

# WARWICKSHIRE

## Industrial Archaeology Society

# WIAS

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Lyndon Fraser Cave-Browne-Cave  
Toby Cave 1923 - 2014

Toby Cave was a remarkable man – architect, teacher, author, conservationist, historian, enthusiast for the industrial heritage, as well as being a very committed family man and an inspiration to so many with whom he came into contact.

It is not my role to cover all aspects of Toby's contribution to our lives, but to concentrate on his role within the Warwickshire Industrial Archaeology Society. However, I do feel I need to mention that before he came to Warwickshire in the 1950s, he was a fire-fighter on the Liver Building in the Second World War in the face of German attacks on the Liverpool Docks, became actively involved in the post-war reconstruction of Prague, and was a founder member of a modern art gallery in Nottingham. There was always much to learn about Toby.

I cannot quite remember when I first met him, but I suspect it was in an educational context, with me as student and Toby as teacher. Our shared interest in the industrial heritage soon became apparent and from this developed the idea of forming the Warwickshire Industrial Archaeology Society.

Toby played a pivotal role in the formation of WIAS, being its first Chairman, and subsequently its first President. In the early years, he gave talks to the group, and also organised speakers for meetings, a role that he subsequently passed on to me. Even after he had relinquished the responsibility, I would still receive the occasional hand-written letter which contained details of a potential speaker, drawn from his multitude of contacts.

What was immediately apparent was that Toby's knowledge was both

wide and deep, with certainty about where everything could be checked if doubt arose. What amazed me was his capacity to find the relevant newspaper cutting, journal or book from the mass of literature that was contained – just about – within the four walls of 24 Portland Street.

I would often pick him up to take him to meetings, and the car journey was always packed with interest as Toby led the conversation on any number of issues. A casual chat en route to a WIAS meeting often produced another of those hand-written letters with details of chapter and verse where I might follow up the topic concerned.

What surprised many was that a man so dedicated to conservation, and so knowledgeable about traditional buildings, should also be so interested in those more mundane building materials of cement and concrete. His membership of a number of organisations dedicated to conservation, and his determination to save the Warwickshire that he knew and loved, (together with his published works on Warwickshire Villages, Smaller Country Houses and two volumes on Leamington Spa), must also be placed alongside his work, for example, on the Model Village associated with Southam Cement Works, and his continuing research into the brickmakers of Warwickshire.

When he moved to Sherborne because of ill-health the flow of information – and newspaper cuttings – did not cease and it is remarkable that he was still working so effectively beyond his 90<sup>th</sup> birthday. We have lost a remarkable man, and the Committee are actively considering how best to create a lasting memorial to honour his contribution to the Warwickshire Industrial Archaeology Society.

#### WIAS Secretary: Dennis Crips

Our long-serving secretary Dennis Crips has decided to relinquish this post after many years of dedicated service. Dennis has executed this role with great efficiency, and the carefully prepared minutes of all our committee meetings are testimony to this. He has also been much involved in projects such as creating a constitution for the society and in the development of the database project. In addition, he contributed much to debates within committee

and would remind us all of the need to look at the role of the Society within a broader context.

On behalf of the committee and the Society as a whole, I would like to pass on sincere thanks to Dennis for all his hard work as Secretary of WIAS, and we all look forward to seeing him and his wife Maureen at future meetings, together with some lively contributions from the floor at question time.

We do not have a new secretary in place as yet, and if anyone would be interested in taking on this role, please contact myself or Dennis. The one aspect of the post that we really need to cover is the notification and recording of minutes of committee meetings (four per annum), and if you feel this could be for you, do not be shy in stepping forward!

Martin Green

#### PROGRAMME

##### September 11 2014

AGM, AIA Cheshire Conference Report and Members' Evening.

##### October 9 2014

Peter Grenfell:

*The Ford Foundry, Leamington Spa.*

##### November 13 2014

Bob Booth (Chairman of the Bournville Society):

*'Cadburys and Bournville'.*

##### December 11 2014

Martin Green:

*Nooks & Crannies of Warwickshire's Industrial Heritage.*

##### January 8 2015

Richard Thomasson:

*The BAE 146: the last UK-designed civil aircraft.*

##### February 12 2015

Christiaan van Schaardenburgh:  
*Coventry Shadow Factories.*

##### March 12 2015

Jeff Burgess:

*Leamington's Water Supply.*

##### April 9 2015

Jim Andrew:

*Housing the Great Exhibition - The Crystal Palace of 1851.*

##### May 14 2015

Sue Tungate:

*Matthew Boulton and the Soho Mint: Copper to Customer.*

##### June 11 2015

Members' Evening:

*Industrial Archaeology and Agriculture - Strange Bedfellows?*

NEWSLETTER

## Meeting Reports

**April 2014: Malcolm Nixon**

*A New Light on an Old Industry: The Industrial Archaeology of the Worcestershire Potter.*

**D**r Malcolm Nixon recently retired from a long career in Conservation Architecture specialising in buildings preservation. He has had a lifelong interest in the pottery industry, surveying his first bottle kiln in 1966. Since his retirement he has been working with the Royal Worcester Museum. He has his roots in Warwickshire, which did have a pottery industry centred on Nuneaton, but this was his first talk in the County. His presentation used many old maps and photographs plus narrative detail from archives and old minute books to create a vivid impression of life in former times.

According to Malcolm, historians' views of the pottery industry as a whole are changing and perhaps some of this attitude can be read over into other industries with whose origins we are more familiar.

The Napoleonic Wars and general state of flux in Europe during the late 18<sup>th</sup> and early 19<sup>th</sup> centuries had made the traditional 'Grand Tour' impossible. Consequently, attention was turned to the delights and wonders to be found nearer to home as the 'New Pandemonium' ushered in the industrial revolution.

Wealthy patrons scrambled around the Blue John caverns in the Derbyshire Peaks and explored the wild countryside but of greater importance to the burgeoning manufacturing class was their interest in furnaces and factories. This interest was well exploited, and notably so, by Matthew Boulton and his friend Josiah Wedgwood both of whom lavishly entertained potential customers at Etruria and Soho whilst fearing possible industrial espionage. Other potteries were popular destinations, especially those in Worcester with its links to Staffordshire. Michael Faraday of electricity fame was one celebrity visitor to Worcester.

An especially useful find for historians has been a 'Guide Book' *The Process of Making China* with twelve plates illustrating much of the production methods used. Visitors were above all interested in how things were made and examples of new technology were greatly sought after. No wonder Wedgwood had concerns for his intellectual property. Another prime source of information has been rediscovered minute books and other paperwork. These have much extended knowledge of the early operations in factories that no longer exist. For example, we know that one James Hadleigh broke away and founded the Shrub Hill China Works but there is nothing else known about the business.

Similarly, Bellevue Potteries on Mucklow Hill is unknown apart from the name and location. Clearly there is evidence of a vibrant pottery industry in and around Worcester of which nothing is now known. And not only in Worcester. In the 1770s a cream ware factory to rival Wedgwood's Etruria was built in Kidderminster but it failed and is now shrouded in mystery.

Turning to techniques, what can be deduced from the available evidence? An underlying fact is the antipathy to progress shown by many pottery owners; for example, the failure to introduce machinery for plate making. An invaluable source of information is a report from 1850 in *The Penny Magazine* following a visit to Worcester. There are excellent illustrated descriptions that show little change in techniques in over a century; child labour still powered the potter's wheel in a deeply conservative industry.

Working conditions continued to be terrible and those employed had a built-in ability to die early. An examination of the now available minute books shows much evidence of illness but also that little or no action was taken to ameliorate conditions. All categories of workers were affected by pneumoconiosis, paint poisoning and other

preventable incidents. Josiah Wedgwood might be regarded as our greatest potter but his reputed remark 'I want to make machines of men' shows some lack of humanity, or perhaps, simply reflects the attitudes of the age.

Another example of the management style was that of Chamberlain & Sons who also owned a pub and exerted a measure of wage control by paying the men's wages in the bar, thus ensuring some immediate recirculation! It may be possible to do some excavation work on this site in the next few years.

Chamberlain's archive also provides an example of the draconian 'rules & regulations' imposed on workers with fines for the most minor offences such as whistling. Sometimes this fund was put to good use; Royal Worcester used it to take apprentices to the Great Exhibition and for excursions to Llandudno. However, the myth of the caring, compassionate employer seems to be just that.

Looking at the surviving examples of architecture in Worcester it seems that the City followed the prevailing fashion. There are problems with excavating in many places and this, coupled with the changing uses of land and buildings over time, causes some confusion. However, the employment of the same architects in both Stafford and Worcester makes for similar buildings. An old 'Aeroflms' photograph of the Royal Worcester works during a 'potters fortnight' holiday gives an unusually pollution-free picture of the site.

An examination of the people working in the potteries provided many insights into contemporary life. Squalor was commonplace and one pithy comment was 'you could guarantee a beetle race as soon as it got dark'.

As today, many women were employed as 'paintresses'. Arnold Bennett's description of those in Stoke as 'loud-tongued and aggressive' may be equally true in Worcester as there was frequent migration of workers between the two cities. However, whilst painters often suffered from lead, arsenic and cadmium poisoning, they also benefitted from training at the Worcester or Stoke Art Colleges that then led to employment.

Worcester was also a centre for glove-making and plotting 'glovers' and 'potters' from census data onto old town maps produces clear enclaves for each trade. An interesting case history was that of one woman shown in the minute books of Royal Worcester as having been employed for 65 years and receiving support as a widow but in a census she was shown as a glover! Was she moonlighting at two jobs or was there a census error?

Finally, archaeology has produced evidence for technological advances. Discoveries of over-fired wasters and shoddy buildings as well as pioneering attempts at underglaze transfer printing and encaustic tiles are but a few examples. Also unearthed has been a 'seven-fire-mouth' biscuit oven, one of the few so far excavated. The use of a cheese-cutter wire and a large lorry to bring down a bottle oven was an interesting aside.

The clean air acts have greatly affected both Stoke and Worcester and today it is difficult to imagine what life in those communities was really like. Or for the rest of Worcester because the works were predominantly located to the South West of the city whence come the prevailing winds!

The social history of the two pottery communities 70 miles apart needs much more research, and could be a very rewarding subject. There is a common denominator in the people, but what did they really do to exploit their resources of coal, clay and bloody-mindedness? Not forgetting the funding that came up the Severn from Bristol.

## May 2014: Peter Perkins

### *The Rise and Fall of the Northamptonshire Boot and Shoe Industry.*

For forty years Peter Perkins worked for SATRA, The Shoe and Allied Trades Research Association and has been both Secretary and Chairman of the Northamptonshire Industrial Archaeology Group. Who better then to tell the story of 'The Land of the Shoemakers' as the 1878 *Murray's Handbook for Travellers* describes Northampton with its streets haunted by leather aprons and grimy faces.

Before the 16<sup>th</sup> century, the woollen industry was the source of wealth in Northamptonshire, but as weaving declined, the boot & shoe and leather trades emerged and it is with these that the prosperity of the county would forever after be linked.

As in many other parts of Britain, shoemaking was a cottage industry; but there were factors that increased its importance in Northamptonshire. The pastoral economy provided hides or skins and the oak woodlands provided the bark for tanning them. There was also a good supply of water for washing the hides. Additionally, its central location was important.

By the time of the Civil War the boot & shoe industry in the county was sufficiently organised that groups of makers could compete for orders from the army. An order was obtained in 1642 by Thomas Pendleton of Northampton (fulfilled by 13 shoemakers) for 4,000 pairs of shoes & 600 pairs of boots for the army bound for Ireland.

Large orders could only be met by good organisation and in this respect, the wholesale manufacturer was pivotal. He would have had a small warehouse, where uppers, soles and other components were cut and sent to outworkers for making into shoes and return to the warehouse for payment. Until around 1850 all boot and shoemaking was entirely manual, but within a decade, machinery started to influence the industry.

The principles of shoemaking were explained with a wealth of illustrations and the progression from the early 'turnshoe' system (a leather upper stitched in the form of a bag, turned inside out and attached to a sole) to the lasted, hand welted process became clear. In the latter, the upper is stretched over a wood or metal former (the last) and attached to an innersole. The outsole is then attached to the upper with the aid of a leather welt. This method forms the basis of modern welted footwear.

We learnt a new vocabulary of 'clicking', cutting the upper leather or sole around a brass bound pattern; 'closing', stitching together the upper leather pieces; 'lasting', stretching the upper leather over the former or last and fixing it to the insole and finally stitching a leather welt to the lasted upper and the insole before attaching the sole by stitching it to the welt. The welt simply allows the sole to be stitched on without stitching inside the shoe which would be quite difficult. Finishing covers a range of operations including scouring and inking the sole edge, buffing, lacing and cleaning. Some shoemakers used a cheaper riveted construction. The shoe is lasted as before but the sole is attached using rivets - simply nails or tacks - being hammered in and clenched over on the metal last. Later as machinery began to be introduced, simpler machine-stitched methods of attaching the sole were introduced.

Turning to machinery, shoemaking in Britain had the reputation as a trade to which machinery could never apply. Due to variability in leather it was thought impossible to perfect suitable machines. Nevertheless, there had been

some attempts at development of machinery during the Napoleonic wars, when Marc Brunel filed a patent for a machine to fasten soles to uppers by means of driving nails. The machine was apparently used for mass production of army boots; but after the wars it was forgotten.

In the 1850s shoe machinery developments, especially sewing machines, started to appear in America. However there was resistance to its introduction in England and a series of strikes caused resentment and some highly skilled workers moved to other parts of country.

How did these machinery developments influence the shoe industry in Northamptonshire? Whilst some outworking continued, large factories were built to house the new mechanised production, typically three storeys and a basement. In the basement was leather storage and heavy presses for cutting soles; on the ground floor was lasting, making (sole and heel attaching) and riveting; on the first floor was finishing and the outworkers' waiting room and on the second floor, often with roof lighting, was clicking and closing. Power came from steam or oil engines, with all the attendant fire risks.

Fortunately, a large number of these buildings remain, or have been recorded, and plenty of examples were shown, together with a nostalgic roster of manufacturers. Not only the exteriors but many examples of working practices were also shown.

As might be expected, there is a long list of allied industries: tanning, insoles, stiffeners, lasts, tacks and cardboard boxes to name but a few.

The growing fashion for sports and leisure meant people turned against welted leather footwear in favour of leisure designs. Such shoes had more complex constructions with subsequently higher costs which drove production to low labour cost countries such as Portugal and especially China. Despite attempts in the UK to automate design and production the competition from imports continued and no amount of technology could stop the decline of the UK industry.

Paradoxically, the failure to use new technology and new machinery has turned to Northamptonshire's advantage. Men's welted footwear is difficult to produce and people are prepared to pay a premium for it. So today exports are increasing! Church's Shoes announced earlier this year they are taking over a former tram and bus depot to give additional production capacity. So, in contrast to some other industries there does seem to be a future for traditional footwear manufacture in Northamptonshire using machinery and techniques that the Victorian shoemakers would recognise.

Finally, to the issues of heritage and conservation. An English Heritage survey identified over 450 buildings associated with shoe trade (excluding garden workshops). Some are still in industrial use and internally remain relatively unchanged. Many of the 3-storey factories have been converted into apartments, where radical change has taken place internally. In 2011 a conservation area was created north and east of the town centre called the boot & shoe quarter. It contains over 100 former shoe factories and 3 or 4 are still in operation. The aim is to conserve the Victorian streetscape and try to preserve the factory buildings whilst ensuring their ongoing use. Northampton Museum is known worldwide for its enormous collection of shoes - not just Northamptonshire and machinery and a new, expanded museum is to be built.

## June 2014: Members' Evening

25 Years of WIAS. 1989 - 2014.

A perfect June evening and the excellent facilities of the Bridge House Theatre provided the best possible setting for members, wives and friends to celebrate the first 25 years of WIAS.

Welcoming drinks and canapés, plus a magnificent Anniversary 'Gas Works' Cake by Jan Coulls served in the interval, were enjoyed by everyone.

After moving into the theatre Martin Green opened the proceedings with a moving tribute to the late Toby Cave and his contribution to the success of WIAS since its inception.

Peter Coulls then reviewed the Industrial Heritage of Warwick which was liberally illustrated by pictures from the collection of Derek Billings. Thanks to such pictures we can see the wide variety of local manufacturers and their products, often in settings that remain in existence today. Vehicles of many types and applications jostled with buildings, canals and railways. Warwick has been much more than a quiet Market Town in the Midlands.

Peter, together with Alain Foote and John Willock has been spending many hours in the County Record Office helping in the huge task of organising the archive of Rugby-based Willans & Robinson, a leading steam engine builder at the turn of the twentieth century (see Newsletter No. 38 on the website for more details), that had been handed over to the Record Office. This significant archive, consisting of photographs, glass plate negatives, engine index books, drawings, commercial documents, Board minutes, company publications and much more - invaluable primary sources for historians and industrial archaeologists alike - is now being preserved.

To further help this work WIAS has made a donation to The Record Office of £250 and a cheque was handed over to Sam Collenette, the Archive and Historic Environment Manager. She briefly described the work of the 80 year old Record Office and especially the full scope of the W & R Archive. There are 90,000 negatives, many of which are glass. John and Peter have so far catalogued 17,000 of them and Alan and John have also catalogued 1,000 plans. A part-time conservator has also been employed thanks to grants and a contribution from the I.Mech.E.

Martin Green then reviewed the Society's activities, especially in relation to museums, world heritage sites and other organisations such as English Heritage. In particular he considered the place of Industrial Archaeology within the study of economic and social history. As would be expected from someone with his academic background, and his commitment to the preservation of our industrial heritage, his views were both pertinent and timely.

Martin was followed by the personal recollections of three longstanding members.

Roger Cragg reminded us of the remarkable structure of the Marton Bridge close to Leamington. When built this was the longest wrought iron truss bridge in the world. However, its designers soon developed doubts as to its load carrying capability and gave it a supporting structure that

remains to this day.

John Selby, another founder member recalled a walk with Peter Chater on the Oxford canal near to the abandoned Fenny Compton brick kiln. This visit inspired a sustained piece of research into the brickworks and a resultant paper. Amongst John's illustrations was one of contractors at work on the site in 1837.

Peter Chater, also a founder member, has the unique distinction of never having missed a meeting save the one when the Leam broke its banks totally disrupting traffic. Peter has organised many summer walks, notably, along the local canals and produced accompanying leaflets. He gave us some reminiscences of his lifetime's work on the railways.

Roger Cragg made a presentation on behalf of the Society to Martin and Judy Green in recognition of the immense contribution that Martin has made over 25 years as founder, secretary, programme organiser and chairman and the support that Judy has provided. The Society is much indebted to them.

After a break Martin looked at the future of the Society. Of particular importance, both because it will provide information to visitors to the area and be a record of Warwickshire's industrial heritage as it exists today, is the development of our database.

Martin illustrated this with 25 examples representing the 25 years of the Society and covering the County from the Mancetter Quarry to Wellesbourne water mill via Coventry top shops. The Nelson Club at Stockton to Chesterton windmill. Bridges at Compton Verney, Walton Hall and Hampton Lucy. Hatton locks to Stratford's canal basin and warehouses. Cash's, Courtaulds, Toye Kenning & Spencer and Atherstone Hats. Alcester needle making and de Normanville's roof for Leamington's swimming pool.

Warwickshire has a rich industrial heritage. Much no longer exists but much remains to be recorded. It is to be hoped the WIAS through its members will be instrumental in that regard.



*Presenting the Society's cheque to support the work of the Warwick County Record Office.*

*From l to r: Martin Green, Alain Foote, Peter Coulls, Sam Collenette and John Willock.*