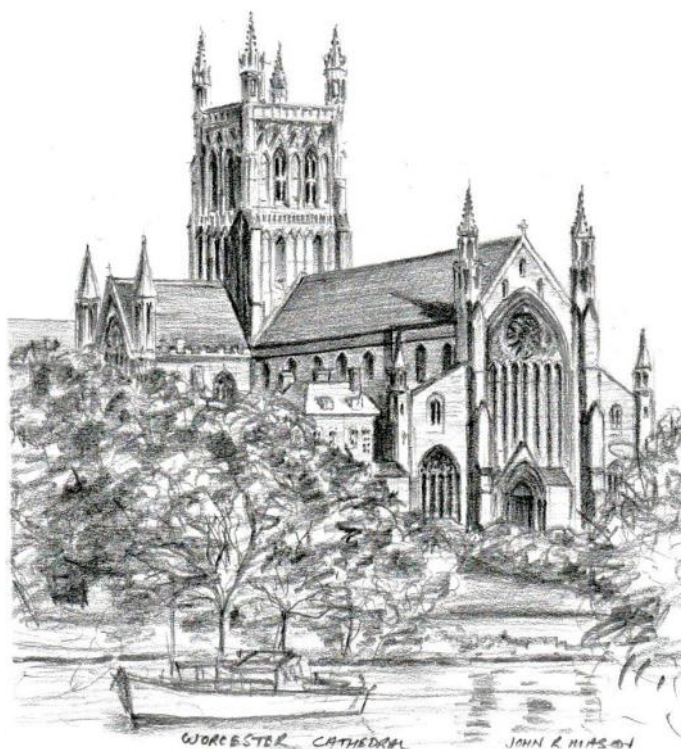


Issue 55: December 2019

# Newsletter



*Worcester Cathedral by John Mason*

**WORCESTERSHIRE  
INDUSTRIAL ARCHAEOLOGY  
& LOCAL HISTORY SOCIETY**

## MEMBERSHIP NEWS

We are pleased to welcome the following new members to the society:

Michael & Judith Dames	Worcester
Karin Fancett	Worcester
Anna Frankel	Worcester
Richard & Andrea Handy	Worcester
Angela Harris	Worcester
Tony Sleight	Elmley Castle
David Steade	Kempsey
Robin Walton	Ashton under Hill
Brian & Kim Darwood	Worcester

Sadly 3 members have passed away. Bob and Connie Swann both passed away last year, but we were not informed until June of this year, and Anthony Russell-Jones, who passed away in May. Our condolences were sent to both families. We were pleased to see Sue R-J at our September meeting.

It was announced at the September meeting that I will be stepping down as Membership Secretary at the AGM in March next year. If you would like to know more of what the job entails please email me ([membership@wialhs.org.uk](mailto:membership@wialhs.org.uk)), phone me (01905 353438), or speak to me at one of the meetings.

It is an important role, which I have very much enjoyed, so I hope someone will be willing to take it on. You will need to be able to use email. I'm happy to have a hand over period, but do not wish to continue in the role. It will be 9 years in March since I took over from Jacky Hollis.

*Sue McCurdy*

## INSIDE THIS ISSUE:

PRESIDENT'S PIECE	3
2020 SWWRIA CONFERENCE	4
2019 SWWRIA CONFERENCE	5
MADE IN OLDBURY	7
VISIT TO NORTHAMPTON	8
2020 CONFERENCE FORMS	17
VISIT SOUTH BIRMINGHAM	24
TARDEBIGGE LIME KILNS	28
COACH TRIP TO BRISTOL	29
RÁCKEVE BOAT MILL	32
RUSSELL PIPE EXCAVATION	34

## NEWSLETTER TEAM

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Please accept my apologies for this newsletter being later than normal, this is due to an unusually busy autumn for me. The next issue will be in April please send me any contributions by 15th March 2020.

*John Beale*

## PRESIDENT'S PIECE

It seems no time since our April meeting — I hope you had an enjoyable Summer and that you are looking forward to the *(rest of the)* programme of Winter talks we have arranged for you. I had hoped to have a talk on the history of Morgan motors at the Conference *(more of this below)*, this will not be possible - but will be included in the talks of 2020 — 2021. It seems a long way off but time will pass very quickly.

We have been working to organise the 51st Regional Industrial Archaeology Conference. The date is 4 April 2020 and the Conference will be held at the Elim Conference, Centre, West Malvern, WR14 4DF. The facilities are excellent and I do hope that many of you will be able to attend. Some of you may remember that the society visited the site before it became the Elim Conference Centre. They have made great changes and even offer inexpensive bed and breakfast in smart hotel type rooms. The lunch is cafeteria style and is 3 courses and there are tea and coffee breaks during the day.

On 24 July we enjoyed a garden party at the Walled Garden — the weather was very good and Julia and Will Scott explained the history of the Garden and I hope you all enjoyed the cakes. We managed to raise over £100 for Julia and Will's charity.

Mike Hayzelden organised another excellent summer programme. On Sunday 1 September. We met at 8.30a.m. at Northwick Lodge and headed for Clifton Downs in Bristol. I have visited

Bristol many times but had no idea that there was such a lovely spot above the suspension bridge. Our object was the observatory - this was originally a windmill and has had several lives including as a watchtower in WWII. There is an excellent café that was only opened a few weeks before and seemed very popular. We climbed to the top of the tower and all enjoyed the camera obscura — it is fascinating to look down on a scene as if it was a film. There was also a Giant's Cave that led from the tower to overlook the gorge — I didn't attempt this but heard one of our members say it must have been a very small giant.

After refreshments we travelled to Aerospace Bristol — This was a huge museum devoted to the BRISTOL company and the history of flight. I think that we were all amazed at the bravery of the early pilots - one plane was called the Bristol box kite if you have ever seen a box kite it looked just like one and just as fragile. It was interesting to see how quickly flight progressed.

Our final visit was to see CONCORDE; we all knew that it was quite small inside but compared to Concorde our coach was luxurious. The entire museum was manned by volunteers and they were both very helpful and informative. We all agreed that it was a great day out — thank you Mike!

*Christine Silvester*

## REGIONAL AIA CONFERENCE 2020

### SOUTH WALES AND WEST

Next year, 2020, it will be the turn of WIA&LHS to host the annual South Wales and West of England Regional Industrial Archaeology Conference (SWWRIAC). This will be the 51st such conference and we have selected the venue as the Elim Conference Centre in West Malvern. It will be on Saturday, 4 April 2020.

You may remember the conference centre in its previous use as St. James School — we visited some years ago when it first became the Elim Centre. The facilities are now very good, offering a theatre, three course lunch, inexpensive hotel type accommodation and even a heated outdoor swimming pool!

The speakers will include:-

- Dr Dennis Williams — the Industrial Archaeology of Croome Park, Defford Airfield, the Museum and Jet Flight.
- Pamela Hurle — Stephen Ballard, Canal and Railway Engineer and Entrepreneur of Colwall.
- Dr John Harcup, The Magic of Malvern water — the Springs of Malvern and the Water Cure.
- Mike Napthan—The IA of Worcester Shrub Hill station

During the lunch break Mike Jackson will introduce a screening of a historical film of hop picking and processing in Worcestershire and the various socie-

ties from the region will have stands and there may be books for sale.

Following the main programme there will be a series of optional visits in the Malvern area.

We hope that as many of our members as possible will support this event. 2020 will be the start of our 50th year as a society (founded in 1971) and this event marks the beginning of our celebrations.

A programme and booking form has been circulated at meetings and a copy enclosed in this newsletter. Information and booking is also available through our website.

On the next page I review the 2019 conference, which was held in Bristol.

*Christine Silvester  
(with updates from John Beale)*



## REGIONAL AIA CONFERENCE 2019

### HOSTED BY: - BRISTOL IA SOCIETY

The 50th South Wales and West Regional Conference, was hosted by BIAS at Saltford, Bristol on 6th April 2019.

Stuart Burroughs, Chairman of BIAS welcomed the delegates. The conference was held in the Village Hall with good facilities and car parking.

**Brunel Swivel Bridge-** Geoff Wallis M.I.Mech. E.

You may remember that Geoff came to speak to us some years ago — his company Dorothea restored the Bill Gwillam memorial seat situated in the Cathedral gardens. We visited the bridge some years ago at a BIAS Conference.

The swivel bridge is older than the suspension bridge and was originally located over his new lock. The bridge was designed in 1849 and was operational in October 1849. In 1872 — 1873 it was shortened and relocated.

The bridge is hydraulic and internally self bracing and has not been used for 50 years. In 2012 there was a Sustrans scheme to convert it a cycle bridge by cutting it in sections. This was not advisable as the construction is of cast iron.

In 2015 Avon Industrial Building Trust 's initiative was to restore it in situ with minimal intrusion and risk. The difficulties were the position, BCC Dockland, 4" from the modern Plimsoll Bridge at

one point and it is owned by Bristol City. Volunteers worked on it for 5 years. The Structural Boxes were cleared and re- painted. The vulnerable central position now covered - to date £70,000 has been spent.

The bridge rotates on cast iron wheels (IKB design). 3 pairs of new bronze bearings were cast by Boro Foundry' Dudley. 8 wheel bearings were levelled and aligned. Bearings to 2 tail wheels were dismantled and serviced (in good condition). The list of Volunteers work in 2013 includes prepared CAD drawings.

Rust and holes had previously been repaired by plates — they were blasted by dry ice — followed by paint trials and plate repair trials. The side girders had holes cut to allow tie rod investigations. The ground investigations found alluvium and made ground.

The bridge is retained on a pintel; this has this has never moved since 1840's. A new bronze collar weighing 300kg was cast and manoeuvred into place. The water hydraulic system 750psi was made by Armstrong Whitworth in 1901. It will eventually be moved with winch cables.

There will be a Structural Engineering Conference on 6 September 2019 and a subject will be 'Building Bridges with Brunel. There is a copy in Petersburg—the Petrowski Bridge.

## **Recording Watchett Paper Mill — Mary Miles — SIAS.**

When Wansborough Paper Mill closed, a local art group decided to record buildings and record oral history of the site by local community. In June 2017, SIAS covered recording - no locals volunteered. The site was huge 15 acres — there was no accurate plan of buildings on the site which was on a slope. There were a few photographs: 1889 - major fire, 1898 - second major fire, 1920 photograph of mill workers included same small children. An 1870 photograph showed a house above the factory and an even older painting showed a water-mill on the site. There were constant alterations to the factory complex and a 1951 overhead view showed a 'modern factory complex'.

A laser scanning company worked on the site and produced a plan to scale. The level 2 survey was drawn, photos taken and surveys written both inside and outside. The recorders produced a sheet for each floor and invested in a laser distance meter.

The machinery was very complicated and not possible for amateurs to understand. A weighbridge was dated to 1955 — not 1933 as was thought. In 1905 A 1,000hp engine was installed — the largest engine in South of England.

The Company paid for disposal of waste paper. There was also the cost of dealing with effluent and even after closing the electricity cost £1,000 per week. Keeping the factory 'Mothballed' was too costly. The only planning application was for demolition.

The volunteers were on the site for approximately 1 year and produced 5,000 photographs, a spreadsheet, building survey and 'a walk round the site' online. This was an enormous task for the volunteers — I wonder if we would have enough willing helpers in WIA&LHS! It was interesting that an art group did the work.

## **Brass Mill at Saltford**

This after-conference visit was very popular and the majority of WIA&LHS delegates had chosen it.

Brass is not an easy alloy to produce — it contains approximately 67% copper and 33% zinc. Both materials were available fairly locally and the mill is on the estuary making deliveries of the raw materials possible. The British did not have the skills and knowledge to produce high quality brass and sought craftsmen from the low countries — many of their descendants are still to be found locally.

Our guide was very helpful and explained the process — the craft was that the materials must be amalgamated at the correct temperature. A reverberating furnace was developed and that refined the method. Brass is not cast but hammered into shape in the same way as silver — the craftsmen used a drop hammer and moved the object being made around- with great skill and speed to produce many different articles.

The mill is in an excellent position on the edge of the river and would have been ripe for renovation into a des res.

*Christine Silvester*

## MADE IN OLDBURY

### The Products and Enterprise of a Midland Town

Dr Terry Daniels delivered two talks to the society on xxx and xxx.

His first talk started by outlining the natural resources of the old Borough of Oldbury, which straddled the eastern boundary fault of the South Staffordshire Coalfield. The western half of the borough was rich in coal, Etruria marl, and some iron ore leading to the heavy industries that developed there, coal mining, brick making and metal working. The eastern half remained rural and agricultural until the mid-twentieth century being based on Permian sands and gravels.

He then presented various objects manufactured in the town and illustrating the different industries that became established there. The Oldest industry was the production of hand-made nails, which flourished locally until they were replaced by machine-made cut nails in Victorian times. One Of the first factories to be established in the town was that Of William Hunt in the late eighteenth century. They produced all manner of 'edge tools' at the Brades works, including brick-layers' towels (the object for this industry), scythes, garden equipment, knives, and even ramrods for cannon in the Napoleonic war.

Larger products arose through the development of railways, with the building of wagons and coaches at Oldbury Carriage Works. Not able to bring a whole wagon, his object here was a carriage plate, 'Built at Oldbury Works 1929'. The firm started in Bromsgrove

in 1847 but moved in 1854 to a Site in the cornfields next to the new London and North Western Railway at Oldbury. Carriages were sent to railways throughout the world, giving them an international reputation. They became part of Metropolitan-Cammell, and the site finally closed in the 1930s. They can claim the production of around three-quarters of the tanks used by the British in WWI.

Also of large size were the boilers built by Edwin Danks and Co, and represented by a 1911 sales specification. Their main rivals were other members of the family running Danks of Netherton! The company was sold to Babcock & Wilcox and continued to make boilers until the 1970s. To burn low-grade coal and release men for WW2, they developed the 'Oldbury' Chain Grate Stoker which fed fuel to the boiler and removed the ash mechanically.

The next object was a brick made by Pratts Ltd at their New Century Brick Works. This was one of the last brick companies in Oldbury, started in 1900, at a time when the centre of Oldbury was surrounded by marl holes and brick works. The last marl hole was filled in about five years ago, and now there are none!

The second instalment focused on the remaining industries of chemicals, plastics, surgical items and a host more.

*Terry Daniels*



## VISIT TO NORTHAMPTON & WEEDON

7 August 2019

I cannot remember having so much material sent to me for one summer outing, but its all fascinating and worthy of printing. So in this extended feature on Northampton you will find:

- A visit summary from Mike Hayzelden
- Extensive notes to the itinerary produced by the Northampton IA Group
- An article on Charles Rennie Mackintosh and 78 Derngate by Eileen Porteous

*The notes from NIAG contains photographs of almost every building—too many to reproduce here. If any member is interested Mike Hayzelden or John Beale can email the complete document to them.*

### **Northampton, Boot and Shoe Quarter: Peter Perkins, NIAG Sec.**

The Secretary, Peter and Treasurer, Terry Waterfield of the local Northampton Industrial Archaeology Group guided our coach on a tour then short walk to see some of the factories of the area, mostly to the north of the town centre. We began with probably the best preserved and most iconic one, the Barratts terracotta building well north of the city centre. William Barratt, born in Northampton in 1877,

started selling 'Shoes by Post' around the turn of the C20th. Now used as offices (not Barratts).

The boot and shoe industry started in Northamptonshire around the time of the Civil War and expanded rapidly in the C19th as mechanisation increased. From a craft industry, undertaken in houses and workshops, factory working became the norm in the main towns of Northampton, Kettering, Wellingborough, Rushden and Daventry, as well as smaller towns and larger villages. The

latter half of the C19th saw the development of the typical Victorian streetscape of 2- and 3-storey factory buildings, usually on street corners, set in amongst terraced houses, some of which had shoemakers' workshops in their back yards. There were also associated industries such as leather production and shoe machinery manufacture.







We ended with a short walk around the old quarter close to the town centre, where the theme was more of dis-use or re-use, with surprising little conversion to apartments evident. Peter left us at the town centre, beside the main market square for us to find lunch, before our afternoon visit to 78 Derngate. Some members were lucky enough to gain entry to the Town Hall and see its' magnificent Great Hall.

### **Visit to Weedon Bec Depot**

We (Ian our driver and myself) almost missed the village due to a newly opened bypass, maps and satnav notwithstanding. This Georgian munition depot remains mainly the same as when it was first erected in 1803, when 53 acres of land (later increased to about 150 acres) were purchased for "erecting buildings thereon for the service of His Majesty's Ordnance".

The site was chosen being furthest from the coast and possible invasion by Napoleonic forces. The Depot was connected to the Grand Junction Canal by

a short cut which enabled loaded narrowboats to move into and through the site under a gatehouse or lodge and a portcullis. A second gatehouse cum lodge with portcullis was situated at the far end of the storehouses to protect the canal access to the powder magazines beyond. There were originally eight large brick and stone-faced buildings of two storeys housing a military prison, a hospital and a chapel. The magazine built at the same time as the Depot consists of brick buildings with very thick walls and each building was used for storing over 1000 tons of Gunpowder.

After a short stop and walk up alongside the central canal (and then extracting some members from the antiques



centre) we travelled back via Southam to the M40.

Mike Hayzelden

## **Brief Overview of the History of Northampton**

Originally known as Hamtun, a Saxon word for a main farm or manor, Northampton was of strategic and military importance in early medieval times, located in the Midlands on the River Nene (the name rhymes with 'hen' in these parts!). While there is evidence of habitation in the surrounding area some 6000 years ago, it is in the 10th century that a significant community was established, and by the time of the Domesday Book it had a population of over 1,500. The first Earl of Northampton, Simon de Senlis, fortified the town in 1089 and a castle was erected in the 12th century. It became one of the most important and prosperous towns in Britain where great events of state took place. In 1164 Thomas à Becket, Archbishop of Canterbury was tried in Northampton Castle for his opposition to Henry II but he managed to escape and his name is commemorated in a number of ways around the town, most notably by Becket's Well on Bedford Road.

Much of the town's wealth sprang from the craft industries in medieval times, firstly cloth weaving and dyeing and later on the wool industries. The leather industry was important due to the good supply of local oak bark for tanning leather. The town was also involved in shoemaking from medieval times and gradually developed to become the dominant industry.

In the English Civil War, Northampton was considered to be on the Parliamentary side and Cromwell spent the night here in 1645 prior to the Battle of Naseby, some 10 miles away. In 1642, there is the first recorded order for boots and shoes for the Parliamentary Army manufactured by a group of shoemakers in the town.

In 1675, tragedy struck when the Great Fire of Northampton destroyed much of the town but public donations, including 1,000 tons of timber from Charles II, allowed the town to be rebuilt. By 1724, Daniel Defoe was able to write that 'Northampton was the handsomest and best built town in all this part of England'. He also recorded that Northampton was renowned for its shoes.

In 1742, the world's first water-powered cotton spinning mill opened in Northampton, some 20 years before Arkwright's mill at Cromford in Derbyshire. Unfortunately it was never financially successful.

Northampton's position in the centre of England undoubtedly influenced its importance, being close to the Chester Road (now the A5), giving access to London and the north-west. In the 18th century the River Nene was made navigable up to Northampton from the Wash and in the 19th century the town prospered further as industrialisation brought new wealth. A branch canal was dug from the River Nene at Northampton to join up with the Grand Junction Canal at Blisworth, thus creating a water transport link to both London and Birmingham. In 1845 the first railway arrived in the town, albeit a branch line from the Lon-

don to Birmingham Railway at Blisworth on its way to Peterborough.

Northampton's population grew from 7,000 in 1801 to 87,000 in 1901 as mechanisation of the shoe industry brought factory working to the town. In the early part of the 20th century, almost half the adult population was working in the shoe and leather industries. Other industries were also important, for example engineering companies such as Express Lifts (lift manufacture) and British Timken (roller bearing manufacture) were large employers in the town, not to mention model engineers Bassett-Lowke whose founder owned 78 Derngate, the house to be visited in the afternoon.

The middle of the 20th century saw decline in shoe and leather industries due to cheap imports. The centre of Northampton was again ravaged in the 1970s, not by fire this time but by planners who swept away vast swaths of buildings and streets including most of the town centre's shoe factory buildings. However, many of the factory buildings in the town's suburbs survived and in 2013 the area north and east of the town centre was created a Conservation Area called the Boot & Shoe Quarter.



However, today it is once again testing lifts.

#### *History of the lift tower:*

Lift engineers Smith Major and Stevens established their Abbey Works on this site in St James Northampton in 1909. In 1930 the company merged with the Express Lift Company and were later acquired by the General Electric Company. In 1983, the Express Lift Co built their lift testing tower at the Abbey Works. It is 127 metre (418 feet) high and a landmark in the Northamptonshire countryside, nicknamed the 'Northampton Lighthouse' by the late Terry Wogan. It was designed by North-

NIAG

### **Sites visible from coach coming into Northampton**

#### A) National Lift Tower

Constructed in 1983 for Express Lifts using a revolutionary continuous concrete slip-casting process, the 127 metre high lift testing tower was only in use by the company for less than 20 years.

ampton architect Maurice Walton of architects Stimpson & Walton and constructed by Tileman & Co of London. Standing on a reinforced concrete raft some 24 metres in diameter and 3 metres thick, the tower is 14.6 metres in diameter at the base, tapering to 8.5 metres at the top. The structure above ground level weighs 4,000 tonnes. Constructed using a revolutionary continuous slip-casting process, the tower grew at a rate of 7.2 metres every 24 hours and took 3 weeks to form the shell. Circular in cross-section, the top is pierced to reduce wind resistance. Inside are six lift shafts of varying heights and speeds, one of which is a high-speed shaft with a travel of 100m and a theoretical maximum speed of 10m/s.

The tower had a short working life under Express Lifts. The company was taken over by OTIS in 1996; the Abbey Works closed in 1999 and the site was demolished in that year, all except the lift tower which had been listed Grade II by English Heritage in October 1997. The site was sold to Wilcon Homes for development. After an uncertain period during which an application to demolish the lift tower was made (citing 'concrete cancer' as the reason) and rejected, it is now privately owned and has been renovated, renamed the National Lift Tower and since 2010, has once again been used to test lifts. As well as being a resource for the lift industry, the building is also available to

companies requiring tall vertical spaces, for example companies wishing to test working-at-height safety devices.

#### B) Former Tram & Bus depot

Built as the Northampton Corporation Tramway Depot in 1904, the building has been expanded on a number of occasions and was used as a bus depot until closure in 2014. Tram tracks are still in the floor of the original part of the building. It has been acquired by next-door company Church's Shoes – see below – who plan to turn it into additional shoe production facilities.

#### C) Church's shoe factory

Shoe factory with three-storey frontage with two-storey ranges behind extending back some 100 metres. Constructed by 1900 and occupied initially by shoe manufacturer Arthur Stanton & Co. In 1901, taken over by Padmore and Barnes who were here until 1950s, producing footwear using a moccasin construction; their emblem, a roundel in the form of a Native American can be seen above the main entrance. Church's Shoes have occupied the factory since 1957.



### *History of Church's Shoes:*

In 1873, two brothers – Alfred and William Church – set up a small boot & shoe manufacturing unit at 30 Maple Street in Northampton (now demolished). In 1874 they added a larger building in nearby Duke Street (in part of what is now called the Boot & Shoe Quarter). At this time, only the 'clicking' (cutting out the upper leather pieces by hand) and 'closing' (stitching the upper leather pieces together using a sewing machine) were carried out on the premises, the other shoemaking operations were carried out in the workers' own houses.

By 1893, all manufacturing operations were being undertaken with the aid of machinery and a large 6-storey factory was constructed in Duke Street. Even so, as production increased over the next 50 years, additional space was needed and acquired by taking over adjacent factories and in some cases terraced housing, as well as factories in other parts of Northampton. In 1957, Church's moved to the present factory in St James and despite the demise of most UK shoe manufacturers during the second half of the 20th century, Church's have sustained production, producing high quality men's Goodyear welted shoes. It is thought that they produce some 4,000 pairs of shoes per week and employ some 350 people on the premises. The Church family remained in control until 1999 when the company was acquired by the Italian Prada Group.

Today the factory produces high-class men's Goodyear welted footwear which it sells in its own shops across the world. The production process is based on the

traditional hand-crafted method of shoemaking but using a range of machinery that reproduces these hand operations. It involves stitching a leather welt to a lasted shoe upper (a leather upper that has been pulled over a plastic last and tacked to an insole). A leather sole is then stitched to the welt, thus securing it to the shoe bottom. There are more than 250 individual operations that go into manufacturing a Goodyear welted shoe. By the late 19th century most of these operations were mechanised.

### D) Former maltings

Maltings built in 1888 for Thomas Manning & Co of the Castle Brewery. Later taken over by Phipps' Brewery and used as bonded warehouse. Part of building has been used by Frog Island Brewery in recent years.

### E) Northampton Station (formerly Northampton Castle Station)

The railway came to Northampton in 1845 but only as a branch line from the London & Birmingham Railway at Blisworth with its station in Bridge Street on the south side of town. A station first appeared on the present site in 1859 with the opening of the Northampton to Market Harborough line but it was not until 1881 that a loop line was built off the West coast Main line, to pass through Northampton that Northampton Castle station was first built and a new station destroying the remains of the castle in the process. Following a 'modern rebuild' in the 1960s, the present station building opened in 2015.

### F) Remains of Northampton Castle

The only 'remaining' part of Northampton Castle is located just past the sta-

tion. It is a postern gate which was moved from its original site and re-built into the wall adjacent to the station. The castle had substantial defences and was so important that Parliament was held there during the medieval period. It was the first major Norman Castle a day's ride from London. The favourite castle of King John, who visited 30 times, he moved his royal treasury to the Castle in 1205, and the Castle was associated with a mint for coins of the realm. Until 1879, the castle's foundations could still be traced on the southern and western sides, and part of a round bastion on the southern side, formerly the prison, was also standing.

#### G) Former gasworks offices

Substantial 2-storey brick building with hipped slate roof built in 1880 is all that remains of the site of the extensive Northampton Gas Light Company works which began here in 1824.

#### H) Former Barratt's shoe factory

William Barratt, born in Northampton in 1877, started selling 'Shoes by Post' around the turn of the 20th century. People would draw a plan of their foot on paper and send it to him. The Foot-shape Boot works was built in 1913 on

this site. The impressive three-storey frontage is all that remains of an extensive shoe factory. Note the stone lettering forming a balustrade at eaves level proclaiming the FOOTSHAPE BOOT WORKS. Taken over by Stylo Shoes in 1961 and closed in 1998. Now used as offices.

#### J) Fire Station and Public Baths

Five-storey 16-bay building fire station building constructed in 1935. Flat roofed and no decoration except between the windows of the top storey. Next door is the Grade II Mounts Baths of the same vintage.

#### K) TCB – Former shoe machinery factory

Pub/restaurant in former factory constructed c1923 for the Leicester-based British United Shoe Machinery Co, the biggest suppliers of shoe machinery to the UK shoe industry during the 20th century. The factory was initially used to manufacture tacks and other metal grindery for the shoe industry, later to repair shoe machinery.

### **Guided walk round part of Northampton's Boot & Shoe Quarter**

In the 1850s, boots and shoes were still being manufactured in Northampton by hand, cut leather pieces being issued from warehouses located in what is now the centre of the town to be made into shoes by workers in their own homes or workshops before being sent back to the warehouse for packing and distribution. In 1857 the first stitching machines were introduced, signalling the start of mechanisation and over the next 30 years, more and more manufacturing took



place in the shoe factory. As more people moved into Northampton to work in the expanding industry, so areas outside the town centre were developed and what is now the Boot & Shoe Quarter was one of the main areas for expansion between the late 1860s and the 1890s. This gave rise to the typical streetscape of boot & shoe factories, usually three storeys high, often on street corners, interspersed amongst the terraced housing. In addition, there were leather factories where skins were processed and finished (tanning of leather usually being carried out adjacent to the River Nene) as well as factories producing things like shoe components, wooden lasts, shoe machinery and cardboard shoe boxes.

Today most the shoe industry has disappeared from the Boot & Shoe Quarter, although we will see one factory that is still making shoes. However unlike the town centre, where the early shoe factories/warehouses have almost completely disappeared, over 100 factory buildings that were used at one time or another by the shoe and leather industries still remain, albeit in other industrial use or converted into apartments. Details of all these buildings can be found in NIAG's 'A Guide to the Industrial Heritage of Northampton's Boot & Shoe Quarter', available for sale (£10).

Brief details of shoe & leather factories on our walking route.:

#### Former GT Hawkins Factory

In 1876, Hornby & West built a 3-storey factory on the corner of St Michaels Rd & Overstone Rd. It was extended in 1883. In c1886, George Thomas Hawkins built a 10x3-bay, 3-storey shoe fac-

tory on the corner of Overstone Rd & Dunster St. By 1899 he had built a further 7-bay, 3 storey extension in Dunster St and a 4-storey block round the corner in St Michaels Rd. In c1912, GT Hawkins took over the whole site, producing walking boots until closure in 2000.

#### 78 Overstone Rd / Dunster St

Three-storey factory built in 1870 for Frederick Fudger, leather dresser. Later, used by other leather companies. In 1960s & 1970s, it was AJ Tear's bedding factory. Note the wooden window frames in top floor which would originally have had louvres for ventilation.

#### Globe Leather Works, 4-12 Dunster St

Thirteen bays, 3 storeys + basement with Dutch style gables, built in stages from 1888. Occupied by James Collier, a leather currier, for about 50 years. Inside, iron columns and joists support the floors.

#### Leather factories in Dunster St

Range of single, 2 and 3-storey buildings which were used as leather warehouses.

#### Linen & Thread Building 113 Overstone Rd

Three storeys +basement with 5 bays, built in 1876. Initially the shoe factory of John Collins; later the warehouse of the Northern Ireland-based Linen Thread Company.

#### Unicorn Works, 20-26 St Michaels Rd

Ten-bay, 3-storey factory built c1885 as two separate factory units. Note the entrances, taking-in doors/cranes at each end of the building. Earliest occupier was London shoe manufacturer James



Branch.

### Trickers, 56-60 St Michaels Rd

RE Tricker had a small 2-storey shoe factory on this site by 1914. The present three-storey factory with glazed brick façade dates from 1924. Trickers still produce shoes here. This was the factory used in the production of the 2005 feature film 'Kinky Boots'.

### 62 St Michaels Rd

Three-storey factory built c1890. Used by Pollard & Son until the 1970s; now part of Trickers factory.

### Business Centre, 70 St Michaels Rd

Four-bay, 3-storey factory built in 1890s. It was the leather warehouse of AE Rodhouse.

### G Weed Factory, 72 St Michaels Rd

Eight-bay, 3-storey factory built in c1886. Initially it was the Pedestrian Boot Factory of George Weed. By the mid-1930s it was a grocery warehouse. Now converted to flats.

## **Guided walk in Northampton town centre**

### Northampton Guildhall

Designed by Edward Godwin, the Victorian Gothic styled Guildhall was opened in 1864. In 1889-92 a west wing was added in the same style, designed by Matthew Holding. Finally an east wing was added in 1992 in a modern but sympathetic style. The Guildhall includes a Great Hall with murals painted by Colin Gill in 1925 depicting famous men connected with the town. Outside, fourteen statues stand high above the street under their canopies, one before each window, of monarchs and famous people

who had close ties with the town. In the arches of each ground floor window are sculpted scenes of historical events which took place in Northampton or within the County.

### Derngate Theatre Complex

The Derngate theatre complex completed in 1983 incorporates the Royal Theatre constructed in 1887 with its classical façade fronting onto Guildhall Road. On its southern flank, the façade of polychrome brickwork was retained from Phipps and Sons' five-storey shoe component warehouse when the Derngate Concert hall was built behind it.

### Façades of former CWS warehouses

At the bottom of Guildhall Road on the eastern side, a Cooperative Wholesale Society saleroom opened on this site in 1890. The present buildings are of later date. At the southern end a four-storey brick façade carries a CWS wheatsheaf and date of 1921. The art-deco style building at the northern end was constructed in 1936.

### Northampton Museum

On the west side of Guildhall Road is Northampton Museum known worldwide for its enormous collection of shoes and a fair quantity of old shoe machinery. The museum closed two years ago to undertake an expansion project, spending what some might regard as ill-gotten gains from the controversial sale of an Egyptian statue called Sekhemka. It is planned to reopen the museum in 2020.

### Sessions House

Built 1676-78, following the Great Fire of Northampton, by Henry Bell of Kings

# **51<sup>st</sup> REGIONAL INDUSTRIAL ARCHAEOLOGY CONFERENCE SOUTH WALES AND WEST OF ENGLAND**



**WORCESTERSHIRE INDUSTRIAL ARCHAEOLOGY  
& LOCAL HISTORY SOCIETY**

**Saturday 4th April 2020**

Elim Conference Centre  
De Walden Rd  
Malvern  
Worcestershire  
WR14 4DF

# PROGRAMME

- 09:00 Registration, refreshments, view society stands
- 09:45 Welcome and Introduction
- 10:00 *The Industrial Archaeology of Croome Park and Defford Airfield, and the Museum of Jet Flight.*  
Dr Dennis Williams
- 11:00 Break
- 11:15 *Stephen Ballard, Engineer and Entrepreneur of Colwall*  
Pamela Hurle
- 12:15 Lunch in the refectory—first group  
Screening of archive film: “A Pocket of Hops” introduced by Mike Jackson (20 mins)
- 12:35 Lunch in the refectory—second group  
Time to mingle, and view society stands
- 13:20 Archive film: “A Pocket of Hops” will be shown again for those who were at lunch the first time
- 13:45 *The Magic of Malvern Water*  
Dr. John Harcup OBE
- 14:45 *The Industrial Archaeology of Worcester’s Shrub Hill Station*  
Mike Napthan
- 15:45 Summary and Close
- 16:00 Tea
- 16:30 Muster for tours and depart

# POST CONFERENCE TOURS

The following optional tours have been organised for the end of the conference. Sign up sheets will be available at registration, on a first-come-first-served basis.

- A: The Elim Conference Centre: Our venue has a fascinating history and many unusual features. It was originally the large mansion of Lord Howard de Walden but was taken over as a girls boarding school early in the 20th Century. Its more recent history is as home to the Regents Theological college and headquarters of the Elim Pentecostal Church.
- B: Malvern Town Centre and water spouts. This short walking tour will also include Malvern Priory.
- C: Great Malvern Station: This tour will cover the influence by Lady Foley, the architect Edmund Wallace Elmslie, the sculptures by William Forsyth, the design style and links to the Imperial Hotel (now Malvern St. James School), rail links to Worcester, Hereford and Ashchurch. Plus changes over the years and current proposals for refurbishing the station and the Worm.
- D: Geology of the Malvern Hills. Depending on the weather, this may involve a short walk on the hills, possibly a quarry. If wet the tour will comprise a visit to the Malvern Hills GeoCentre the official visitor information centre for the Abberley and Malvern Hills Geopark, and the Malvern Hills AONB. Led
- E: The Story of Malvern Water—This tour is not confirmed, it is hoped to visit Holywell Spring and Visitors Centre to see where Malvern Water is still bottled.

## COST

The conference delegate rate is £23 inclusive of hot, three course lunch, and all refreshments. A booking form is enclosed, which may be posted or scanned and emailed. Alternatively you may book through the website at [www.wialhs.org.uk](http://www.wialhs.org.uk).

Contact Christine Silvester 01905 354679 or [conference@wialhs.org.uk](mailto:conference@wialhs.org.uk)

*Booking form for WIALHS Members and their guests:*

To: **Christine Silvester, 12 Upper Park Street, Worcester WR5 1EX**

[ You may scan and email the form to [conference@wialhs.org.uk](mailto:conference@wialhs.org.uk) ]

Please reserve \_\_\_\_ places at £23 for the AIA South Wales and West Regional Conference on Saturday 4th April 2020. I enclose a cheque payable to WIA&LHS for £\_\_\_\_\_.

Special dietary requirements (with numbers)

\_\_\_\_\_

My party will be travelling by car, in \_\_\_\_ vehicles, including \_\_\_\_ blue badges

Name and Address of person making booking (Block capitals)

Numbers for tours: A \_\_\_\_ B \_\_\_\_ C \_\_\_\_ D \_\_\_\_ E \_\_\_\_

Contact Telephone No. \_\_\_\_\_ Email:

\_\_\_\_\_

Other names in my party:

\_\_\_\_\_

\_\_\_\_\_

Society/ Affiliation: WIALHS

If booking by post, please enclose an SAE if you require acknowledgement by post. By default we will email you. We will not retain your contact details after the conference.

Questions? Contact Christine Silvester 01905 354679

Lynn, it was Northampton's Court House until 1993. Grade I listed, it is considered one of the finest provincial courthouses in England. Of particular note is the plasterwork on the ceilings, 1684-8, by Edward Goudge. The building to the left, constructed from locally quarried Northampton sandstone, was the associated Judges' Lodgings.

### All Saints Church

The medieval church was largely destroyed in the fire of 1675 except for the west tower and the crypt below the chancel. The rest was rebuilt 1676-80, almost certainly to a design by Henry Bell of Kings Lynn. A statue of Charles II stands above the Portico as thanks for his help in restoring the town after the Great Fire.

Several medieval churches still remain in the town, including the Church of the Holy Sepulchre dating from 1103 and considered the best preserved medieval round church in the country. Also the twelfth century St Peters Church close to the site of the castle, one of the finest examples of Norman architecture in the region.

### Market Square

Dating from 1235, it is one of the largest market Squares in England, the town being rebuilt around it after the Great Fire in 1675. Many of its buildings were controversially replaced in the second half of the 20th century but there are still some older buildings, particularly on the west side of the Square. In the north-west corner next to the entrance to the Grosvenor Shopping Centre is Welsh House which dates back to the 16th century.

## **Sites visible from coach on route out of Northampton**

### Former warehouse on River Nene

On the east bank of the River Nene, adjacent to South Bridge, a four-storey 19th century brick-built warehouse which was used for storing grain. It has wooden lucams at each gable end to facilitate road and river loading/unloading. Formerly used by agricultural suppliers Latimer & Crick, now apartments.

### Carlsberg Brewery

Carlsberg's modern lager brewery is seen on the right hand side when passing over South Bridge. It was built in the 1980s on the site of the large Phipps/NBC Breweries which had been in existence since the 19th century. Part of this site near the river was originally the Eagle Foundry started by Edward Harrison Barwell\* in 1823. A book recently published by NIAG, 'Edward Harrison Barwell - 19th Century Northampton Iron-founder' is available for sale (£9).

### Former Midland Railway Granary

Three-storey warehouse constructed by the Midland Railway c1905 for storing grain. Located close to the site of the level crossing which took to 1845 Blisworth to Peterborough railway line over Bridge Street, adjacent to which was Northampton's first railway station.

### Queen Eleanor Cross

Crosses were erected by Edward I between 1291 and about 1295 in memory of his wife Eleanor of Castile, who died in November 1290 in Lincolnshire, marking the nightly resting-places along the route taken when her body was trans-



ported back to London. In Northampton, the body lay overnight at the adjacent Delapre Abbey. The cross is currently under repair and enclosed in scaffolding but the picture (right) shows what it should look like!

### **Weedon Military Depot (10 miles west of Northampton)**

The Royal Ordnance Depot at Weedon was built between 1804 and 1816 to provide the first inland store and distribution point for small arms, ordnance and other equipment. It was constructed at a time when the threat of a French invasion was strong. Existing ordnance depots were all in the south-east of England and thus vulnerable to invasion from France.

Weedon was chosen as the location because it was centrally located in the country, on the Old Stratford to Dunchurch Turnpike (now the modern A5)

and on the brand new Grand Junction Canal which linked London to Birmingham.

As originally built, the depot contained several areas:

- Canal basin on the Grand Junction Canal with branch canal some  $\frac{3}{4}$  mile long (still extant but branch canal truncated).
- Walled compound containing eight large warehouses for storage of small arms and other military equipment on either side of the branch canal with gatehouses at either end (still extant)
- Magazine compound for storage of gunpowder in earth-filled blast houses (demolished c2000),
- Military barracks to house a troop of horse artillery (demolished c1955)
- Block of houses for the principal officers at the depot (demolished 1970s)

The main walled compound had additional buildings added over the years as the depot was adapted to changing requirements. Most of these have been removed. In 1965 the Royal Army Ordnance Corps moved out of Weedon Depot and following a period of use by the Ministry of Supply, the walled compound passed into private hands in the 1980s.

There were several plans for its reuse, including a shopping centre and at one time it was proposed that a fire engine museum be located there. However, today under the name Royal Ordnance Depot, a private company is offering the warehouses as industrial units to let.



*The site today:*

The ordnance canal basin still exists on the Grand Union Canal, today used by a boat hire company, but the link to the branch canal through the main compound no longer exists.

The main walled compound has a gatehouse across the truncated branch canal, complete with portcullis. Inside the compound only the eight original two-storey warehouses remain, four each side of the branch canal, those on the east side of the canal having an additional basement storey exposed on the downhill side away from the canal.

At the far end of the main compound a

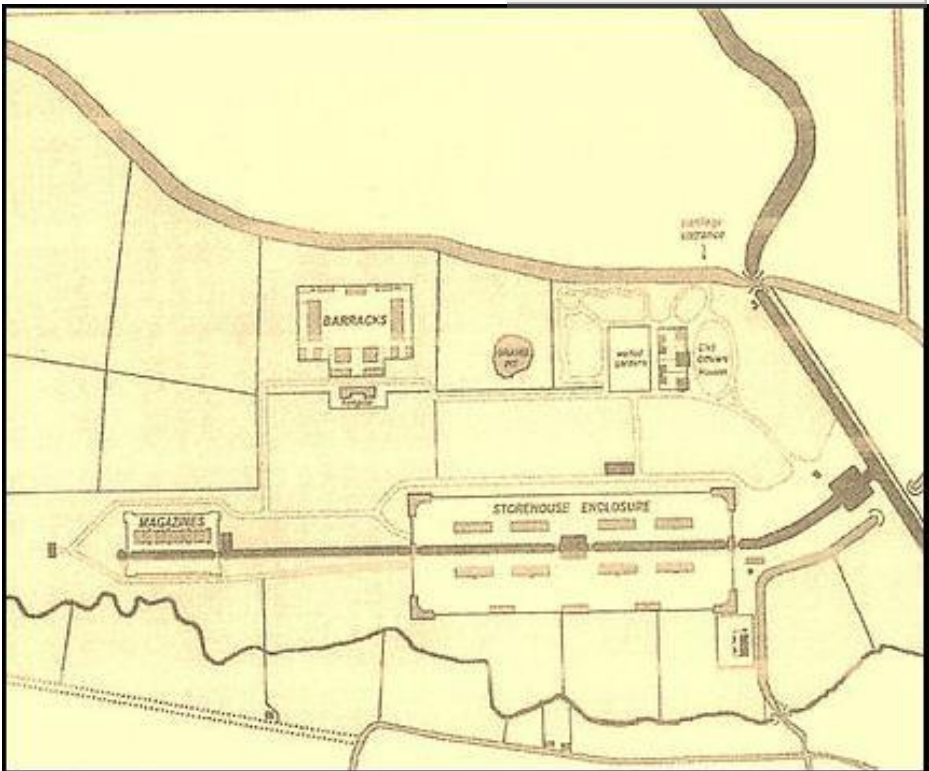
second gatehouse remains. This separated the main compound from the magazine compound (now demolished).

NIAG

**DEPOT SITE AS BUILT c1816**

The major elements of the Depot can be clearly seen - the storehouses, powder magazines, barracks and pavilions.

The line running top to bottom on the right is the canal with its link into the site. The line running left to right above the barracks is the turnpike road (now the A45 west) and the wriggly line below the site is the River Nene.



## 78 Derngate, Northampton



### **Charles Rennie Mackintosh**

*A man before his time*

Our visit to 78 Derngate got me thinking about Mackintosh and how he went un-

noticed in the United Kingdom but was greatly valued on the continent. An architect, designer, painter, and graphic artist, Charles Rennie Mackintosh was born in Glasgow in 1868. His most iconic building The Glasgow School of Art bears testament to his talent.

His marriage to a talented artist-designer, Margaret Macdonald 1864-1933 ( the designer of the roses and sinewy decoration), and the marriage of her sister, Frances, to Mackintosh's close friend Herbert McNair led to the formation of a brilliantly creative group, clearly led by Mackintosh, known variously as "The Four" or "The Spook School." \* A little local interest, Margaret and Frances were from the Black Country.

Considerable attention was focussed on the work of Mackintosh and the "Glasgow Style" artists and designers who had come from the School of Art. In 1900 Mackintosh and his friends were invited to create a room complete with furnishings at the

Vienna Secession exhibition. This created a lot of interest, and the Mackintoshes were praised when they went to Vienna. Their exhibition display had a direct influence on the development of the Wiener Werkstatte formed shortly thereafter by Josef Hoffmann. Hoffmann and Mackintosh were close friends, and Hoffmann visited Glasgow twice to see Mackintosh's work, as did the influential critic Hermann Muthesius and the Werkstatte's patron, Fritz Wärndorfer. "The Four" exhibited widely in Europe, both together and individually, and Mackintosh received commissions for furniture from patrons in Berlin, Vienna, and elsewhere in Europe.

In Glasgow Mackintosh's greatest public exposure was through the creation of a number of restaurants, the tea rooms of his most enduring patron, Kate Cranston. The tea rooms provided a wonderful opportunity for Mackintosh to put into practice his belief that the architect was responsible for every aspect of the commissioned work. At The Willow Tea Room (1903) he converted an existing interior into a remarkable dramatic series of contrasting



interiors with furniture, carpet, wall decor, light fittings, menu cards, flower vases, cutlery, and waitresses' uniform, all designed by Mackintosh to create a coordinated setting, applying the idea of art and architecture.

Despite Mackintosh's fame in Europe and the numerous articles in, for example, *The Studio* magazine devoted to his work, he never became a dominant force in Glasgow architecture. He created the private house Windyhill in 1901, a number of tea rooms, many works of decorative art and furniture, and other architectural conversions but never had the opportunity to create a second masterpiece after the School of Art and in the manner of Hoffmann's success with the Palais Stoclet in Brussels (1905) which owes so much to Mackintosh's influence. The dramatic designs for the huge International Exhibition in Glasgow in 1901 were rejected as too radical, and his entries for other competitions for example, Liverpool Cathedral were unsuccessful.

Mackintosh left Glasgow in 1915 with a notable lack of commissions and the general building slump caused by the onset of World War I. He moved to England and then to France and created a series of watercolours of landscapes and flowers, his designs for wallpapers were rejected.

The famous white-on-white interiors of the Glasgow period were replaced by geometric black-on-black interiors which clearly anticipated Art Deco. His final architectural

commissions were 78 Derngate, Northampton, England, in 1916/1917. (Here we were able to appreciate his linear and geometric designs both in textiles and furniture.) The other being the additions to the Willow Tea Rooms in Glasgow.

Much of his work has been lost and the remainder is confined to the city of Glasgow and surrounding region. Although completely neglected and largely ignored in the middle decades of this century, he has now become admired and recognised for his unique style. His furniture and textile designs are now a great success, and in 1979 a writing desk he designed in 1901 for his own use reached the then world record price paid at auction for any piece of 20th-century furniture, £89,200.

Charles Rennie Mackintosh died from throat cancer in distressed circumstances in London in 1928; his wife Margaret in 1933.

*Eileen Porteous*

*\* Following an exhibition of their drawings and art work in 1896 at a London Exhibition. The sinewy art form was disliked thus earning the name The Spook Group.*



## Victorian South Birmingham, with Tim Bridges

**Tuesday 20th August 2019**

We were a select bunch, with a small coach making some of Tim's manoeuvres slightly easier. We began with a coffee break at St. Augustine's parish rooms, then the church itself. This sits central to a designed townscape lying to the north of the Hagley Rd (and Calthorpe estate developed from 1810). This land was the estate of Joseph Gillott, a successful pen manufacturer, who lived in Westbourne Road. J A Chatwin, the foremost ecclesiastical architect in the city, created, in 1830, an island site, from which St Augustine's Road would run to the Hagley Rd, plus other radiating streets. The church is also largely by Chatwin, who won the design competition, but lack of money meant the tower (1876), Lady chapel (1930), etc. followed some years later.

We travelled south through Edgbaston to a row of large Arts & Crafts houses, of interesting design, past other listed building, parks, gardens and then after the main university buildings of 1909, by Sir Aston Webb, Winterbourne House, the former home of industrialist, John Nettlefold. He commissioned J L Ball to design a 'cutting-edge' Arts and Crafts inspired design with all the modern conveniences of electric lighting, hot running water and a telephone line. Rooms were light and airy, with views over the garden.

Crossing the Bristol Rd, we entered various estates in the Moseley area (where my unfamiliarity with the area left me lost). We saw many interesting, mainly

Edwardian designs and two particular Arts and Crafts houses in Oxford Rd, before turning back on the Stratford Rd to Sparkbrook and the Church of St Agatha. Designed by W H Bidlake, in 1899 replacing Christ Church, New Street, when demolished. A Grade I listed building, in an austere but light style, a modified form of the later Gothic style, built in red and blue brick with stone dressings on the outside and buff brick on the inside [see Owen Porteous' note on this and the school next door].

A short journey to us to an excellent buffet lunch at St. Albans. This, replacing a temporary mission of 1866, was designed by J L Pearson in 1880, in a red brick, with dressings in ashlar, but the tower and spire were added in 1938. Imposing almshouses in a similar style sit adjacent on the east side. In the south chapel, an unusual copper Arts and Crafts triptych with painted panels was made by local artists Kate and Myra Bunce, in 1919.

After lunch, we again circulated around the Moseley area before ending up at Highbury, the former home of Joseph Chamberlain, which was to be the highlight of this trip. It has rarely been open to the public in the past but now, run by a trust, was opened for us for half an hour. It has been under restoration (principle rooms – some yet to be completed) and is needing a viable end use. Joseph Chamberlain lived here from 1880 until his death in 1914. Adjacent to the house were Chamberlain's famous

orchid houses. From here a supply of orchids was sent every few days to his London residence, when Parliament was sitting. The gardens were once magnificent and included a park and lake. These are not yet restored (if ever fully), but the park and lake form Birmingham's Highbury Park. An £8m fundraising campaign was launched in 2018 to restore the building (now leased from the City) and parkland. The aim is to open Highbury to the public, create an exhibition on the Chamberlains' lives and history of the hall (temporary boards hung in the study), plus a café, as well as spaces for weddings and conferences; but this is for the future.

We finished the day in Bourneville, looking at some of the more unusual houses, before tea in the Friends Meeting House.

*Mike Hayzelden*

## **St Agatha's Church and Nostalgia**

On our tour of some Birmingham churches we had just left the Edgbaston suburb near Hagley Road and had visited St. Augustine's church set amidst its own little green and leafy island. Later, sitting on our coach we had fascinating glimpses, right and left, of much of Birmingham's considerable 19th century housing, churches and public buildings. Some shabby or care worn while others looked in great condition, standing proud. This took us to Sparkbrook, an area in which I worked as a teacher in the early 1970's. Our specific visit was to St. Agatha's church on the Stratford Road near Ladypool Road of 'Balti Triangle' fame. The church is squeezed between the school where I briefly worked

and several stores, offices and workshops. In this setting a useful walk around the church was not possible, it really is hemmed in on all sides, with the front entrance on the Stratford Road. However you cannot hide this church, its 120 ft high tower dominates the surroundings.

The exterior is Gothic style with Arts and Crafts overtones, with blue tinged red brick and stone dressings here and there. Inside, the church is impressively high with light reflecting yellow/grey brick walls and piers and stone for arches and mouldings, all leading up to a wooden ceiling entirely replaced to the original design in 1961 after a fire two years earlier. Other original furnishings were also destroyed, apart from the pulpit. Bomb damage in 1940 damaged the chancel and east window, and evidence of renewal is evident in slightly yellower brick.





To me it seemed a remarkably restrained, beautifully plain building, surprising for a church obviously engaged with Anglo-Catholic liturgy. The church was built from 1899 to 1901 to a design by WH Bidlake. The whole project funded by the sale and demolition of Christ Church on what is now called Victoria square in the city centre (Christchurch passage or steps are still there at the top of New street.)

Ladypool primary school is next to St. Agatha. You can see the Martin and Chamberlain 1885 design, largely intact, from Stratford Road with the caretaker's

house nearest the road. The original doorways, terracotta mouldings and mosaic also seemed in good order. However the ventilation tower was severely damaged in a local tornado in 2005 and it was dismantled and its parts put into storage. I remember from the 70's the lovely curved iron ceiling ribs in the assembly halls with classrooms leading off.

The area seemed to me to be as busy and active today as in the 1970's although much housing has been demolished or replaced.

OWEN J PORTEOUS

## Visits to Tardebigge Lime Kilns with Bill Lambert 8th and 22nd June 2019

We met on a warm, dusty afternoon at the wharf buildings, beginning with refreshments, before walking along the canal to the top lock and lock keeper's cottage to set the scene. The kilns were at the side of the basin where we started, but from the canal embankment, we could see the extent that the kilns construction had made use of the valley running alongside. Returning to the basin we took the circuitous path down to the base of the kilns, where their structure was more evident. I had been here a few years ago, but other than portions of brickwork, loose bricks and heavily undergrowth on soil banks, there was not

much visible then. There is still much to excavate, when the existing, now visible stone walls, are consolidated, as removing much more soil from inside the kilns might jeopardise their stability.

Mike Hayzelden



## Coach Trip to Bristol Area

### Sunday 1st September 2019

#### Clifton Observatory

A bright clear warm day saw us make excellent time down the M5 on a Sunday morning, in good time for the opening of the observatory at 10:30am, some for the café others the camera obscura or the cave.

Dating back to 1766 the Clifton Observatory began life as a windmill for corn and later converted to the grinding of snuff (tobacco), when it came known as 'The Snuff Mill'. Associated with luxury and excess, it is unsurprising that Bristol needed its own snuff mill to keep up with the demand from the wealthy land owners and merchants.

It was derelict for over 50 years following a fire in 1777, during a gale when the sails were left turning. In 1828 William West, an artist based in Bristol, rented the Observatory as his studio. West transformed the old mill into the building we recognise today by installing a large telescope into the tower and creating the Observatory. In 1829 West replaced the telescope with a camera obscura [note: I had been bemused as I could find no reference in their web pages nor in the exhibition of when this occurred, so had to resort to Wikipedia], a 13cm convex lens and sloping mirror were installed on top of the tower projecting panoramic views of the iconic Clifton



Suspension Bridge and surrounding area. Whilst excavating the foundations West discovered natural caves. He excavated a 200 feet (61 m) long tunnel connecting his Observatory to the 'Giant's Cave', also known then as St Vincent's Cave (or Ghyston's Cave), which opens onto St Vincent's Rocks on the cliff face, 250 feet (76 m) above the floor of the Avon gorge and 90 feet (27 m) below the cliff top. The tunnel took two years to build and first opened to the public in 1837.

#### Aerospace Bristol at Filton

We drove to the Filton museum for lunch, which is located on the historic Filton Airfield, where every British Concorde made her maiden flight.

The manufacture of aeroplanes started in 1910, when Sir George White, the owner of Bristol Tramways, established the British and Colonial Aeroplane Company in the maintenance sheds of Bristol



Tramways. In 1915, as the Aircraft Works expanded over the original flying area, the Royal Flying Corps established Filton Airfield in fields at the bottom of Filton Hill.

Aero-engine production started close to Filton Airfield, with the acquisition of Cosmos Engineering in 1920. In the same year, the British and Colonial Aeroplane Company became the Bristol Aeroplane Company, often abbreviated to BAC.



From 1929 the No. 501 (City of Bristol) Squadron RAF was based at RAF Filton. The squadron was equipped with Hawker Hurricanes by 1939 and formed part of the British forces sent to France. By the Second World War the Bristol Company supplied engines for nearly half the world's airlines and more than half the world's air forces, and in the Second World War it provided a third of the RAF's engines.

The museum holds a wide variety of exhibits from both wars and civil aviation periods as well as subsequent develop-

ments in other fields, space and undersea exploration. Only one example of the Bristol car appears in the display and also a lorry. Post war manufacture was diverted for a time to prefab buildings for the post war reconstruction.

The museum itself is housed in the First World War hangers of 1918, by the War Office's Directorate of Fortifications and Works. Walls, buttresses, central piers and door 'pylons' in brick, curtain walls half-brick thickness in cheaper bricks, softwood 'Belfast' roof trusses, corrugated steel door cladding and later profiled steel roofing. They are listed Grade II. Sited to the north of Sir George White's aircraft factory of 1910 this part of Filton was developed as an Aircraft Acceptance Park for the reception and final assembly of aircraft from factories

and their flight testing, storage and distribution to operational squadrons. These buildings, that survive are the most complete on any of these types of sites in existence.

The Concorde exhibition is in a separate, new hangar. The aircraft is British Airways Concorde (G-BOAF), which first flew on 20th April 1979 and made the last ever landing of a Concorde, at Filton, on 26th November 2003. Its total flight time was 18,257 hours.

*Mike Hayzelden*

## Photos from Other Visits

The Newsletter has not been supplied with reports from two events this year, but Mike Hayzelden has, as always, made his excellent photos available. Here are a couple from the many available



The Walled Garden  
Party, near Fort  
Royal, Worcester,  
24th July 2019



Halesowen &  
Leasowes visit,  
17th June 2019

## AN UNUSUAL MILL - RÁCKEVE BOAT MILL



In recent years our Summer Program has included trips to several interesting water mills of different design in and around Worcestershire, e.g. the visit to Churchill Forge last year to see a fine working example of the overshot style. During the recent Association for Industrial Archaeology (AIA) Spring Tour to Hungary in April, we visited a mill unlike anything we have seen here in the UK.

The morning of the tour had taken us some 120 Km South of Budapest along a route close to the Danube to visit to the nuclear power station at Paks. On our return journey, about half-way back to Budapest, the Danube divides into two separate channels forming an elongated island and here we made a short detour to Ráckeve. The town is situated on the island close to the eastern arm of the mighty Danube and the restored Ráckeve boat mill moored on the river here has become one of the town's prize

attractions.

A boat mill (or ship mill) comprises one or more undershot waterwheels attached to a boat that contains the milling machinery. The first recorded examples date to the mid 6th Century in Italy. The water wheels were usually mounted on one side although, apparently, in some cases they were placed on either side in the manner of a paddle steamer. This became a popular form of mill on the Danube and by the middle of the 19th Century there were more than 4000 boat mills in Hungary alone. The particular advantage was that milling could continue whatever the height of the river, which can vary by 7-10 metres. The miller paid a charge for his mooring according to the quality of river flow and the mill would be moved away to be dismantled for safety during the winter. It seems that the Ráckeve Mill was among the last of its type to survive until



stone that would of course have been found in earlier mills.

The Ráckeve boat mill is now operated by means of an electric motor concealed beneath the floor which also drives the two paddle wheels (the blades being free to rotate) and this gives a very good impression of how the whole thing operates. The mill is functional and regularly works to pro-

duce flour. More information can be found at: <https://www.industrialheritagehungary.com/02-Industrial-Heritages/01-Food/rackeve-boat-mill.html>

duce flour. More information can be found at:

<https://www.industrialheritagehungary.com/02-Industrial-Heritages/01-Food/rackeve-boat-mill.html>

In 2006, the Municipality of Ráckeve started an ambitious restoration project which led to the reconstruction of a fully -functional replica of the original mill based on written records, photos and drawings. This took three years to accomplish and, while the boat and two water wheels are new, being a superb example of highly skilled carpentry, it seems that the milling machinery inside the boat is all original having been rescued from the mill that had worked during the early part of the 20th Century. Being a fairly “modern” example of its type, the grinding wheels are of steel rather than the

For a full description of the April AIA tour to Hungary see: John Copping (2019) Industrial Archaeology News, 190, 2-5.

*Hugh & Jenny Field*





## Excavation at site of Russell Pipe Manufactory Cripplegate Park, Worcester

An independent research project into clay tobacco pipe making in Worcester was completed in 2018. The evidence strongly indicated the existence of an old pipe kiln and associated works within and below what is now a children's play area.

Cripplegate Park has Green Flag status and is managed by Worcester City Council. The council has an active archaeology department that presides over the heritage of the city alongside a Community Engagement department. These three bodies were approached at the end of 2018 with a proposal for a small-scale archaeological excavation at the outlined site. This proposal was approved within defined terms.

Funding was provided in-kind and in financial awards from the council, the Mick Aston Archaeology Fund managed by the Council for Archaeology and the Garth Raymer fund managed by the local Worcestershire Archaeology Society. Members of two local archaeology groups provided manpower for the excavation while a local kiln specialist provided important guidance on kiln design and structure.

Members of a local archaeology group completed a geophysical survey in April 2019 and decisions on the timing and location of the excavation were made after the results were reviewed.

The excavation was carried out for one week in September 2019. Three trenches were opened and the excavation was carried out by trowels and hand shovels. Detailed photographic records were kept of the progress and specific finds. Finds washing, drying and bagging was carried out on site ready for later catalogue and assessment.

A number of finds were made covering the period following the English Civil War through to modern times. The area of the site and adjacent buildings had been subject to several periods of demolition, the last one being in the early 1970s.

Fragment of a  
Russell Pipe  
(Worcester Art  
Gallery and  
Museum )



Tobacco clay pipe bowls and stems were recovered and the signature changes in style were used to date them from the mid 17th C through to the period of the end of the Russell Pipe Manufactory circa 1868.

Examples of kiln fireclay bricks and furniture were recovered and identified. These are more difficult to date but their presence was important evidence supporting the archive records of a kiln on

the site. On the final day of the excavation, a section of a structure was found at a depth of 1.2 m., which could be part of the kiln described in archives and maps. This was a validation of the project design and represents an opportunity for further excavation.

Interest from local residents was an important outcome of the work and this enhanced the Green Flag status of the park through engagement and heritage. A final report will be submitted to the national HER scheme.

Roger Moore

*Note: WIALHS has provided support to this project, primarily through Malcolm Nixon who has been providing advice and reviewing documents. As a result of this an Occasional Paper is planned for 2020—watch this space! Ed.*



Section of the Kiln Structure found on the final day



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2019/2020

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