksey. Like most waterworks, it first employed steam power, initially using beam engines and later compound vertical and horizontal engines. The design of waterworks and their setting were often used by water companies as a public expression of purity, improvement, confidence, and reliability, and the Lake Street works reflected this. What is now Hinksey Park began life as the grounds of the Lake Street Waterworks. The classically designed pumping station has become the South Oxford Community Centre.

Turning to industry, Liz emphasised that nineteenth century activity in Oxford focussed on local rather than national or international needs, with the product mix reflecting these requirements. Brewing played a significant role, and several important brewing interests developed in the city. On such example was Morrells Lion Brewery which was significantly developed from the 1870s onwards under the direction of (the splendidly-named) architect Drinkwater. All the buildings constructed were of similar style, and the façades of some of the buildings, the chimney and the waterwheel were retained when the brewery closed in 2002, with the site being developed for housing.

Regrettably none of the buildings of the Swan Brewery, the Eagle, or Phillips's Tower Brewery survive, but some small elements of the huge Hanley's City Brewery operations previously centred on Queen Street remain, if converted to other uses e.g. the premises housing Modern Art, Oxford in Pembroke Street. Hanleys were famous for brewing beers that were advertised for family use, including the 'Intermediate Family Ale'!

Access to river, canal and railway transport links have had a powerful influence on industrial location in Oxford, and the Jericho area of the city was adopted by many given the adjacent Oxford Canal facilities. One such firm was established at the Eagle Foundry by William Carter in 1825. (This was the same Carter who came to Leamington Spa and helped to establish the Eagle Foundry on the Warwick & Napton Canal, still functioning today as Rangemaster). The Oxford foundry was taken over by W. Lucy and, after initially concentrating on decorative ironwork and agricultural machinery, turned its attention to the construction of bookshelves and document storage systems for government offices, universities, museums and libraries. Lucy's remains in business today following considerable diversification and expansion in the UK and overseas. A last vestige of the old Eagle Ironworks remains in the form of factory gates adorned with stone eagles.

Very aware of the nature of her audience, Liz then turned her attention to steam-power and the John Allen Steam Ploughing Company in Cowley, with some wonderful illustrations of the firm's products. Sadly little remains of the complex today except for a gabled end wall with a rather forlorn plaque in Rymers Lane 'THE OXFORDSHIRE STEAM PLOUGHING COMPANY: ENGINEERS with the date 1909, together with some housing specifically built for company employees.

Given the importance of the river, the boat-building department, the rental fleet and the pleasure steamers of Salter's Boatyard were responsible for a large number of craft seen on the Thames. The firm played a key role in the development of the pleasure-boating industry, as well as providing the design and construction of the highly specialist racing boats, some of which were used by the Oxford University crew in the Boat Race. Their premises on Folly Bridge, adjacent to the Head of the River pub originally operated as Knights Boatyard before the Salter Brothers took over in 1858.

Turning to food production, Liz looked briefly at Oxford sausages, and then to the (listed) marmalade factory of Frank Cooper, a brand name familiar to us all. The splendid frontage of the building on Park End Street survives largely intact, now converted to a restaurant 'The Jam Factory' (housing arts centre, café and restaurant). It was originally sited outside two railway stations and a goods yard, with all the advantages that this provided for goods transport, and for sweet-toothed rail passengers (and others) to receive a regular fix!

Finally, moving into the twentieth century, Liz explored the origins of the Morris Motor Works, and the surviving example of the garage and offices on Longwall Street built in 1910, prior to their move to Cowley.

The evening was a real pleasure and undoubtedly opened many eyes to the surviving industrial heritage of the city of Oxford. We hope that WIAS may be able to include a walking tour with Liz at some stage to see thes sights for ourselves.

January 2021: David Skillen
The Bentley Boys.

David Skillen entertained us a year ago (January 2020, Newsletter 69) with the history of Germany's Zeppelins – Giants in the Sky. Tonight, with many evocative and contemporary photographs, he told the story of a group of British (and one French) Giants of Motor Racing in the inter-war years. More precisely, Bentley Motors and its drivers, the Bentley Boys, from 1920 to 1930.

To begin with, without Walter Owen Bentley, always known as WO, there would have been no story to tell. Born in London in 1888, the youngest of nine children, he was from an early age fascinated by things mechanical and especially steam power. It is not surprising, therefore, that he left school early to go to Doncaster as a premium apprentice at the locomotive works of the Great Northern Railway.

David took us through WO's transition from steam to petrol before, during and after WW1. A chance encounter with an aluminium piston in France was important as was the development of his renowned BR1 and BR2 radial engines which powered some of the best fighters flown in the war.

Demobilised, WO founded Bentley Motors and set about producing a sporting car that would build upon his now considerable experience in high performance machinery. The first engine, a 3 litre four cylinder, burst into life in October 1919 in a mews off Baker Street to the distress of the lady nursing a sick person next door. A happy sound to die to was the irreverent comment of one of WO's team.

It soon became apparent that the Bentley was something special and for a small company with limited resources, racing might well be the best way of promoting the car. And so began the legend.

The first big race was the Isle of Man TT in 1922 where WO drove one of the three cars which won the team prize.

David introduced the 'Bentley Boys' through the 24-hour races at Le Mans. Many other successes were enjoyed, notably in long distance races at Brooklands and circuits where long straights and few corners allowed the Bentley's speed and reliability to triumph, but it was the long summer days and nights on the 'Circuit Permanent de la Sarthe' where Bentley dominated the 1920s.

The first of the 'Boys' was John Duff whose privately entered car set many records at Brooklands in 1922. He approached the works with a view to some support at the first Le Mans race in 1923. WO was more than sceptical but eventually agreed to prepare Duff's car and provide support at the race.

At the last-minute WO crossed over to see the race. By nightfall he was a convert. Duff and co-driver Clement (who headed the experimental department and was the only professional driver in the team) finished fourth and set the fastest lap. They went on to win the race in 1924, setting the scene for the further triumphs to come.

Planning for future races meant recruiting a suitable team of drivers. Fortunately, amongst its wealthy customers there were plenty of the talented and willing only too glad to be given the opportunity to race such a superlative machine. These men with money, who had survived WW1, also held it a duty to live life to the full. Later known as the 'Bentley Boys', David sketched the biographies of the most prominent and their major races.

Dr J D Benjafield, was a Harley Street consultant (whose wife happened to own Claridges Hotel) and had bought a car after a high-speed demonstration at Brooklands by the ebullient Bertie Kensington Moir who ran the Bentley pits on many occasions. 'Benjy' went on to drive for Bentley at Le Mans from 1926 to 1929, winning in 1927, and many other races. A steady and reliable driver who enjoyed a party.

Sir Henry 'Tim' Birkin was wealthy and totally ruthless towards his cars. He shared the winning Bentley in 1929 with Woolf Barnato but his love affair with the supercharger, which was an anathema to WO (who prefered to build a larger engine for better performance), was unhelpful. He did win Le Mans again in 1931 but driving an Alfa Romeo after Bentley ceased racing. He died, not while racing, but of an infected mosquito bite in 1933.

Woolf (Babe) Barnato was central to the Bentley story. Son of Barney Barnato, who made a fortune in South African gold and diamonds, he was fabulously wealthy. A superb sportsman he excelled in all he took up, not least motor racing. With Bentley he started the Le Mans race three times 1928/29/30 and won each time. He gave fabulous parties at his country estate 'Ardenrun'. His wager to race the Blue Train' from Cannes to London in a 6 ½ litre Bentley was typical of the man – and he won handsomely. When Bentley Motors was in severe financial difficulties in 1926 Barnato came to its rescue and as a result was involved in it eventually passing into the hands of Rolls Royce in 1931.

Bernard Rubin, a wealthy Australian was a friend of Barnato's and his co-driver in 1928. In 1930, Glen Kidston partnered Barnato. Another tough adventurer and naval officer he was later killed in an air accident.

These men and several others created and sustained the Bentley story with their hedonistic life-styles, a corner of Grosvenor Square was known as 'Bentley's Corner', and glamorous girlfriends. The story was told of WO being invited to meet 'the most wonderful woman' on three separate occasions by three different men – WO says that she and he knew each other pretty well by the end of the third meal!

Tim Birkin's pursuit of supercharging, funded by Dorothy Paget, gained much publicity for the 'Blower Bentley' but little success although Birkin had some monumental tussles, notably with Mercedes' driver Caracciola at Le Mans in 1930 when both cars retired hurt.

To finish, David brought the Bentley story up to date with WO's work with Lagonda after a spell at Rolls Royce following their purchase of Bentley Motors and the post WW2 badge engineered cars leading up to the VW buyout. A Bentley raced again at Le Mans in 2001 and in 2019 the 'Rue des Bentley Boys' was unveiled at Le Mans.

For those who might be interested, 12 replica 4 ½ litre Blower Bentley cars are being built at £1.8 million each.

February 2021: Margaret Ingham
The UK's Forgotten Transporter Bridge and the Campaign to Save It.

With only 18 examples, and every one different, ever built in the world, transporter bridges would be an interesting specialist subject for Mastermind. And Margaret Ingham would surely be a short priced favourite to win.

Whilst centered upon the now unused Warrington Transporter bridge and the efforts to preserve this forgotten relic, Margaret opened many members' eyes to a little-known subject in industrial archaeology. Chairman of the Friends of the Warrington Transporter Bridge, Margaret, a retired IT specialist with the Atomic Energy Authority but with no claims to be either an engineer or an historian, has clearly inherited her father's interest in the industrial revolution.

Waterways were industrial highways plied by tall ships to some distance from the ocean. In a number of places, this conflicted with the need to transport people and material from one bank to the other without a lengthy detour. Various solutions were adopted depending on the local terrain, swing and high-level bridges, for example. However, a cheap and practical solution was found in the transporter bridge where a lightweight lattice girder, mounted on piers high enough to give sufficient clearance above the water, allowed a load carrying gondola suspended from a trackway to pass from bank to bank.

In 1905, an earlier, and at 1,000 feet span, the largest, British transporter bridge had been built at Runcorn spanning both the Mersey and the Manchester Ship Canal. In the list of the 18 transporter bridges, the Warrington bridge, built in 1916, is the youngest. Photographs of the extant 8 bridges showed the variations on the basic concept that had been built.

A 180^{o} loop of the Mersey in Warrington encloses an area known as 'The Tongue' on which Joseph Crossfield & Sons established a soap works. In 1899 the company was prosecuted for contaminating the river – 150 tons of calcium carbonate were being discharged into it every week. Eventually the company decided to find an alternative use for this sludge and built a cement works upstream of the bend in the river and required some means of transporting material across to another site on the far bank.

A light railway ran around the site serving existing jetties but it was decided to build a new transporter bridge adjacent to the cement works. Design proposals were made in 1913 and the bridge became operational in 1918. The methods of construction were illustrated with photographs of the Runcorn bridge – another example to give 'elf 'n safety' nightmares. The finished bridge differed slightly from the original proposals, mainly in the profile of the main beam which was flat rather than having a slightly bowed top. The Warrington bridge was never used for passengers, only for raw and finished materials carried in rail wagons.

The bridge was built by the famous bridge builders Sir William Arrol & Co., to a design by William Hunter, of rivetted mild steel plates and angles. It has an overall length of 103 metres. Double steel cantilevers on each tower support a span of 61 metres with a clearance of 23 metres at high water. Originally designed to carry railway trucks up to 18 tons it was converted to road vehicles in 1940 and upgraded to a 30 ton weight limit in 1953.

A series of archive photographs from the 1920s through to the 1960s showed how the bridge functioned. The cable suspended gondola was driven from a cab on its roof and rather flimsy looking gates protected the open ends. Probably because of WW1, women painters were photographed working on the new bridge and giving a sense of its size. Another view from the gondola floor clearly shows its rails and the approach to the twin piers on the abutment. Current photographs detail the remains of locating clamps and rail tracks and a possible walkway along the riverbank with views back to the bridge. Another wartime relic is the fire-watcher's chimney-like shelter on one end of the bridge.

A small steam ferry used to ply across the river, in the 1950s it became known as the 'African Queen' but there was never any sign of Bogart or Hepburn.

Margaret's personal connections with the Bolton Steam Museum gave useful insights into the locomotives used around the site, one had been named 'Persil'. The Friends have hopes of someday running trains there again.

The bridge has had a succession of owners since it was built by Crossfields who then became a subsidiary of Lever Bros and subsequently Unilever. It ceased to be used in about 1964 and in 1976 Unilever wanted to demolish it. After considerable local comment the bridge became a Scheduled Monument and Grade II* Listed and was acquired by Cheshire County Council on a 50-year lease. Because of its poor condition it is on the Heritage at Risk Register. Meanwhile, ownership of the site on the Tongue has passed from Unilever to ICI and now to INEOS. It is hoped that the lease will be extended.

The Friends of Warrington Transporter Bridge was formed in 2015 to act as the independent voice of the bridge. FoWTB is liaising with other interest groups to safeguard the bridge's industrial heritage status but has no intention of seeking ownership.

The Council is supportive of the project to improve the condition of the bridge but there is no point in attempting to repaint before serious restoration is undertaken. One major problem would be the prevention of debris falling into the river – adding to the already high potential costs.

If anyone is contemplating a visit, be aware that the site is infested with giant hogweed that can deliver a nasty sting to the unprotected.

Margaret's involvement with the WTB has led to several interesting and rewarding trips to other sites under the auspices of the Association of Transporter Bridges, notably, to Argentina, Spain and Germany as well as the other sites in the UK. Building on the examples of others, there are now information boards at Warrington and the Friends have hopes for a visitor centre at some time. On the subject of building, a local Meccano enthusiast built a large-scale working model of the bridge which he bequeathed to the Technical College.

The Friends of WTB clearly have a challenge on their hands. It is to be hoped that they will be successful.