WARWICKSHIRE WIAS
Industrial Archaeology Society

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NEWSLETTER

FROM THE CHAIRMAN

One of the pleasures of being Chairman has been the opportunity to take the message of Warwickshire's industrial heritage out to other groups and societies. Over the years, this has included many local groups within Warwickshire, but the advent of Zoom options has enabled that message to go to a wider audience. So I was able to deliver a Zoom presentation to Gloucestershire Society for Industrial Archaeology, whilst delivering a similar message in person to the Leicestershire Industrial History Society.

On each occasion I have tried to demonstrate links between Warwickshire and its neighbouring counties. For example, in the case of Leicestershire, their long history of textile manufacturing has several links with Warwickshire. One particular instance is the elastic web industry, which has its origins in Leicestershire, but also gained a foothold in Hillfields and Foleshill, Coventry and Attleborough, Nuneaton. Similarly, the renowned Leicestershire textile manufacturer Hart & Levy had a branch factory in Nuneaton, whilst Symingtons corsets, based in Market Harborough, had a branch in Rugby.

One of the great assets of Leicestershire Industrial History Society is a focal point for visitors (and an associated income stream) in the form of the Glenfield Tunnel, with nearby heritage sites managed by the Swannington Heritage Trust. The latter included Hough windmill and the coal mining remains and railway incline at Swannington. As part of Alain Foote's visits programme, a small group of WIAS members were able to visit these sites under the guidance of LIHS members Chris Hossack, Matt Davis, Mike and Jas Richardson, and Swannington Heritage Trust members Roger Bisgrove and Owen Bailey. Space does not allow a detailed description of the visit but it is well worth a trip. Details can be found on websites www.lihs.org.uk>glenfield-tunnel and www.swannington-heritage.co.uk

This small collection of photographs give a flavour of the day.

Notice board for Glenfield tunnel

Gathering at the entrance

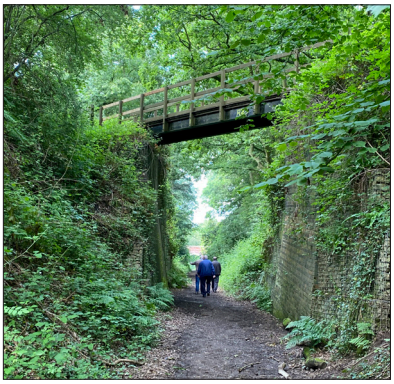
The tunnel itself

Guides Matt Davis and Chris Hossack

Alain Foote takes refuge inside the tunnel

Hough Mill

WIAS members at the (replica!) Swannington horse whim



Looking up the Swannington Incline

Meeting Reports

March 2024 (live/hybrid): Terry Merrygold
Sir William Lyons: The Great Opportunist.

Tony Merrygold of the Jaguar Daimler Heritage Trust gave us a fascinating account of the life of Sir William Lyons and the origin and development of Jaguar Motors.

However, he started by describing the Trust which began in 1983 at the time Jaguar separated from British Leyland and before Jaguar was taken over by Ford. Now established at Gaydon, the Trust owns some 170 vehicles of which more than 55 are on show. The Trust has 10 employees and about 20 volunteers including Tony himself.

Tony introduced Lyons as a person with two vital characteristics, first an eye for design and second, an extraordinary business acumen. He was also an opportunist, brilliant at recognizing and taking advantage of opportunities when they arose. Born in 1901, by the age of 21 he had owned – bought and sold - 20 motor bikes.

On leaving school he started as an apprentice with Crossley Motors but left in 1919 to work as a salesman for Jack Mallalieu who was setting up a business in William's home town, Blackpool. As Tony put it, 'enter William Walmsley', who was ten years older than Lyons and making motor cycle side cars, just one a week but of a very stylish design. Lyons bought one and was so impressed that he went into partnership with Walmsley to build them. They persuaded their fathers to support this by underwriting a bank loan of £1000, although the formal arrangements had to wait until Lyons was 21. They rented a small workshop and moved in July 1922 with a target to make 10 units a week at a price of £28. They called the enterprise Swallow Sidecars. Soon they outgrew the small workshop and William Walmsley's father bought a larger place in October 1926 and rented it to the partnership.

Walmsley's brother-in-law asked them to rebody a scrap car that he had acquired and this gave Lyons the idea of expanding the business to bodywork. In 1927 he ordered an Austin 7 chassis privately and fitted it with a stylish sports body which they christened the 'Swallow'. Lyons drove this to Birmingham where he had arranged a meeting with Frank Hallam. Frank did not show up so Lyons took his car around the corner to the motor dealers, PJ Evans. Evans ordered 50 on condition they were sole agents for the area. Lyons drove the car to London and Henlys promptly ordered 500, to be delivered at 20 per week. Importantly for Walmsley and Lyons, Henlys would buy the chassis thus considerably helping their cash flow, but they also wanted a four seater model. All this meant expanding production and they decided to move to Coventry, then the centre of the motor industry, where they would find it easier to hire skilled labour.

In 1928 they rented two buildings on the Whitmore Park Estate off the Foleshill Road with an option to buy after three years. This was part of a WWI shell filling factory with wooden floors. Thirty of their fifty employees decided to move with them. In July Swallow sidecars became SS cars. They tried rebodying other cars, particularly the Standard 9, but Lyons's ambition was to develop his own design and in 1931 Lyons produced the SS 1 using the well-established Standard 16hp engine.

The new car was well received and, in 1932, Lyons took the opportunity of buying six more buildings on the Whitmore Park Estate together with the sawmill. In the continuing economic depression, all these buildings cost less than the original two they had rented in 1928.

The next year, 1933, William Walmsley decided to retire. To finance this the company was floated with a valuation of £181,000. In 1937 Lyons bought Wappenbury Hall, a large Victorian house in a local village.

A characteristic of William Lyons was his ability to attract and employ highly talented engineers. To improve his engines, he commissioned Harry Weslake who improved the output of the Standard 4 cylinder engine from 70hp to over a 100hp, principally by fitting it with overhead valves.

By 1939 the company was building well respected saloons and SS 100 sports cars at attractive prices, but when war started production was switched immediately to more urgent needs. They produced 10,000 motor cycle side cars and 55,000 small trailers besides making innumerable parts for aircraft. During long nights of fire watching his engineers were encouraged to turn their minds to planning the company's post war production. A six cylinder engine was determined.

The first change post war was to rename the company Jaguar as the letters SS now had a particularly sinister implication. The name Jaguar had actually been registered in 1937. Production of the Mark IV saloons was restarted, some with six cylinder engines after Captain Black of Standard had sold them their production line for just £6000.

At the first postwar London Motor Show in 1948 they had a new saloon, the Mark V, but what really caught the attention was a concept car they called the XK120. So popular was this, that they decided to put it into production. The first 140 cars had aluminium bodies and most of them went for export to the USA. Tony showed us a slide which we were assured was Clark Gable with the first one in California.

In 1950 Jaguar took on the lease of a disused shadow factory in Browns Lane, with an option to buy and there they developed the XK 120,140 and 150. The 1950s were good for the company but in 1960 when they wanted to expand further the government insisted they start production in a less developed part of the country as Hillman had done at Linwood. Lyons had no wish to do this and Jack Sangster, the Chairman of BSA, who owned Daimler offered to sell Jaguar not just their unused plant at Radford but the whole company. In typical Lyons fashion the deal was agreed without reference to the Jaguar Board. Jaguar moved their engine production to Radford and expanded the car assembly at Browns Lane.

1961 was the year that saw the introduction of the most iconic of Jaguar's cars, the E-type. Tony described how the prototype was driven through the night to Geneva to arrive just in time for the opening where it stole the Show.

By 1968 Jaguar Daimler was part of BMC with approximately 10% of the workforce but Lyons managed to keep a degree of independence. New models were introduced including the XJ6.

Sir William Lyons retired in 1972. He and his wife continued to live at Wappenbry until he died in 1985.

April 2024 (live/hybrid): Mark Davies
The Work of the Chance Heritage Trust.

Mark, as Chairman of the Chance Heritage Trust, enthusiastically presented the aims and achievements of the Trust, but began with a brief account of the history of the company.

Chance Brothers was founded in 1822 in Smethwick alongside the Birmingham to Wolverhampton Canal and it soon became the foremost glass producer in Britain securing the contract to provide the 900,000 square feet of glass for the Crystal Palace in 1851. For this they were the first British glass makers to use the cylinder method of making flat glass which involved blowing an immense cylinder which was then slit and allowed to unroll. In 1854 they supplied the glass for the Houses of Parliament but the company is best known for producing the extremely complicated Fresnel lenses for lighthouses and all the associated equipment: 2300 lighthouses around the world had Chance Brothers lenses. During the First World War when Germany had a near monopoly of optical glass for binoculars Chance Brothers had to expand this specialty rapidly and they were later to produce the early cathode ray tubes for John Logie Baird's developments in television.

During World War II, the war artist Melvyn Peake painted glass blowers at work making cathode ray tubes, and he is said to have declared that it was like a dance with each member of the team knowing and playing their part.

At its peak the firm employed 3500 and were renowned for their support of local education and community facilities. We were shown several impressive pictures of the site. However, after World War II Chance Brothers was taken over by Pilkingtons and ceased production at Smethwick in 1981. The site has remained largely unused since then.

The Charitable objects of the Trust are threefold: first, as a vehicle for regenerating the heritage assets in Sandwell; second, for the advancement of education about the history of the buildings and the area through cultural activities and third, economic regeneration by creating training and opportunities for new jobs, developing enterprise space, residential space, educational facilities and community and cultural space.

The Chance Glassworks site is at the western end of the Galton Valley Conservation Area which includes Brindley's Old Main Line Canal and Telford's Birmingham Canal and extends eastwards to the Soho Foundry and Mint. By revitalizing the heritage aspect of the area, it is expected that the whole economy will benefit. Mark quoted John F Kennedy – " a rising tide raises all boats."

The Vision of the Trust is expressed as: to regenerate Chance Glassworks; to protect and celebrate its highly significant industrial heritage; to act a beacon of hope and to create a new vibrant, urban community generating employment, training, learning and leisure opportunities for all.

Pictures of the dereliction that is now the state of most of the buildings emphasised the prodigious task that lies ahead. The invention of the Regenerative Furnace in 1861 by Carl Willhelm Siemens saved a huge amount of fuel but required a tangle of subterranean passages, ducts and flues which are only now being explored.

Deciding how many of the existing buildings should and can be saved is difficult. The most important building in the site is a massive seven story listed building which clearly must remain.

Several designs for the site have been prepared by different architects and designers. This has shown how developing a design scheme is hard work! Aspects of the design which need to be considered include the connection between the site and the canal, access, the dynamics of sound, sunlight, structures underground and overground and the creation of a sustainable landscape.

We were shown several pages from the comprehensive report by BPN Architects which concluded: 'this is a fantastic site, rich in heritage and potential. It has been a privilege to have spent time getting to know the place and to have been entrusted to make proposals for its future. We are confident that the ideas presented in this report will sympathetically and sustainably regenerate the site and bring about an exciting new chapter in the fascinating history of Chance Brothers Glassworks.'

The Soho foundry and mint at the eastern end of the conservation area is an equally challenging site. The foundry (Grade II*) was opened in 1797 and was used through the 19th century by Boulton and Watt for the production of steam engines.

In 1895 it was bought by W & T Avery Ltd. for the manufacture of weighing equipment. Avery (now Avery Weigh-Tronix) have consigned the vast historic foundry building and the buildings in its immediate curtilage to the Chance Heritage Trust for £1.

The Trust is now engaged in feasibility studies to assess the possible regeneration of this historic site. Options include business start-ups, exhibition halls and conference spaces amongst others.

Mark described a huge step forward in March of this year with the signing of a Memorandum of Understanding with Sandwell Metropolitan Borough Council. It confirms that both organisations share common objectives and aspirations to regenerate the former Chance glassworks for the benefit of the Sandwell community.

Finally, Mark listed the challenges that face such a project:

- "It's big and it's complicated"!
- Site Ownership is critical.
- Scheduled Monuments are a developer's nightmare.
- Balance between heritage assets and density a challenge.
- Funding doesn't fit community-led regeneration.
- Stakeholders can be difficult to engage.
  Local Authorities, WMCA etc.
- Community of interest v community of place.
- Capital funding that isn't housing.
- Community engagement
- …..But Tenacity is all you need

It was plain throughout the talk that Tenacity had been prominent in all the Trust had achieved so far. The audience was deeply impressed.

May 2024 (live/hybrid): David Daniel
Guns and Cars - BSA's Motoring History.

As David put it 'The Empire on which the sun never sets' needed a lot of guns and by 1860 demand was outstripping supply. Until then muskets and later rifles had mostly been made at the Royal Small Arms Factory (RSAF) at Enfield which had adopted American machinery and standards to make interchangeable parts in place of earlier craft based systems where individual parts were filed to fit.

In 1861 the government provided the Birmingham Small Arms Trade Association with access to the RSAF plans and designs and their automated parts technology together with funds to build a new factory. The trade association formed BSA Co Ltd and built a factory, the Small Heath Works in Armoury Road and in 1863 they were awarded a contract to make 20,000 rifles. However, in 1879, there were no more orders and the factory closed.

The government work proved to be intermittent so to keep busy BSA turned to the cycle trade making small parts for other makes as well as complete machines. From 1887 to 1903 bicycle production was stopped while they returned to manufacture the Lee-Metford rifle for the British army.

In 1905 the RSAF wanted to dispose of its Sparkbrook factory and end production but the government encouraged BSA to take over and promised them 25% of all rifle orders. However, contracts failed to materialise so there was another factory with no work. Under Dudley Docker, who had joined the board, BSA rented out part of the Sparkbrook works to Lanchester Motors and used the remaining part to build their own BSA motor cars. The first car was sold in 1907 and in 1908 they built just 150; in 1909 the venture was claimed as unsuccessful and poorly managed. However, in the following year Docker arranged to merge with (or take over) Daimler Motors and in the same year BSA produced their first motorcycle.

From 1910 to 1914 BSA continued to make their own cars using Daimler engines, in 1912 they were ahead of the game in using steel bodies and David showed some slides of very elegant machines.

When war started in 1914 car making was stopped and it was back to guns, although motorcycle production continued. A vast new factory was built in 1917, at Small Heath, equipped with BSA machinery where, amongst other war material the barrels of rifles [these must have included the WWI rifles my school paraded with in the 50s – CB] and the new Lewis Machine Guns were produced . The Sparkbrook works made parts for the Bentley BR2 rotary engine. The Daimler works at Radford, besides making vast numbers of lorries and special vehicles, built engines for the new tanks and made large numbers of rotary engines for aircraft. They took over neighbouring land for an airfield and built aircraft. This was only part of their huge output during the four years in which time their employment grew by four times.

After the armistice BSA published an account of their production including aerial pictures of their five main plants. This was to prove a valuable resource to the Luftwaffe in 1940. In 1918 BSA comprised BSA Guns, BSA Cycles, BSA Machine Tools, Jessop's Steels (in Sheffield) and Daimler but with the end of hostilities and no need for munitions the company needed to change direction. The gun works were adapted to motorcycle production and a new car factory was built on the Coventry Road. Fred Hulse designed a V-twin engine 10hp light car followed by larger models.

In 1920 BSA bought Airco which claimed to be the largest manufacturer of aircraft in the world. Under their chief designer, Geoffrey de Havilland, they had made 30 per cent of all trainers, fighters and bombers used by Britain and the United States during the war. Within days it was apparent that Airco was financially in a much worse state than had been realised and BSA rapidly closed it down. This was a huge financial loss and BSA paid no dividends to shareholders for four years. They sold the new car factory to Singer but continued car production in a small way at the Daimler works. However, the motorcycle business was booming and BSA became the world's largest motorcycle manufacturer, albeit with no particular sporting image.

By late 1920s Daimler was struggling to sell cars, there was little market for their luxury models and they moved towards commercial vehicles production. The financial crash in 1929 added to their woes. In 1931 Daimler made no cars at all.

Nevertheless, in the same year BSA bought Lanchester cars which was in an even worse financial state and merged it into Daimler. Production started again on a 'small Lanchester' and a similar new BSA car. Both featured a fluid flywheel and a preselector gearbox, all made at Daimler.

Meanwhile, BSA had brought out a three-wheeler, inspired by the Alvis FWD models, with the Hotchkiss V-twin engine and a two seat fabric body to be built at the motorcycle works. These had to compete with the Morgan, which with rear wheel drive , was much simpler. Production of the BSA V-twin and 4 cylinder three wheelers continued until 1936 and four wheel model was also available. By 1934 production of all rear wheel drive cars ceased.

In 1935 the BSA Scout was introduced in a variety of models and in 1937 an experimental 4 speed gearbox was on offer with synchromesh on 3 and 4. With the start of WWII car production ceased and it was back to guns.

Under the Daimler label BSA made a scout car which had the extraordinary ability to go forwards and backwards with equal facility. It was very successful.

In August 1940 the Luftwaffe, guided by the 1920 pamphlet, bombed the BSA gun barrel mill, the only one in the country, destroying 750 machines. In November further attacks killed 53 workers and trapped many hundreds; 1,600 more machine tools were lost, halting rifle production for three months.

With peace in 1945 military gun making ended, and car production was abandoned. Machine tool manufacture continued but there was a new focus on motorbikes. Dudley Docker's son Bernard became chairman.

In 1954 BSA bought Carbodies which was put under the control of Daimler-Lanchester, concentrating on taxis. Efforts to revive the luxury car market were unsuccessful and shenanigans involving Lord and Lady Docker resulted in their ejection from the board. In 1960 Daimler-Lanchester was sold to Jaguar cars and in 1973 BSA went into liquidation. Now Tata owns the name.

David Daniel had given us much more than the 'Automotive Adventure of BSA' but, as well, a comprehensive example of the ups and final downs of an important British manufacturer – a story which has become all too familiar.