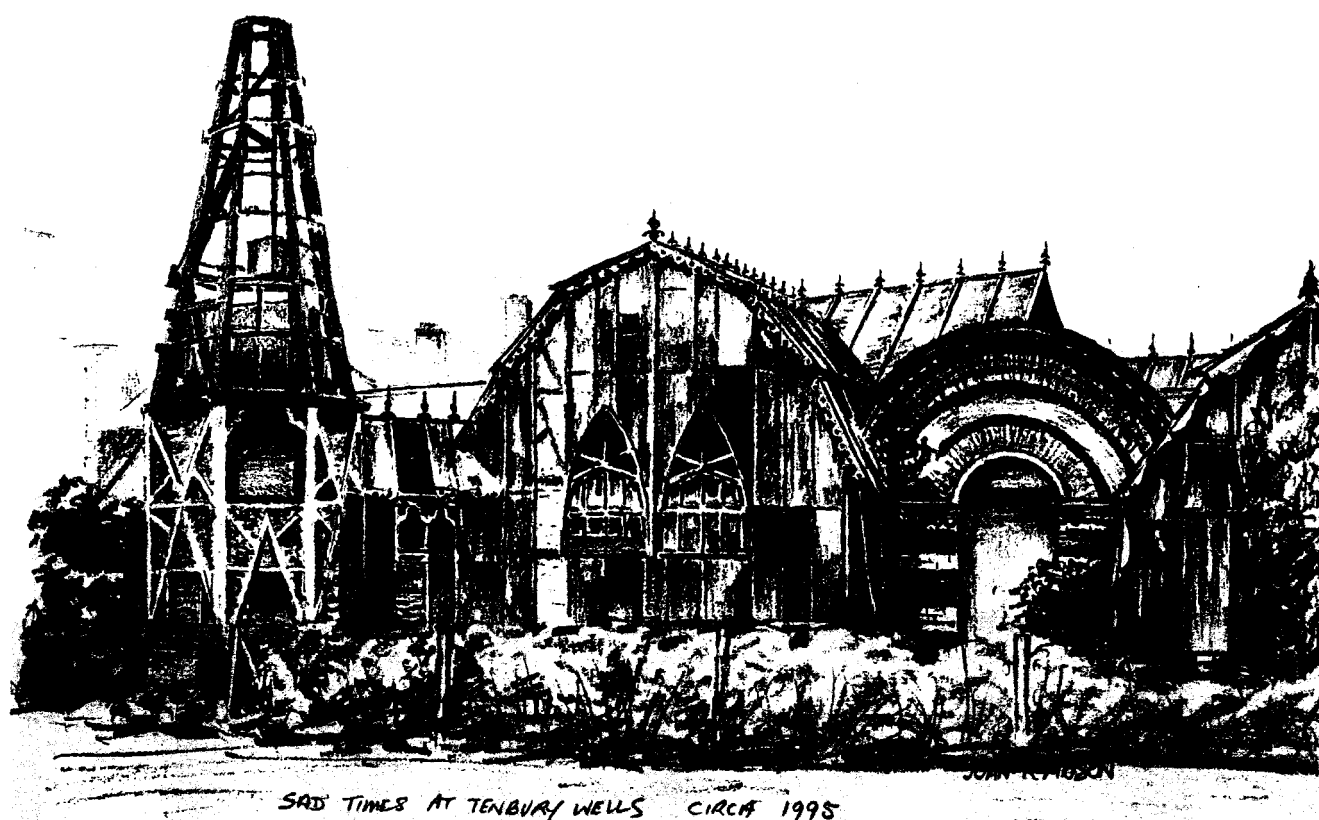


THE JOURNAL

OF THE
WORCESTERSHIRE INDUSTRIAL ARCHAEOLOGY
AND LOCAL HISTORY SOCIETY



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WIALHS JOURNAL
(ISSUE 36 – SPRING 2009)

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Front cover illustration by kind permission of John Mason (Society Member)

NOTE : The material contained in the Journal does not necessarily reflect the opinions or policy of the Society. Articles, letters, book reviews, photographs or questions for publication are always welcomed by the Editor.

EDITORIAL

Thanks to the efforts of those members who have sent in material over the last few months, I am in the enviable position of being able to hold back a few items for the next edition. Apologies therefore if your piece does not appear this time – it is on file for the next edition!

But please don't rest on your laurels WIALHS members – keep up the good work sending stuff in, whether it is a short letter, a book review or a longer piece. The new Summer Programme looks excellent and should provide many opportunities for your creative talents in reporting on the events. Please don't wait to be asked to write a report, just send me your views – the more the merrier. If you visit anywhere else interesting over the summer months then let your fellow members know by writing a short article.

This edition has a wide variety of items, including a report from Mike Hayzelden on some local IA work on the Droitwich Barge Canal. I decided to include this as a single item as I am sure it will be of immediate interest to members – which would be lessened if the item was "split" over two issues.

Roger Tapping and Mike Hayzelden, with some assistance from John Drury, undertook a major measured and photographic survey of both canals from Hanbury Wharf to the River Severn. This survey was done as part of the Droitwich Canal Restoration Heritage Consultation Group. For their work on this project they have been awarded the BW Recognition Award 2008 for Volunteering Activities (Central Region).

So I'm sure that you will wish to join me in offering congratulations to all concerned - I

will try to give more details in the next edition.

Next, I must draw your attention to our very own website. Yes **we** have one, at - www.worcester-wia.co.uk. This is regularly dusted, polished and maintained (or whatever it is one does to websites) by Peter Wheatley – for which we are eternally grateful as nobody else understands how to do this! Joking aside, thanks to Pete's efforts we have a very informative site, which has details of the Society, its Summer and Winter Events, and much other useful information besides. If you can't remember the date or subject of a forthcoming meeting (or a previous one) look at the site and you will find the programmes listed.

The site also attracts many "visitors" (nearly 6000 hits at the last count) and as a result we have attracted enquiries from around the world from people researching family or local history. If you haven't already done so, take a look next time you are near a computer.

Finally, thanks again to John Belt for his sterling work in recording notes on the Winter Programme talks, so that you have some idea what you missed if you were unable to attend.

Glyn Thomas

**PRESIDENT'S PIECE
AND THE THOUGHTS OF
CHAIRMAN SILVESTER**

The Chairman's and President's reports to the AGM are given later, in lieu of these items – Ed

**WINTER PROGRAMME
2008/9
EVENING TALKS**

**A SMALL COG IN A LARGE
WHEEL - CODE BREAKING AT
BLETCHLEY PARK
IN WWII
Mrs Webb (1219108)**

This was not a lecture on the technicalities of code breaking but the recollections of one of the ten thousand people involved in this very secret work. The site was chosen because it was midway between Oxford and Cambridge, thus being able to call upon these Universities to provide experts. Mrs Betty Webb was eighteen in 1941 when she joined the Auxiliary Territorial Service (ATS) and was recruited as a clerk to work at Bletchley Park. Being issued with a Rail Warrant for Bletchley she was instructed not to tell anyone, including her parents, where she was going. During the entire length of her service there they never knew where she was, mail contact was via a PO Box in London. On arrival at the large Victorian Mansion she was ushered into an office where an Army Captain was sitting behind a large desk, his revolver lying on the desk in front of him. She was instructed to sign the Official Secrets Act (OSA) and was given a precise explanation of what was involved in this most secret work. He also added that any breach of the OSA and he would use his revolver! This caused the writer to recall signing the OSA on joining the GPO Engineering Department. It was far less dramatic! Betty explained that they were instructed to shut their mind on finishing work and not to discuss anything they did with colleagues. They were forbidden to

enter any other office, if calling to go to lunch with a friend they had to wait outside. Security was enforced by the RAF Regiment, interesting because the establishment was controlled by the Admiralty, though they worked in eight hour shifts these were called watches. The WRENS were fortunate, being billeted at Woburn Abbey, Betty on the other hand was billeted locally in a very small house with a large family, though she was able to arrange a move to better digs later. Though secrecy was enforced, social contact was more relaxed, messing was mixed, rank not bringing special status, Christian names were used. The work performed by Betty and others involved translating and transcribing, females were not allowed to decode. The main breakthrough in breaking the German Enigma machine was brought about by two Royal Navy Officers serving on HMS Petard who obtained code books from a sinking U Boat, losing their lives in the process. Note, the US Navy had no part in this gallant action despite their later claims. The story of code breaking at Bletchley Park remained a secret under the terms of the Official Secrets Act for thirty years, only becoming public knowledge in 1975. Betty explained that her parents never knew about her war work, both having died before 1975. Indeed, she also mentioned that she never talked to her husband about it before he died. The high level of secrecy was such that no one, particularly the Germans, had any idea of the vital work being carried out at Bletchley Park. It was Winston Churchill who instigated the code breaking centre, and called the code breakers his "geese that laid the golden eggs that never cackled Without doubt they saved countless lives and shortened the war by at least two years.

Betty's talk was followed by a question and answer session during which she gave out a leaflet on Bletchley Park together with a list

of publications dealing with the subject. She recommended a visit and Roger Tapping added that two days were needed to take it all in. In an age blighted by politically correct nonsense and the denigrating of valour and selfless service it was refreshing to hear Betty's story.

John Belt

HEREFORDSHIRE BEACON

Paul Remfry (10/10/08)

This presentation was given by Paul Remfry who first became interested in this part of the Malvern Hills some thirty nine years ago when he lived in Malvern. These hills are composed of some of the oldest rocks in England, in geological terms, Pre Cambrian. The extensive earthworks on the Herefordshire Beacon have been known for centuries as British Camp and comprises some 32 acres of hill fort, dating from about 200BC. The highest point and the centre of the fort is referred to as the Citadel, this incidentally is the site of a Norman castle built around the time of the Norman Conquest. The prehistoric earthworks were built of stone and earth ramparts with a defensive ditch on the downhill side, further downhill an outer or counterscarp was built. Rampart, ditch and bank were overlapped at the entrances to afford better protection and four of these entrances pierced the fort's one and a quarter mile long ramparts. The work was carried out over long periods of time, some as recently as shortly before the Roman invasion. The hard rocks which form the hill have been cracked by weathering, otherwise they would not have been workable with the crude implements of the time. It is estimated that thousands of man-hours work was carried out building these impressive defences.

Paul questioned whether British Camp was in fact a hill fort like nearby Midsummer Hill, or was merely a domestic establishment or some form of ritual structure. He argued that the earthworks are unlike those of any other Iron Age hill fort in the area, posing more questions than answers.

The area has been subject to various activities over time. The Saltway an ancient route which from pre-Roman times was used to carry salt from Droitwich to South Wales ran along the top of the hills and in 1287 the Earl of Gloucester built a rampart and ditch known as the Red Earl's dyke. This was to prevent his deer and other stock from straying onto the land of the Bishop of Hereford, who appears to have been a pilfering priest, who refused to return them. The Norman castle already mentioned lasted for just under a century, being destroyed in 1195. This ancient site was mutilated by the Victorians who constructed footpaths to make it easier for visitors to view the earthworks. It is a source of amazement to the writer that so many of our ancient sites have survived given that respect for, and care of, these places has only been practiced for a hundred years.

The presentation was followed by a question and answer session. One question asked was why did the Saltway climb along the Malvern ridge rather than use the easier route on the plain. Our Chairman Christine Silvester answered this one saying that the lowlands were heavily forested which provided cover for brigands and robbers, historically all such routes kept to the safer high ground where possible. Mugging it appears is not a modern phenomenon.

John Belt

ANOTHER MAN'S SHOES

Ellie Targett (7111108)

The speaker was Ellie Targett, the popular presenter on Radio Hereford Worcester; she was talking about her father Sven Somme and his remarkable escape from German occupied Norway.

Born in 1904 Sven was a Professor of Marine Biology and Head of Fisheries for the Norwegian Government, being responsible for fish stocks and training. He was in Oslo in 1940 when the German army invaded, returning to his training duties on the west coast.

One of the first acts of the German army was to confiscate all radios, but Sven concealed his and used it illegally to listen to the British broadcasts including those of Winston Churchill. He then published this information in an underground newspaper which was circulated in the locality. In 1942 he joined the resistance and using photomicrography was able to supply vital intelligence to the Allies.

His brother, also a Marine Biologist was involved in the resistance carrying out similar work, he was arrested by the Gestapo, tortured and finally killed on 3rd March 1944. Sven was arrested three months later but was able to escape from his German guard whilst being held awaiting transport to take him to the Gestapo HQ. Thus began his eight week trek across the mountains to neutral Sweden.

In the first instance he used a technique of tree jumping to avoid leaving foot prints and scent. He was assisted by various Norwegian families who risked certain death in so doing, early on he was given a new pair of boots, leaving his unsuitable shoes in exchange. Having reached Sweden he was

then able to travel to London where the Norwegian Government in Exile was operating.

After the war he married a girl he had met years before when a student living in England, returning to live and work in Norway where Ellie, her sister and brother were born. Living on the coast they enjoyed an ideal childhood, in winter using skis to get to school. Ellie remarked how despite having deep snow the schools never closed, in contrast to the UK where a centimetre of snow closes the schools. (Older readers will remember harsh winters often with failed heating systems but the schools never closed. In giving in so easily teachers today set a very bad example to their students.) Ellie's father continued his work on fisheries, dying at the early age of 57 in 1961.

Sixty years on and members of Ellie's family decided to retrace their father's route from the west coast of Norway through the mountains to Sweden. So Ellie accompanied by her son, sister and brother set off armed with maps, compass, camping gear and basic food following Sven's original course.

During the trip they met members of some of the families who had helped Sven all those years ago. One lady gave Ellie a brown paper bag which contained the shoes her father had left behind when he was given the boots in 1944. In the mountains wooden huts have been built which walkers can use, free of charge, these providing a welcome alternative to tents.

Ellie's narrative was accompanied by a number of slides which showed the beautiful and spectacular scenery through which they travelled. After a while Ellie's son and brother succumbed to problems and returned home leaving the girls to carry on. Moving through wolf and bear country they had to

cope with loose scree making walking more difficult as they were by then suffering from a combination of sore feet, blisters and swollen ankles. Having reached the Swedish border and being unsure of their father's eventual destination in that country they returned to Oslo.

A question and answer session followed during which Ellie again stressed that the Norwegians are a very friendly people and very fond of the UK. A number of books with photographs were on display as was the Norwegian national dress that she wore as a child. Copies of the book *Another Man's Shoes*, which detailed Sven's epic journey were available and proved popular. This was an excellent talk given by a very experienced presenter.

John Belt

BANNERS BRIGHT **Ned Williams (5112108)**

Ned is a previous speaker to WIALHS and this time we welcomed him back for a colourful survey of banners - trade union banners, Sunday School banners and Co-op banners, including scenes at Warrington Walking Day and Durham Miners Gala. Ned's interest in banners was inspired by John Gorman's book, *"Banner Bright"* which provided the catalyst for "collecting" banners (photographs, of them – not the real thing).

His presentation began with early images of processions and of posed group photos of "us and our banner" – Ned identified this need for "group identity" as the reason why these slightly strange photographs were originally taken.

But Ned also showed that the world of banners encompasses far more than chapels

and Sunday Schools – banners were used by the trade union movement, women's organisations (suffragettes, Co-op Women's Guild, The WI and the Townswomen's Guild), churches, chapels and Sunday Schools, Friendly Societies and Co-operative Societies. And they were not just a British phenomenon – as indicated by images of banners from many other parts of the world.

Many banners were "home made", by members of a congregation for example, but the more ornate examples, such as Union banners, were made by professional banner manufacturers. Examples of these were preserved in many unlikely places, and were sometimes in very poor condition – costing thousands of pounds to restore.

The most important month in the year for a banner enthusiast is July when three events follow each other in quick succession: Warrington Walking Day, the Durham Miners' Gala, and the Tolpuddle Rally. Ned showed images from all these events – the enthusiasm of those involved indicating that "us and our banner" is still an important thing in many peoples' lives.

Glyn Thomas

UNCOVERING A HIDDEN LANDSCAPE **Adam Mindykowski (911109)**

After briefly outlining the project on which this presentation was based, describing its aims and its funding, Adam gave us a fascinating and entertainingly delivered overview of the findings of his work to date, using "ordinary" maps of the Wyre Forest area and actual results of this exciting new survey technique. Despite the technical nature of the work I felt that the presentation

was pitched at exactly the correct level for our meeting.

Airborne LIDAR (Light Detection And Ranging) measures the height of the ground surface and other features in large areas of landscape with a resolution and accuracy hitherto unavailable, except through labour-intensive field survey or photogrammetry. It provides, for the first time, highly detailed and accurate models of the land surface allowing even quite small features, such as sunken trackways to be seen.

Lidar operates by using a pulsed laser beam which is scanned from side to side as an aircraft flies over the survey area, measuring between 20,000 to 100,000 points per second to build an accurate, high resolution model of the ground and the features upon it.

Where the technique becomes especially intriguing is in its ability to show the ground surface even in landscape which is completely covered in forest. It does this by picking up the very faint secondary signals from those laser pulses which penetrate the tree canopy and are reflected from the ground below. In this way Adam was able to show two aerial views of the same landscape, firstly with the tree canopy "in place" and then as if all the vegetation had been stripped away to reveal the features masked by the trees.

This provided a fascinating first slide of the whole forest area which, when the trees were "removed", revealed a complex underlying landscape of hills, streams and valleys.

Adam went on to highlight a number of specific areas of interest on the forest which he had recorded, showing features such as possible house platforms, enclosures and the trackways connecting them, and even areas of mining (including what he suggested were early bell-pits).



This Lidar image of the Wyre Forest shows ground contours hidden below the tree canopy

Much work remains to be done in actually finding and surveying these features on the ground, to check that they actually exist and are not false images caused by other factors. This will be a long-term aim and Adam pointed out that he was looking for volunteers to help him with this work by going "hunting" in the forest itself. Anyone "game" ?

Glyn Thomas

MOTHER OF PEARL

George Hook (6/2/09)

This talk was unfortunately cancelled due to bad weather, but it will be re-scheduled for next season if possible.

**WIALHS AGM
(13/3/09)****Chairman's Report for 2009 AGM**

You may have heard rumours of a recession and terms like credit crunch etc - WIALHS is not joining in and I advise you not to associate with negative people - they will only make you depressed - remember, smiling makes you happy!

The Committee is very aware of the rising cost of living and I think you will agree that our Summer Programme is very good value for money. The visits to Morgan Motors and Madresfield Court are £10.00 each, but as they are near home there are very small travel costs and you may wish to take a picnic.

The Hereford visit is only £10.00 for the day out and the visit to Bristol is only £6.00 each. Other Societies have much more expensive outings and I hope that you will all be able to support the events we have arranged for you.

Highlights of the Summer are the Henley to Maidenhead River Cruise, the Birmingham Outer Circle tour and the Gloucester Ship Canal and Purton Wrecks visit.

Many thanks to Mike Wall for acting as returning officer in the recent election for President. 115 members completed nomination papers and I announce that there will be no change in our President. Congratulations Roger - and thank you Len Holder and Malcolm Nixon for also standing.

The Society is successful because we have the support of the members. The Committee work extremely hard to make the wheels run

smoothly and we always have room for anyone who would like to join us in helping to run the Society - you will not be asked to become Chairman overnight or to start organising the Summer or Winter Programmes immediately but you might find it interesting to see from the inside how we keep the wheels oiled.

We are hosting the SW Region Industrial Archaeology Conference again this year and will need volunteers on the day for various duties - please contact me if you are willing to help in any capacity at all - my phone number is in the Journal and in the information you have or will soon have in the post.

I have many people to thank. Our President, Roger Tapping for his continuing support and help in all matters. Our Secretary, David Attwood for always being present at Committee meetings and circulating the minutes and other information. Our Treasurer, David Sharman who has kept our accounts in order for 11 years; Len Holder for organising such an excellent Winter Programme for ages and ages and for also attending many local history fairs, conferences etc. and promoting the Society. Our Membership Secretary Jacky Hollis for chasing up members new and old. Our Journal Editor Glyn Thomas for doing such an excellent job. John Belt for taking notes at our Winter Programme meetings, Sue Bradley for acting as our Publicity Officer and the other Committee members for their continuing wisdom and support. We also need to thank John Merrick for examining our accounts each year.

Industrial Archaeology is a very wide subject and I was recently reading an obituary of Thomas Coughtrie. I was impressed that he installed the 1,000 ton Whale floating pontoons for the Mulberry Harbours in Normandy in 1944, but much

more impressed that he was the inventor of the Mole Wrench which was patented in 1955 when he was the managing Director of M.K.Mole & Son of Birmingham.

Thank you for your continued support and I look forward to enjoying the Summer Programme with you.

Christine Silvester

President's Report for 2009 AGM

Welcome to you all, it is very good to have such a good turnout at our AGM.

My initial notes have had to be altered in the light of the result of the ballot for President and I am delighted with your vote of confidence and thanks to all of you who took the trouble to vote. I believe there were 136 replies. Collective thanks go to Mike Wall for his role as "Returning Officer" and to both Len Holder and Malcolm Nixon for agreeing to stand in the election.

Our programme of Winter speakers started with the shock news that Richard Burt, our link with the school for so many years, was no longer working there. He had always been responsible for opening and closing the lecture theatre and all the associated security.

In his absence we met with the estate manager and after this meeting the school offered us a set of keys and security codes to deal with access on our own. The new system is **working** well but we need to continue to advise the IT contact, Richard Powell, of our visits to ensure that all the equipment is ready for our use and that if needed he has put the heating on.

One of our unsung heroes at Winter meetings is Peter Wheatley who oversees the technical requirements of projectors, laptops, microphones, lights etc. using quite a

complicated set of controls at the front of the lecture theatre. Peter and his wife Jan have informed us of their decision to step down from the Society at the end of this season and we therefore need someone to take on that role. If we have a gifted technician amongst us please let us know. Our sincere thanks go to Peter and Jan for many years of valuable support. Peter was also membership secretary and Jan the proper secretary for a number of years. In gratitude the Committee would like to offer both Honorary Life Membership.

You will have seen the results of the change of editor of the Journal. As I predicted Glyn is doing a very professional job but as ever his plea for material remains constant. He cannot continue to maintain this high standard without your help.

This year on May 16th we again host the South West Regional Conference of Societies affiliated to the Association of Industrial Archaeology. We will need your help, a few of you to assist on the day but the majority with your support and attendance on the day. We struggle with the term Conference, as it appears a little heavy and dull. The day consists of a series of six short talks, presented by a speaker from one of the visiting Societies. Between morning and afternoon sessions we will have a long lunch break, which will give us an opportunity to visit a number of trade and Society stands. After the Conference has ended there will be the opportunity to join one of three site visits. Consider the event to be like having a whole season of Winter speakers on one day, with lunch thrown in! The venue is superb having an excellent lecture theatre plus, of course, the renowned medical museum, which will also be open. We need to show all the other Societies that we can put on a good show and that our members are fully supportive.

The year 2008 was the final one for me producing the Summer Programme. I have thoroughly enjoyed it and we have had some memorable visits both locally and further afield where we travelled by coach. In the later years we ventured even further out and had weekends away with a full programme events based around the area visited.

It is time now for a change of direction and the programme for the current year has been produced mainly by our Chairman, Christine. It looks excellent and only needs your support to make it all worthwhile.

Finally I must blow a big trumpet for some of our Society members who have been involved in a big way with the current restoration of the Droitwich Canals to full navigation standards throughout their length from Hanbury to the River Severn. Originally, nearly 50 years ago, Max Sinclair was the driving and inspirational force behind the scheme and he is still very heavily involved to this day. During the last 2 years myself, Mike Hayzelden, John Drury have been involved with heritage recording of all the remaining structures on the canal. Malcolm Nixon has been recording on tape, on behalf of BWB, the memories of people associated in any way with canal and has produced a "mind map" of those memories. The team involved in the heritage recording (Mike, John and myself) were nominated for an award by BWB and were successful in winning their Central Region award for use of volunteer labour. The presentation of that award will be made at the Regional Conference and one of the six talks will be by David Viner, BWB project manager for the restoration.

Thank you all once again for your continued support.

Roger Tapping

Treasurer's Annual Report for the year ended 31 December 2008

Introducing his report, David Sharman summarised the balance sheet in his normal thorough way. In response to the current economic downturn he was glad to announce no increase to membership subscriptions - for no other reason than the paperwork of changing 100 Standing Orders was just too daunting!

The Headlines

- The Treasurer thanked all those members who pay by Standing Order.
- Membership numbers have fallen slightly but this fall does not cause the committee any significant concern.
- Day Visitors numbers have been lower this year.
- The Bill Gwilliam Fund includes some sales of the Metal Box book and I A Trail leaflets. However, as there is little prospect of future sales the remaining stocks of both the book and the leaflet have been written off at the end of the year. This is included as expenditure. A copy of the Industrial Trail leaflet will be given to all participants at the forthcoming Regional Conference organised by this Society. Any future sales of the Book or the Leaflet will be shown as income in subsequent accounts.
- Winter and Summer Programmes were well supported and we had an extremely successful visit to Cambridge organised through our members, Hugh and Jenny Field.
- Roger Tapping retires as Summer Programme Secretary and the Treasurer thanked him for presenting things so clearly and making the book keeping part of these visits so straightforward.
- *.The Society's reserves remain more than adequate to meet any unforeseen commitments.

The full statement of accounts is reproduced at the end of the Journal as it does not fit the column format here - Ed

Following the formal AGM business, a short talk was given by the Hon Auriol Pakington on the history of the Pakington family and their association with Westwood House, Droitwich, which we visited last summer.

INDUSTRY OF THE LOWER SWANSEA VALLEY

Glyn Thomas

In the last edition I threatened to write something about the Swansea area, which WIALHS visited in September. The area is somewhere I return to quite often - my ancestral home is in Ystradgynlais, a few miles up the valley. [Ed]

Coal: Mining of coal outcrops in the Swansea Valley began in the C 14th and by the C 16th coal was being exported to Devon, Cornwall and Ireland. Industry was first attracted to the area in the C 18th by the superior quality of the coal and its accessibility – the exploitation of the valley began!

Copper: the first copper smelter at Lane's Llangyfelach Works was established at Landore in 1717, although others had been located nearby since the C 16th. The smelting process at this time used 18 tons of coal to smelt 13 tons of ore – producing 1 ton of copper, hence the attraction of readily available coal! Transport was facilitated by the presence of the River Tawe, which allowed ore-carrying ships to discharge directly at the smelters.

Other copper works were established over time, notably the White Rock works at Pentrechwyth in 1736 – which continued to operate for over 150 years. By 1800, nine copper smelters were in production in the valley and in 1810 a new and far larger works was established at Hafod by the Vivian family. These works also produced many other metals present in the copper ore – including cobalt, nickel, lead, arsenic and even silver and gold. Sulphur from the copper ore was used to make sulphuric acid – to add yet further to the toxic combination of industries concentrated in this single valley. At their peak, around 1860, Swansea's smelters were processing two-thirds of the total UK import of copper ore.

The Vivian and Morris families became rich on the proceeds, building themselves fine houses to the West (note - up wind) of the valley, and even naming settlements for their workers (Morriston – and "Morris Castle" which WIALHS visited last summer).

Zinc: The first recorded smelting of zinc was in 1757 but the industry did not 'take off' until a decline in the copper industry meant that the valley's resources and skills were diverted to a new industry. Manufacture of rolled zinc and zinc alloys was followed in 1837 by the development of a process for coating iron sheets with zinc. Widespread use of "galvanised iron" dramatically increased the demand for zinc. Some copper work were converted to the new industry and new zinc works were also established along the valley, until Swansea was producing 20% of the national zinc output.

Both industries began to decline in the late 1800s as new manufacturing processes were developed elsewhere – but not taken up by the Welsh owners, who stuck to their well-tried methods.

Tinplate: The production of iron coated with tin began in the valley in 1845 and ten further works were soon established. As copper and zinc declined, so tinplate production expanded, until by 1913 there were 106 "mills". But once again decline set in as the Swansea valley industrialists refused to adopt new technology from the USA.

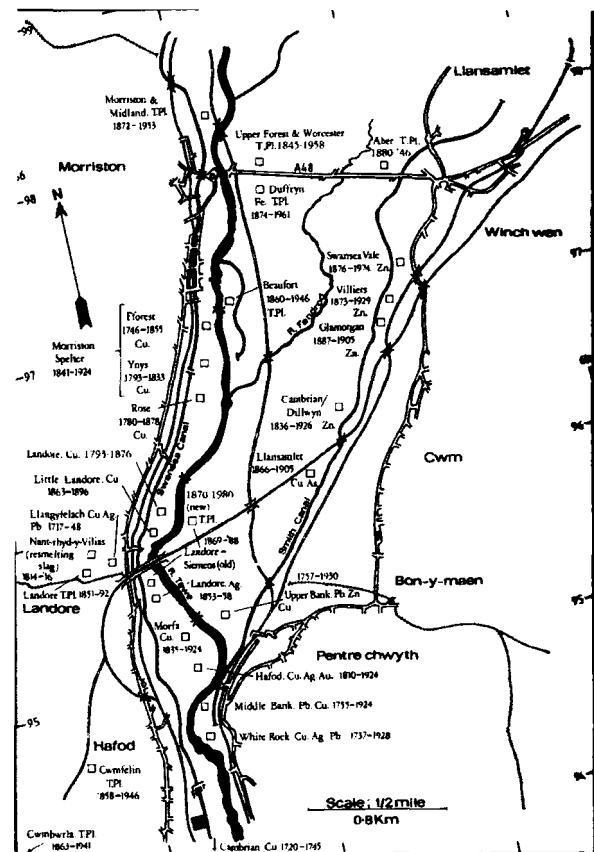
Steel: A steel works was established by Siemens at Landore in 1869 and by 1873 the expanded works was producing 1000 tonnes of steel per week and had become the fourth largest producer in the world. Competition from even larger works made the Swansea site uneconomic however and the company went out of business in 1888, although the site was then taken over and steel tube production was started, continuing until closure of the works in 1960.

Social Conditions: As the industries grew, the population of Swansea rose rapidly and overcrowded communities became established in the vicinity of the works. As might be expected, working conditions and living conditions were horrendous and epidemics of cholera, smallpox and typhus swept the valley in the late 1800s. While industry prospered, the people and the landscape were ravaged alike.

The Legacy: Prior to the arrival of industry in the early 1700s, the village of Swansea had consisted of some 300 houses. By 1883 the city's population was over 70,000.

Within 150 years the formerly rural valley had been transformed out of all recognition by air and water pollution from smelting, dumping of waste and slag in huge tips, and by the sheer number of people.

In 1848 Charles Cliffe wrote that "*on a clear day the smoke of Swansea may be seen at a distance of 40 to 50 miles*".



Location of industries in the Lower Swansea Valley, dates of operation and material produced

In 1897 a local rhyme went -

*It came to pass in days of yore
The devil chanced upon Landore
Quoth he, by all this fume and stink
I can't be far from home, I think.*

The decline of the industries in the valley left a barren "moonscape" of waste, containing highly toxic residues. The White Rock works tip alone, formed by 200 years of dumping, contained over 300,000 tonnes of waste in an enormous mound visible from most parts of the lower valley – and located only yards from some of the workers

housing! This scene was replicated along the valley, with tips of different hues produced by the various industries – orange from copper waste, black from lead and zinc waste and so on. It was estimated that well over 7 million tonnes of waste were left after the valley's industries closed.



White Rock Works 1962

Beneath the tips, further pollution was taking place as toxic materials leached into the ground after rain, flowing into the River Tawe and Swansea Bay and adding to the vast amounts of toxic material discharged directly from the works into the river over hundreds of years.

As works closed, their buildings were abandoned and fell into decay and in many cases the owners could not be traced – leaving nobody who could be held responsible for clearing the dereliction and pollution. It is said that many travellers, approaching Swansea for the first time on the London train as it passed through the lower valley, looked out over the landscape and simply returned to London without leaving the station.

By the time I knew the valley, visiting grandparents as a child in the late 1950s, the area was being described as “the most

concentrated and uninterrupted area of industrial dereliction in Britain”.

Fifty years on, after decades of effort to remove the waste and regenerate the land through measures such as the Lower Swansea Valley Project, the recovery of the environment is remarkable and the valley is once again becoming “a green and pleasant land.”

The new rugby stadium, B&Q, McDonalds, and other modern out of town “sheds” now cover most of the old works and only a few industrial remains now survive as a reminder of the past. Maybe you will look at the valley differently if WIALHS pass that way again!

Glyn Thomas

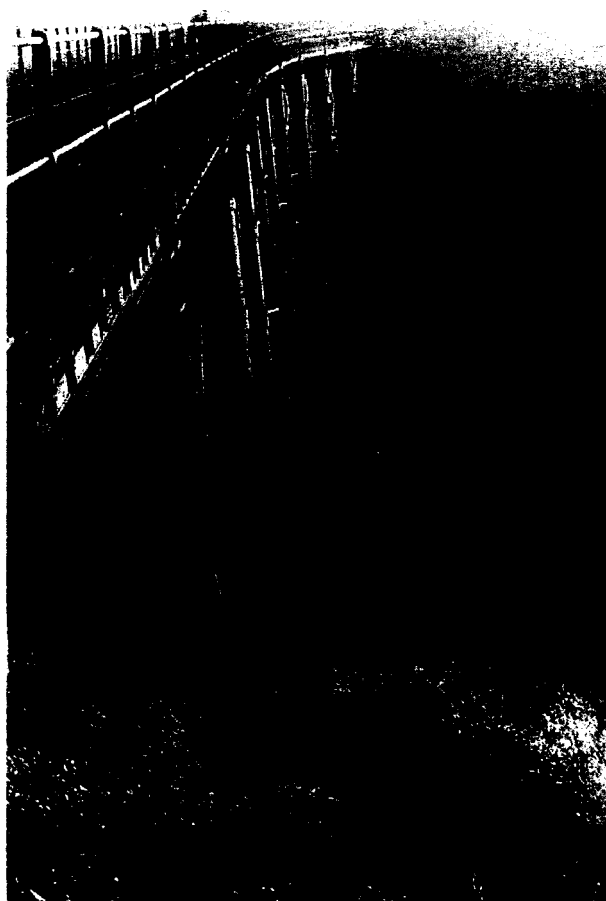
DOWERY DELL VIADUCT (reprise)

Ian Hayes

Ian Hayes has kindly submitted this note as a follow-up to my article in the last edition [Ed]

I am very pleased that someone else has discovered the fascination of Dowery Dell.

Many years ago it was the custom of our YHA Local Group, in the period before Christmas, to walk from Frankley Beeches over towards Romsley, possibly calling at the Manchester or Fighting Cocks, then back via Dowery Dell viaduct. There was a perfectly good footbridge over the stream, but the viaduct was more of a challenge.



*Keith Christie on the viaduct, late afternoon
December*

The workmans trains from Longbridge to Halesowen were worked by the Great Western, generally using a pannier tank and a variety of ancient rolling stock. In later years the commuting Austin employees are reputed to have made a habit of travelling without tickets, making egress from Halesowen station via the fence. As a result, although trains were quite well patronised, when receipts were examined there was no hesitation in withdrawing the service. This was way before the time of Dr Beeching. Freight was generally worked by the Midland/LMS.

Matthew Kirtley is believed to have driven the first train from London to Birmingham. He was shed master at Hampton in Arden,

an important junction in the 1830s. He became Chief Mechanical Engineer of the Midland Railway and in 1868 produced what was, in effect, a standard freight locomotive. It was double framed, which means to the uninitiated that the driving wheels were largely out of view. It weighed just over 37 tons.

Because of the weight restriction on Dowery Dell viaduct only very light locomotives could be employed and so a small stud of "Kirtley 2Fs" remained at Bournville shed until they were 80 years old. They were fabulous looking machines and the last one survived until 1951. As a teenager I remember looking at one and realising that I was seeing a direct link with the earliest days of railways.

I only travelled over the line once, on the valedictory run by the SLS on 2 November 1963.

Ian Hayes

TENBURY WELLS PUMP ROOMS

I am grateful to Ian Chell for his permission to publish the following extract from the website www.teme-valley.co.uk. This site contains much interesting information on the area – more anon.

Also, and purely by coincidence, I found one of John Mason's splendid drawings in the "Journal File" bequeathed to me on taking on this job – so I must again thank John for his permission to use it as a cover. [Ed]



The above picture shows the Pump Rooms, as laid out in their heyday with timber cladding and a single-storey attendant's cottage. Various accommodation was provided for visitors and the streets were paved so that they could promenade and keep clean. Unfortunately, the expected influx of visitors never took place and it has had a struggle to survive.

The Tenbury Spa

The name spa used for resorts at Saline springs comes from the town 'Spa' in Belgium in the 16th century. In the medieval period the Spas in England were in the form of Shrines to Pilgrims e.g. at Walsingham pilgrims had two holy wells associated with

the Virgin Mary. This all finished at the Reformation. Curative powers were then attributed to certain chemicals in the water rather than faith. Resorts such as Buxton and Bath flourished in the 17th century.

In the 18th century hundreds of new springs were discovered and promoted with some of the holy wells being refurbished. Spas copied the plan at Bath where associated with the waters were pump rooms, promenade and a formal setting. The visit of Queen Anne in 1702 to Bath set the scene.

A.B. Granville had a lot to do with the coming of the Spa of Tenbury. In 1837 he had written a book on The Spas in Germany which aroused much interest and in 1839/1840 he undertook a tour of England and in the Midlands section he toured Buxton, Matlock, Woodhall Spa, Ashby-de-la-Zouch, Tenbury, Malvern, Leamington, Cheltenham etc

The Mineral Springs

The first spring in Tenbury was discovered in 1839 when the landowner, Mr. S. H. Godson was searching for a better drinking water supply and dug down into the brine mineral water layer.

Grenville visited the well in 1839 and advised on modifications to the well structure in order to seal it from land springs which would dilute the mineral water. He also sampled the water and took temperature readings and analysed it for its chemical content. He found the water contained Iodine and so could uphold the water's claim to have healing properties.

In Grenville's opinion the town needed 'baths pump rooms and a promenade, lodging houses, walks roads and other accommodation in order to constitute a Spa of the first class'. Septimus Godson could

not manage to convert his land at The Court due to public opposition, so Granville explored the area for suitable locations. He sent his son, an architect, who was also familiar with Spas to survey the site and check out the desired improvements. No further action was taken at the time except to employ bands to entertain the visitors to the Spa. A small red brick bath house was constructed in 1840, but this was deemed unsuitable by Grenville.

Mr. Price of the adjacent Crown Inn decided that one well was not enough to supply the amount of bottled water needed. He commenced sinking a well on his premises and on August 24th 1840 at a depth of 42ft he reached the mineral water layer. This opposition was soon bought out by Septimus Godson.

The Rev. Hall, Vicar of Tenbury, had sent a concentrated sample of the Tenbury Water to Dr. Daubney for analysis. It doesn't seem a very scientific method of analysis as the water was left standing around for some time and it had been concentrated.

With the opinion of Dr. Grenville, Dr. Daubney and others they decided to open the well having built a small brick bath house next to the stables of the court.

They held a public meeting with Dr. Davies of Presteigne in the chair, at which they decided on a scale of charges. Septimus Godson, the owner of the well, gave the first years profits towards building the west gallery of the Church. This was badly needed as all available seating was owned by the gentry and there were no free seats in the Church.

In March 1841 they published the rules and regulations for using the well. They were now using the grounds of The Court to promenade in after drinking the water or

bathing in the minerals. A band was in attendance in The Court grounds, which was amongst the ideas put forward by Dr. Grenville.

By the 1850's a surgeon from London, Mr. Hall had been appointed to run the Tenbury Spa. The Spa had two wells now with the one found on The Crown Inn premises. Things didn't seem to go very well with Mr. Hall as the following extracts show.

There is a letter from Mr. Hall pleading with Mr. Godson to let Mr. Hall have some money as he was destitute. They had made a disastrous move from Highgate. There is also, a letter from Mr. Harris to Mr. Godson re, Mr. Hall: " whose conduct has been most infamous towards me and others in this Town and now write to you to know what steps you would advise to enable us to punish him as much as possible. We are aware of Mr. Hall's private residence; furnished with furniture removed from Tenbury and we have the detective police on alert....

The Baths were closed for a while from 1855 after Mr. Hall's failure to make the Spa profitable.

The railway was coming to Tenbury and business men of Tenbury led by Mr. Norris thought that it would be a good time to resurrect the baths so that the public could use the railway to get to the healing waters. With this in mind the 'Tenbury Wells Improvement Company' was formed in December of 1860 with a sole aim of building a pump room.

At first the favoured site was on a meadow opposite the Swan Hotel after the sites of Mr. Raggatts in Berrington Road and Mr. Tranters of Berrington house had been turned down. In fact by January 1861 the Company made great play of the first sod of

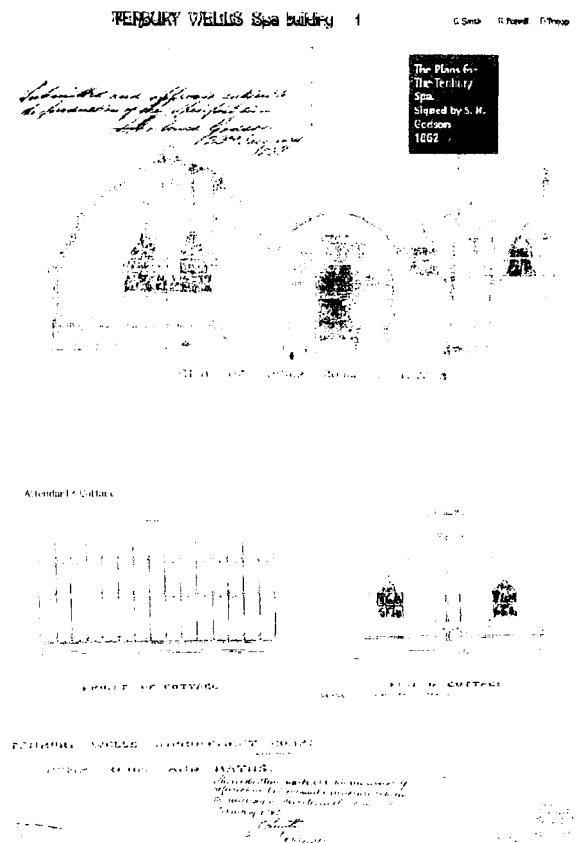
the well in the Swan Meadow, with the Tenbury Volunteers playing a big part in the ceremonies. Presumably they wanted to ensure that there was mineral water at the site before building baths, promenades, etc.

It is not known what decided them to build the Spa on the Crown site rather than the Swan site. It is probable that the reason was that the Crown site had proven mineral water, it having been analysed. The site was now owned by S. H. Godson, the leader in the search for a site. At any rate the main aim of the Tenbury Wells Improvement Company was to come to fruition. That was in following Grenville's guidelines by building baths, pump rooms, promenades, hotels, boarding house and walks.

The Tenbury Wells Improvement Company took a 99 year lease on the site behind the Crown. Mr. Thomas Morris, well sinker, was instructed to remove the whole of the bricks, curls and ironwork from the old mineral well by the Swan Inn and covey the same to the garden adjoining the Crown Inn and use the same in or about the enlargement and completion of the new well. The old well, at the Crown was thoroughly cleaned and sunk deeper with a reservoir at the bottom and it was 'steined' so that fresh water might not enter i.e., a wall of tiles was made in the well. The design of the pump rooms was put out to contract.

In 1862 Mr. James Cranston of Birmingham was given a contract to design a new Spa building with Mr. Smith of Tenbury doing the building, the building to cost approximately £1000. The Spa consisted of 2 halls with a Pump Room (32ft x 20ft) with a recess in which a handsome fountain is placed. On the other side of the halls were bathrooms and an attendant's cottage. An octagonal tower was built containing the well and pumps. The whole was surrounded by pleasure grounds. The Well was 58ft

from the surface and produced mineral water at the rate of 20 gallons hour. The smell was said to be something like when a gun was discharged.



These are copies of the original drawing made for the construction of the pump rooms. G Smith of Tenbury was chosen as the builder after his price of £945 was accepted.

James Cranston was already the architect for the Round Market, The Corn Exchange and the National School and so his work was known to the Improvement Company. He got the idea for the design of the Spa from some greenhouses he was designing at Holmer, near Hereford. In 1862 he published a book about a newly patented design for Horticultural Buildings and he used this principle for The Tenbury Spa replacing glass panels with those of sheet steel. It was

erected on a pre-fabricated principle being one of the first in the country. The wrought iron plates and cast iron clips with foliated ends were made in Birmingham and erected on site. The building was described as being 'Chinese Gothic'. The roof was painted in French Grey with rolls between being deeper and bluer in shade. The Spa was supposed to attract the 'Middle to Working Class'.

On August 1st 1872 the Tenbury Wells Improvement Company was wound up having done its work of building the Spa.

On May 1st 1883 the baths opened for the summer season. Six hot baths cost 9/- (45p) and six cold baths 5/- (25p). The attendant at the baths was Mrs. Griffin. In May 1886 Mrs. Griffin with her son and daughter were trapped in the attendant's cottage in the disastrous flood. They had to stand on chairs which were placed on the beds of the single storey cottage. They hung there for nearly 24 hours before being rescued by a rowing boat which managed to come in by the Crown Yard.

Various improvements were made to the accommodation in the town with the Crown having a large boarding house and hotel built on the side (1883), extensions were made to the Swan Hotel (1886) when it was said that the baths had proper accommodation for the first time since it was opened. Just House in Berrington Road was bought in 1889 as a boarding house for the use of visitors to the Spa.

During the first World War an article in The Medical Times (1916) suggested that Tenbury, because of its Spa and the purity of its air, ought to be a centre for Convalescents Homes for wounded and debilitated soldiers. Tenbury had been gradually changing its name from Tenbury to Tenbury Wells and it looked official when the railway changed the name plate in 1913. However it is far from

clear that Tenbury officially changed its name with the agreement of the County.

Between the wars the Pump Rooms gradually went into decline. During the Second World War it was used as a gas cleaning station and many war time evacuees bathed there on a regular basis. The building had a variety of uses after the war but none of them using saline water.

In 1945 the building was bought by the Wolverhampton and Dudley Brewery, the owners of the Crown Hotel, with the intention of renovating the building.



The Pump Rooms as they appeared around 1980. They were gradually decaying. The 'new' (1890) attendant's cottage can be seen on the right, which replaced the cottage looking similar to the rest

In 1986 it was purchased by Leominster District Council and the exterior restored to its original condition.

Final Note

The Pump Rooms were totally refurbished in 1998/19 with funding from various sources, including English Heritage, Advantage West Midlands, the European Regional Development Fund, Malvern Hills and Leominster District Councils and Teme Rural Challenge.

The major problem that the architects responsible for the repair had to deal with was a major sag of one of the portal frames over the conservatory glass. It appears to have been due to bad design. Each roof structure now has a steel member going down to a concrete block cast at foundation level. There was also a big problem with regalanising the wrought iron sheets. After being regalanised they buckled and would not fit the structure. This was solved by sending the sheets to specialist car body firm in the Medway who were used to dealing with very thin steel.

Another big problem was to ensure that the roof was watertight. The roof was an extremely complicated shape; there were valleys and areas of flat roof and all sorts of unusual angles between one part of the building and another. It never was watertight originally, but hopefully, all the problems have now been solved. All the wrought iron sheets now have spaces between them to try and stop any rust problems recurring and it has been fully insulated.

A lot of the brick work was only 1/2 brick thick and so would always have been rather wobbly. This has all been straightened, but still keeping the exterior as it was built in 1862. It was probably originally designed for a life of only 25 years, but has lasted 137 years.

This latest refurbishment has brought the building up to modern day standards. It is now has insulation, damp barriers are in place and it is weatherproofed. The Pump Rooms are now in the hands of the council and births, deaths marriages, council tax etc are registered there. There is also some use for exhibitions.

DROITWICH BARGE CANAL BRINDLEY SPILL WEIR

Mike has kindly given permission to publish his report on the survey which he carried out on the Droitwich Barge Canal - Ed

Brief History

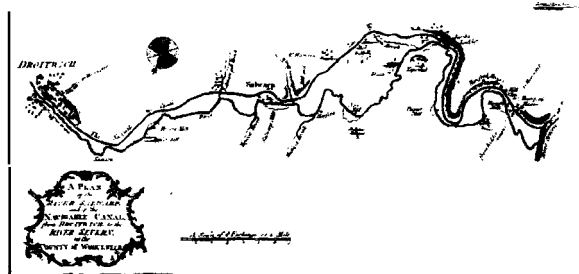
The Droitwich Barge Canal is one of the oldest canals in Britain. Begun by James Brindley, the canal pioneer, in about 1767, in order to allow Severn trows to navigate up to Droitwich. Droitwich was still then the premier brine and salt producing town in Britain and had need for the better exporting of salt around the country as the industry expanded.

In 1695 the town burgesses lost their monopoly of owning and controlling the brine pits and hence the production and cost of salt. In the late 17th Century and early 18th Century new wells were sunk and later in the 18th Century steam engines were introduced to increase production. By the late 1700's the new pit owners, jointly, could now fund a canal route to the Severn and had a need to export ever larger quantities of salt.

Salt was also heavily taxed and from these records we know that Droitwich, in 1772, was the principal source as one third of that years tax originated from Droitwich salt. It was in the previous year, on March 17th 1771 that the canal was opened to the Severn.

James Brindley employed Robert Whitworth as his assistant in surveying and laying out the canal and James Priddy as the resident engineer, supervising the day-to-day construction. This was not without its problems, particularly from the workforce;

as this was all built by hand labour, without the benefit machinery, with the new 'navigators' or navies. Brick and local sandstone were used for the construction of features, bridges, locks and weirs, and it is recorded that in 1770 that the bricklayers went on strike because "thy will not pay for wat we work".



Much of the heavier materials appear to have been transported up from the Severn along the adjacent River Salwarpe. It might have been that the River Salwarpe had already been used by the salt manufacturers in getting 'tubs' of salt down to the Severn for collection and shipment at Hawford. James Brindley's canal designs were generally of the 'contour' type that reduced the amount of cut and fill at the expense of winding routes, which in this case closely follows the course of the River Salwarpe to Droitwich.

This canal had a change in fortunes when the Worcester & Birmingham Canal opened in 1815 and had a salt wharf, just outside Droitwich, along the Saltway, towards Hanbury. Then virtually at the end of the canal boom, the Droitwich Junction Canal was opened in 1854 to carry narrow boats down into Droitwich itself and into the Droitwich Barge canal's basin. The coming of the railway, soon after, caused the demise of boat traffic, with the last commercial use of the barge canal in 1918 and the junction canal in 1920. Both canals were officially 'abandoned' in July 1939.

The canal is fed by the River Salwarpe at

Droitwich, thus unusually for canals would have a regular upstream to downstream flow. It can also be surcharged with floodwaters when the River Salwarpe is in flood in Droitwich. The flow of water in the canal is generally regulated by the lock usage, thus, at times, when traffic was light, there would be a surfeit of water in the upper canal pound. Several weirs are sited along the canal, usually at locks to prevent overtopping of the upper gates. These pass the surplus water down to the lower pound, and so on. At a few intermediate points there are weirs that redirect high levels of water to be redirected away from the canal entirely and back down to the River Salwarpe at a lower level. These are probably intended for flood surges carried into the canal higher up in Droitwich.

The recorded weir [in the attached papers] is such a weir. It is a wide sloping brick apron contained by two stone wing walls, with a culvert outlet to the River Salwarpe. It lies just [500m or so] to the north, along the canal, of the village of Salwarpe, where the canal passes, in a cutting, close to the church and churchyard. At this weir it is about mid-way between the Droitwich basin and the first lock downstream at Ladywood. Whilst it is only 4m to 5m above the River Salwarpe and fairly close (50m) at this point this would undoubtedly be more than sufficient to discharge and surplus flood waters arising from upstream, in Droitwich, where the canal and River Salwarpe are at the same level.

When I first visited the site in the spring [2007] the water level was at least 250mm below the top of the weir, but for much of the summer the level was down 650mm or more. Although the weir has been leaking it probably would not be sufficient to seriously lower the level of the canal. It would appear that the normal water levels do not overtop the weir, however, when I visited after the

July [2007] floods, the whole of the weir was covered in detritus from what must have been a fairly extensive sheet of water over the whole of the brick apron.

Immediately [250m or so] downstream of the weir is a former farm accommodation, swing bridge position, which includes, at the narrow point, vertical slots for 'stoppage boards'. These positions allowed the canal to be dammed by boards, when the canal required to be drained for work to lock gates, or in case of breaches. The spill weir, just upstream, would have allowed the water flowing in at the Droitwich end to be spilled out into the River Salwarpe without overtopping these temporary dams.

Observations on the Brindley Salwarpe spill weir

The weir we see today has evidently been the result of several rebuilds over the course of its life. Much, however, would appear to be still remaining from the Brindley's first phase of construction. The towpath was inserted after initial construction and appears to have resulted in considerable alterations to the spill wall and its relation with the edge of the canal.



Wing Walls

What we currently see are two 'wing' walls of sandstone, on the north, towpath, side of the canal, some quite massive. This focuses on a square brick walled sump leading to a 700mm diameter brick outlet culvert. This flows [or used to flow - as much of it has now collapsed] northwards to the River Salwarpe, to a headwall, visible in the riverbank, 50m away. The canal is cut in on a river embankment at this point and lies about 4m to 5m higher than the river flood terrace below and it approximately follows this contour height, level with the canal basin in Droitwich, until the lock at Ladywood. The ground rises again on the south side of the canal. The spill weir is separated now, from the canal by a towpath and a ditch, which is connected to the canal via four culverts beneath the towpath.

The top of the spill weir, as it currently exists, is at 27.625m OO based on the British Waterway's survey. The outlet at the River Salwarpe from the same survey is at 22.740m OO (for the water level), a drop of 4.875m, so it would still operate even with 2m of floodwaters across the flood plain. The invert of the culvert in the base of the sump is at 25.775m OD, by my survey, just over [the base of the culvert outlet at the river is not visible] a 3m fall.



The stone wings are approximately 19m long at a very shallow angle to the canal. That to the east is slightly longer and has a strange 9m extension parallel to the canal. The distance from the west end to the east end is just about 45m, but only 6m at its widest. A second layer of stones extends from the sump end 9.5m on the east side and 4.5m on the west side, though this looks to have lost half of its stonework. The stones either side of the sump are massive with a visible face for the largest (on the west side) of 800mm high by 2000mm long. The width is not ascertainable, being covered by the upper row, of which the largest is about 1200mm long by 350mm high and 650mm wide.

What is noticeable from the east run of upper stones is that the last sits on a much wider lower stone. A similar stone exists at the same point on the west range, hence the conjecture that the upper stones would have extended a further 4.5m. Searching the undergrowth around and in the canal side ditch I could find another 4.5m of similar sized stones, only 0.5m short of this conjectural length.

The 9m extension of the eastern wing wall is constructed differently as it built or reconstructed on brickwork as an extension of the spill wall.

Apron & Spill Wall

Funnelling down against these wing walls is a wide apron of brickwork that rises at a constant slope up to the spill wall. This is also constructed of brick, running 35m in a straight line and at a perfect constant height. It is here that much of the degradation of the structure has taken place. Most of the brick apron at the top by the spill wall has collapsed due to leaks undercutting the puddle clay on which the brick apron is laid. A length of sheet piling has been inserted

behind the spill wall, though the leak has found its way around the end of this to carve another canyon in the brick apron.

Much of the apron is made of a dark red handmade style of brick and is divided into four main portions and two gutters. Three portions are divided by two brick stretcher bond bands. The central apron is laid with its bricks on edge in a 1/3rd staggered stretcher bond parallel to the spill wall. The outer two brick aprons are similarly laid but parallel to each of the wing walls. In front of each wing wall is a 500mm wide gutter of similar laid bricks laid at right angles to the stonewalls, and slightly cambered away from the stone walls. These gutters extend each side across these three aprons.

The final part of the apron runs, or used to run, across the full width of the weir at the edge of spill wall and up against the wing walls beyond the end of the gutters. This was similarly laid in edge on stretcher bond but at right angles to the spill wall. This has created a stepped and staggered junction with the brickwork of the aprons meeting it at an awkward angle. The soft bricks are cut and shaped as fillet bricks and where abutting at an angle. This portion also manages the change in slope from that of the main apron to level brickwork abutting the spill wall. This convex curve would have been most liable to weathering as joints would necessarily be more open and exposed than on a flat slope. Much of this part of the apron is now missing and has collapsed through undercutting.

The Spill Wall

This is also in brick and abuts the ditch which is connected to the canal through the culverts under the towpath. The bricks used here are machine made, larger [230mm, 110mm, 77mm] an archetypal 'brick red' and impressed with the name "Cafferata". The

main part of the 9" [230mm] wall to below water level is in English bond [row of stretchers; row of headers] with the top of the weir wall with the same brick on-edge. Some of this coping is missing and a few of the main wall bricks but only at the ends. The bricks are mortared with a soft, possibly hydraulic lime based mortar.

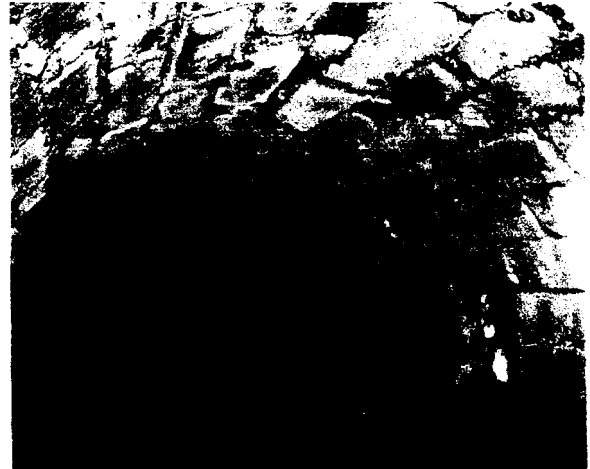
Beyond the eastern end of this wall the line of this wall continues but acts only as a base for sandstones similar to the wing walls. These brick, though not readily accessible are dissimilar to the 'Cafferata' and appear to be of a handmade style of brick and either without mortar or it has eroded so as not to be visible, though again it may have been some form of clay/lime caulking.

The culverts that feed the ditch from below the towpath were not extensively surveyed as were generally under water. They are however, where visible, built in a heavily cement mortared gauged brickwork [uncut bricks with wedges of mortar to create the curves] arches. This modern mortared work might be the result of more recent repairs to maintain the integrity of the towpath. The towpath has remained as a footpath even though the canal itself was derelict for many decades. It might be instructive to gain evidence of the type of brick and type of construction of these culverts below the towpath.

The Sump & Outlet Culvert

The rectangular sump appears on first inspection to be entirely rebuilt in modern blue engineering bricks and cement mortar. It undoubtedly follows the original pattern as the base of the sump appears to be a single large sandstone block, upon which it stands. The lower courses may also be in original culvert [shaped] brickwork, but again a constant flow of water precluded close inspection. The top courses appear repaired

in gauged brickwork. An area of brickwork apron around the sump has also been re-laid, using original bricks in the main, but adjacent lengths of both gutters have been re-laid in 'modern' mortared blue bricks or mortared original bricks.



The outlet of the sump is carefully constructed with massive stone blocks, tightly fitting capping blocks and overlapping upper blocks. Within the outlet is a 700mm inner diameter cut brick culvert. As this is capped by a lintel stone before the two ever wider stones of the upper two courses of stone. This culvert must have been constructed between the two side stones, prior to the upper stones being laid. The culvert runs for about 10m to 12m to where it has partially collapsed. Beyond this again it extends towards the River Salwarpe, but reportedly has collapsed, presumably where the field has boggy spots.

The bricks forming the culvert are an early brick, not dissimilar from those on the apron, but fired in a slight wedge shape. These run stretcher bond along the length of the culvert except at the waist level where, on each side are a course of headers, the ends of bricks sticking out as a waistband. The top of the culvert has a fillet cut culvert brick to complete the arch absent from the base half.

Early Bricks

Much of the apron is made of a dark red [from local clays] handmade style of brick [average size 230mm, 105mm, 70mm] probably created locally in clamps. These are not dissimilar from 17th century bricks in local houses, when it was common in these clay areas to clamp firebricks from the clay excavated from the house site, or from very close by.



Clay pits would be opened as and when bricks were required. The bricks are laid without any apparent mortar on a bed of puddle clay, but must have originally been caulked with clay.

Cafferata Bricks



Cafferata and Company was founded in 1850 by William Cafferata. In 1862, William purchased land and buildings at Beacon Hill, Newark, Nottinghamshire, including a newly erected gypsum and plaster mill, gypsum mines and quarries. This acquisition also included a brick works

and a boiler works, which produced some Lancashire and Cornish boilers.

Late in the 19th Century the pressed brick was developed. This used dry clay, high pressures and a different method of firing which gave a more consistent shape and a smooth, almost shiny, surface. The edges were sharp and clean. The local Nottinghamshire version of this brick is a true brick red. Curiously enough, this colour is not common.

The local "Cafferata" bricks are an example of this technique. The brickyard was producing 30,000 bricks a week. They were not especially satisfactory. Unless burnt very hard, they would retain their granular structure and could not stand up to the weather. Even so, many houses in Newark can still be seen with bricks from this period. It is interesting to note that William died on 5th September 1874, leaving his widow, Elizabeth in control of the company. Redmond Cafferata, who is said to have been a natural engineer despite a lack of formal training, took over the company in 1881. In 1897 he took a lease on an existing quarry three miles away at Hawton. Cafferata appears to be still in the gypsum mining business in 1911 when the company purchase a steam loco for the Hawton gypsum quarry, which was still listed as operating in 1935. Whether the brickworks were still in production is not clear for the boiler works part of the site (located with the brickworks) was recorded as scrapped in 1920 and the works - all or just part? - soon after. The company was eventually bought out by British Gypsum and the site is now home to the Newark Beacon.

Towpath

When the barge canal was first constructed it was without a formal towpath. The River Severn operated with boats 'bow-hauled'

from either of the adjacent banks, by teams of men, recruited on a 'casual' basis and paid for different lengths of the river, effectively a local form of employment monopoly. The River Severn must have had a 'public-right-of-way' on each side of the river, which still exists on at least one side for much of its length. The River Salwarpe might have been the same, though no such footpath now exists.

The barge canal must have first operated in a similar way, possibly with the same haulers teams. It would also have needed a similar 'right-of-way' for the haulers to operate from, possibly only on one side in order to haul the trows into Droitwich and back down to the River Severn. This may just have been some form of license from adjacent landowners. Brindley's other canals, however, relied on horse power to tow the barges and it may have been local resistance from the bow-haulers, who prevented the initial introduction of horse power. Possibly it may just have been parsimonious nature of the salt traders financing this canal; however it soon became expedient to construct a 'proper' towing path for horses.

For the weir to operate with teams of men bow-hauling trows up and down the canal they would have needed to pass across the weir or on the other bank. It seems likely that the towpath was made on the side that already had the right-of-way for the bow-haulers, i.e. across the face of the weir. As the weir was likely to be only in use or covered in water at exceptional times all that would be required would be a flat part of the apron to pass over. It would seem perfectly feasible that this could easily be provided. The top of the sloping apron is not far short of the topmost possible level for the spill weir and however shallow the rollover there would be sufficient width for an 8' to 12' flat brick apron a step or two down from the side banks.

This also raises the question of what the eastern extension is for. In my conjectural drawing of the layout prior to the towpath being built I have projected the existing wing walls to the length of the total of the existing stones on the eastern side. This leaves a narrow 8' pathway, but probably the alternative, as shown with the last 12' of this wall at right angles to edge the 'pathway' would seem much more likely. As the layout is fairly symmetrical I have shown this replicated on the west side as well. This would give a similarly wide apron of soldier course brickwork to the three sloping aprons.

Sequencing: Brindley Phase 1

The massive sandstone of the wing walls and the sump and its outlet culvert are primary first phase work. Although much of the brickwork around the sump has been rebuilt, together with part of the apron around it, the base is pinned under the side stone walls and equally the brick culvert, at least beneath the stone walls appears to be part of the initial construction.

Equally it would seem likely that much of the brick sloping apron and most of the gutters adjacent to the wing walls are of an early 17th century hand made brick, simply laid on edge and abutting, without any visible mortar. The brick is there principally to protect the puddle clay underneath from being eroded, preventing it drying out and cracking. The brickwork would need to have been sealed in some way. It is likely that there was originally some form of caulking, possibly just clay or some form of a clay-lime mix.

The banding and changes in direction of courses seems perfectly acceptable for the engineering work for the initial build. The roll-over portion of brick apron is also unmortared and indicates that the direction line (if not the location) of the spill wall is

original as the coursing is at right angles to it, including the ends of the aprons beyond the gutters. The junction line between this area of the apron and the three central areas creates a staggered junction, causing many cut and trimmed bricks, all of the original type and mostly showing no signs of being re-laid. The width of this band is quite narrow compared to the rest and results in quite a sharp convex curve.

Sequencing: Brindley(?) Phase 2

The narrowness of this top convex curved apron must have been considerably reduced when in a later phase, soon after the construction the towpath was added. Who was responsible for the engineering of this is not known and due to Brindley's workload it is unlikely to be his directly, though it may well be still under his site engineer's control, James Priddy, or even Brindley's assistant, Robert Whitworth.

The existing brickwork of the spill wall is, however, in 'Cafferata' bricks, which were not produced until late 19th Century, whereas it is presumed the towpath was created in the late 17th Century. This entire wall has thus been rebuilt; however beyond the spill wall is the unusual eastwards extension of the wing wall. This is built on a brick wall that appears to be of the original hand made bricks like the brickwork of the apron. It may well be that is an extension of the first version of this spill wall, representing the re-use of the flat apron brick, as conjectured in my 'original' plan. It may well be that a more suitable capping for this type of wall, as with this extension wall, would be long roll-edge stones, as per my sketch. This would have created a solid capping, resisting erosion of the brickwork when surplus floodwaters flowed over the weir. The whole of this wall might have been in stonework, there is no visible evidence either way unless the foundations of this wall becomes exposed at

some time and provides a clue.

The top course of the original sump 'hole' would also more likely to have had roll-edged, long capstones, seen elsewhere on canal systems and wall copings.

The only apparent reason for this extension wall is to extend the ditch to reach the last culvert, which is now beyond the end of the apron. The only probable reason for this extension is that the culverts under the towpath were laid under the original flat brick apron but ended up wider than the resultant width of the triangular brick apron. Not a mistake they made when they got to the other (west) end.

It would be instructive to see into the culverts to see the type of construction and brickwork that these are but with. These probably date from the building period of the towpath and may match the construction brickwork or the east extension wall. The visible ends at the ditch are rebuilt in cement-mortared bricks and a rough gauged brick arches. These are 20th Century, possibly after the canal was redundant as the towpath has always remained a public path.

Sequencing: 19th Rebuilding

The rebuilding of the spill wall in Cafferata bricks, from Nottingham can be dated to the end of the 19th Century or early 20th Century. To transport these from Newark (on Trent), in Nottinghamshire, relied on the infrastructure being in place to transport them and as these bricks appeared in the railway age after 1870 it is probable that they were transported by rail to Droitwich and down the canal from local stockholders. They could just have made the journey by water all the way via the Trent and Birmingham and Worcester canals, but this seems unlikely. The railways were well established by 1900 and prior to this; local

brick manufacturers would have been a more likely source for brickwork supplies. There are better bricks for this work available from Staffordshire and much used around the regions railway infrastructure from the late 19th Century. How these bricks came to be used is intriguing.

Mike Hayzelden

Footnote: The reason Mike had difficulty in working out the relationship between water height and the height of the crest wall of the weir, is that in the 1970s the canal level from Droitwich was lowered by about 12 inches. All the weirs except this one were reduced in height to facilitate this reduction in water level.

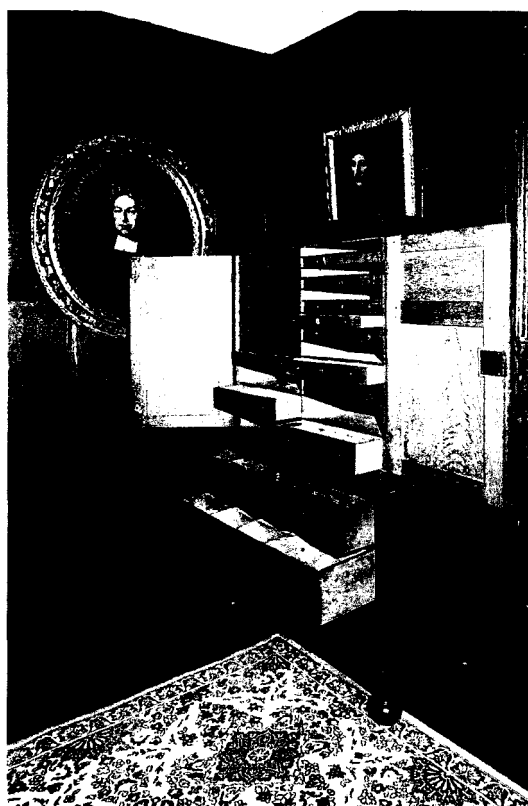
For those wishing to explore on foot to look at this weir, the easiest access is via the hamlet of Salwarpe. At the Copcut Elm junction on the A38 just south of Droitwich, turn and go down the lane to Salwarpe. There is plenty of good parking on the canal bridge. Walk through the churchyard and pick up the canal towpath towards Droitwich. You will pass the newly created reed beds on your left, the weir being only a short distance further on. Map reference is OS sheet 150 - 876623.

**VIGANI'S CABINET IN
QUEENS' COLLEGE
CAMBRIDGE**
A follow-up to the WIALHS
Cambridge Weekend

I am grateful to Hugh and Jenny Field for providing this article by Brian Callingham – which will I hope remind some members of the Cambridge visit last summer [Ed]

This article is a very brief account of the remarkable cabinet that stands in the equally remarkable President's Lodge of Queens' College, Cambridge as an aide memoire for those nearly fifty members of the Society who were able to visit the cabinet last year and as a "taster" for those who could not.

A receipt, dated Aug 8th 1704 still in the college's possession reads, "Recd ye of Mr Clopton [Poley Clopton, Bursar, Queens' College] Tenn pounds for a cabinet for ye use of Queen's College in Cambridge by me John Austin." marks the point when Professor Giovanni Viganì's collection of around seven hundred specimens, samples and curios found a proper home in Queens'.



The fact that the cabinet remains to this day in Queens', and did not follow Viganì when he was poached by Trinity College in 1705, is due to the fact that the college paid for it and for most of its contents. During his

time in Queens', Vigani had used it as a resource for the teaching of undergraduates and of the local physicians, apothecaries and pharmacists as well as interested amateurs. He also used it for research leading up to the preparation of medicaments, including examples, of which he was unwilling to describe how he made them.

It seems that Queens' largely forgot about the cabinet and it quietly settled into a gentle decline, languishing in some corner in what is now the Old Library. This would seem to be the case, except that some of the samples in the lower drawers of the cabinet have on them the name of R. Bradley. Richard Bradley was Professor of Botany who published *A course of lectures on the material medica, Ancient and Modern, read in the physics Schools at Cambridge upon the Collections of Dr Attinbrooke and Signor Vigani deposited in Catherine Hall and Queen's College, London, 1730*. Furthermore, some specimens are wrapped in newspapers from the late 18th Century. One news item describing the apprehension of an alleged French spy is both informative and amusing. Examining this section of the cabinet is reminiscent of reading the newspapers when old lino is lifted!

For many years the origins of the cabinet lay buried and largely forgotten. It was not until 1922 when Mr Peck (a distinguished local pharmacist) chanced upon it. Encouraged and helped by the President, Dr Fitzpatrick, he proved its identity and interest in the cabinet began to revive. A notable paper by Norman Evers (*Pharmaceutical Journal and Pharmacist*, March 1933, 219) describes how recognised analytical procedures were applied to samples of Balsam of Tolu, Anise Oil, Clove Oil and Oil of Turpentine.

While these samples did not quite reach the standards required by the British Pharmacopoeia of the day they were in

remarkably good condition and, as our present studies indicate, remain so. The years of slumber, when the cabinet received virtually no visitors, have proved to be of enormous importance. It is reasonably safe to assume that most of its contents have lain undisturbed for just on 300 years until now!

But what is to be seen in the cabinet? It is hard to know where to start. Perhaps the best way to demonstrate the range and variety of samples, collected by Prof. Vigani, is to provide a key to the lower drawers and to the upper drawers, the latter seen when the doors of the cabinet are opened (see opposite).

The present arrangement of the drawers in Vigani's Cabinet can be considered to be original and as laid out by Vigani himself. The drawers are divided into compartments of various dimensions with wooden partitions to suit their contents. The small drawers are labelled in the order of the alphabet, omitting "J" and "V" and complemented with "1" and "2". Although not all the labels are preserved, the various heights of the drawers make any other arrangement of the drawers impossible.

The contents are, where possible, arranged in such a way that drawers on the same level complement each other (e.g. Seeds - Seeds for drawers "C" and "D" or Minerals - Stones for Drawers "E" and "F"). The volume and size of the samples had to be considered as well as the container they were to be kept in. This is why we can find Fossils in drawer "L" (for small and flat examples) and in drawer "W" (for large specimens which would not have fit in the compartments of the complementary drawer "M"). Drawers "A" to "Z" contain open paper liners, each of which fills a compartment.

Arrangement of the drawers of the cabinet			
Empty	B	A	Gums, Resins
Seeds	D	C	Seeds
Stones, Pearls	F	E	Minerals, Gums
Gums, Resins	H	G	Beans, Peas, Seeds
Fruits	K	I	Pigments
Stones, Minerals	M	L	Fossils
Shells, Snails	O	N	Barks
Roots	Q	P	Roots
Woods, Barks	S	R	Animals
Metals	U	T	Flowers, Fruits
Plants	X	W	Fossils
Roots	Z	Y	Pills, Creams, Syrups
Oils, Balsams, Salts	2	1	Balsams, Oils
Oils, Solutions of Salts, Alcohols	La1		
Metals, Pigments, Resins, Stones	La2		
Documents, Key	La3		

The compartments are designed to fit accurately the size of the sample. This suggests that the cabinet was designed for an already known variety of samples. Drawer "Y" mainly contains egg-cup shaped glazed clay pots for the pharmaceutical mixtures as well as small paper wraps for pills. Drawers "1" and "2" contain glass bottles of two different kinds. The height and the compartment size are adjusted to the size and diameter of these bottles.

Drawer "La1" is designed to keep large glass bottles and drawer "La2" with various sizes of compartments seems to have had the function of a drawer for storage of spare materials for further supply of the small drawers.

Drawer "La3" nowadays contains the documents related to the cabinet. Its former use remains obscure. Stains from spilled liquids could indicate that it also contained bottles, but the spillage could also have happened in one of the drawers above, especially as a few broken bottles exist.

Many mysteries remain and most of the samples and specimens have not been properly investigated. Indeed, there are still quite a few which remain unidentified. A major study of the pigments and painting materials in the cabinet is being undertaken by the Institute of Fine Art Restoration in Dresden and has so far resulted in one successful PhD and another is in prospect.

*Brian Callingham
Queens' College, Cambridge*

HISTORY OF WORCESTER RUGBY CLUB

Part 2 of the article started in the last edition.

My thanks to Worcester Warriors for their permission to publish this extract from their website - <http://www.wrfc.co.uk>

In the autumn of 1945, after two preliminary meetings, it was decided to restart the club at a general meeting at the Saracen's Head. Twenty eight members were present and they stood in memory of those that did not return after the war. The club eventually found land at Claines and the first games was played in November. During that season 19 games were played, ten were won and one was drawn. A total of 53 players turned out in the club colours, hoping to perform well enough to receive a blue velvet, gold braid and gold tassel club cap. The most prominent players being G.K. Taylor (captain), J Brittlebank, J Preston, B.A. Trump, J.H. Pearson, J Russell, L.W.W. Whiteman, J.A. Willmott, D.G. McEwan, T.E. Averill and L Bache.

The club went on air for the first time in 1946 when the BBC arrived in the city. The 1948/49 season was a tragic one as sadly Peter Stockford of the Worcester Training College, died after injuring his back while playing for the 1st XV against Wolverhampton. The club launched an appeal fund and various fundraising events were held. A total of £1,800 was raised. Brighter news concerned the location of the club as the decision was made to once again move headquarters to the Old Talbot Hotel in Sidbury and the home ground to Bilford Road, sparking an increase in attendances.

A NEW BASE AT BEVERE (1950-1959)

Worcester Rugby Football Club was now settled at a home on Bilford Road and with a series of successful seasons the decision was made to try and improve the facilities and reputation. Worcester City Council was approached to install a double decker bus as a grandstand – the scheme was never authorised – before a shed was bought to serve as a players' cloakroom and shelter.

January 15, 1954 went down as important day in the club's history as it is the first time in the club's minutes that a new ground at Bevere was mentioned as a possible purchase. The official opening of the new home happened on September 5, 1956 with the ceremony performed by Surgeon Rear-Admiral L B Osborne, the then President of the RFU. A match was played against M R Steele Bodgers XV, watched by a healthy crowd of 600. Worcester rose to the occasion and won 10-5 with the game followed by a celebration dinner at the Guildhall in the city.

SWINGING SIXTIES FOR WORCESTER (1960-1969)

The club entered the swinging sixties having made great strides in regard to the playing strength and the facilities at the

clubhouse at Bevere. By 1961 Ray Shrimpton had been elected chairman and the provision of floodlighting was being discussed.

Black news greeted the club in 1965 when David Payne, joint Hon. Treasurer with Bill Richardson, reported the club was in a "very unstable position" financially. It was put down to two reasons, bar takings being down £800 and a lack of income from social events.

Membership, however, was improving and a fifth side was created and a sixth was contemplated, so that as many as possible could have a game each week. It is probably down to this playing strength that the club enjoyed two peaks in 1966/67. The 1st XV had the best season in the club's history to date with 27 victories under the leadership of Peter Baxter. They scored 470 points and conceded only 236. Bernard Blower was pack leader and did not miss a single game. In the following season the 1st XV scored more than 400 points in winning 21 matches. On Boxing Day, Kidderminster were smashed 81-3, equalling the 1921 record when the 1st XV beat Birmingham University 81-6.



1st XV 1969-70

SIXWAYS WELCOMES RUGBY IN SENSATIONAL SEVENTIES (1970-1979)

Worcester Rugby Club entered the 1970s in a strong position after the growth at the club over the last decade but the issue of a home continued to dominate much debate at the club. The club continued to play at Bevere for the early part before a move was secured to Sixways in 1975. The official opening of the new site took place on September 4, 1975 with the ribbon cut by world famous Irish international CMH Gibson MBE.

The club celebrated its centenary in 1971 and, on the field, enjoyed some early success at the start of the decade. Among the notable performers were pack leader Bernard Blower who in November 1975 hit the milestone of 25 years as a player. Dave Robins also hit a famous figure as he clocked up his 200th consecutive game on April 6, 1974 when Worcester defeated Stafford 9-6.

Worcester Rugby Club welcomed some famous faces in the latter years of the seventies with world-wide legendary entertainer Max Bygraves making an appearance to perform at Sixways in concert on February 12, 1976. Worcester also welcomed the touring New Zealand side in 1979 who they hosted to lunch in November. Bernard Blower, then club chairman, greeted NZ captain Graham Mounie with Worcester skipper Robert Lloyd.

Worcester ended the 1970s in good health with the first team even going on tour to France.

BUILDING BRIDGES TO THE OTHER SIDE OF THE OCEAN (1980-1989)

Worcester Rugby Club entered the 1980s eager to build on the growing stature of the club from the previous decade – and enjoyed great success both sides of the pond!

The club embarked on a tour to Canada and USA in May 1980. Before the tour the club received a letter from Downing Street and penned by the Prime Minister Margaret Thatcher that still proudly hangs from the wall at the entrance to the Clubhouse. She wrote: "I send my warmest good wishes to the Worcester Rugby Club on the occasion of its first tour of Canada and the United States. It is a very special occasion when a rugby club, founded more than a century ago, embarks on a major international tour in North America for the first time. I welcome the initiative which the Worcester Rugby Club has shown in arranging this tour, and I recognise that one of the best ways of promoting international understanding and goodwill is by sporting contacts of this kind. I wish the team every possible success".

Sixways was becoming the place to host big rugby tournaments with the Rediffusion Floodlight Trophy being won by Abertillery in 1980 and Moseley on 1981, with the winning trophy handed over by Bill Beaumont, the England and British Lions captain.

Worcester again bolstered international relations with the USA before the end of the decade when they entertained Fort Worth Rugby Football Club in 1986. The following season Worcester again made the trip to America and this time included a trip to Worcester in Massachusetts.

WORCESTER HIT GLORY TRAIL IN THE NINETIES (1990-1999)

Worcester Rugby Club enjoyed unprecedented success in the nineties as the club rocketed up the leagues and began its transformation into the power of the English game that it has now become.

Most crucially the decade saw the arrival of Cecil Duckworth who has driven the club

forward ever since. "I always used to watch all the internationals on TV and I first started to go to watch Worcester, who were playing the other side of the city at Bevere," said Mr Duckworth. "My then girlfriend, who is now my wife, used to join me and she knew more of the players being a Worcester girl, than I did. I built up lifetime friendships with people like Jeremy Richardson, Bernard Blower, Derek Thompson, Don Everton, Brian Wilkes, who were exceptionally good players in their day."

It was Mr Duckworth who supported the Lottery bid and paid the professional fees involved in putting forward a bid that was likely to succeed. With his guidance the club enjoyed huge success and Worcester Rugby Club changed beyond all recognition in the space of a few years. With Phil Maynard as coach, he helped attract players such as Neil Lyman, Steve Lloyd, Mar Linnett, Duncan Hughes and Richard Tomlinson.



Cecil Duckworth at Worcester - 1990s

In 1996 the game went professional and Cecil Duckworth decided that if Worcester were going to be successful, they also had to be professional and go full time. Les Cusworth arrived to lead the club and hopes were high at the start of the season. However, the club was deducted two points that season for fielding a player, in Tom Robinson, who was not properly registered.

BEING IN THE BIG TIME FOR WARRIORS (2000-2008)

Worcester started the decade in National Division One and battling to gain promotion to the promised land of the Premiership. Often dubbed the perennial bridesmaids of the division, the club were edged out by long term rivals Leeds and Rotherham for a place in the elite until the 2003/04 season when, under the guidance of John Brain and skipper Werner Swanepoel, the club finally made it.

Worcester Warriors were promoted to the Zurich - now Guinness - Premiership after winning the title with a perfect record of 26 wins from 26 games in the 2003/04 season - something that had never before been achieved. They were the bookies, and many of the rugby pundits odds on favourites to go straight back down but defied the odds to stay in the top-flight in the first season after a memorable campaign that opened with Newcastle Falcons – and Jonny Wilkinson – gracing Sixways Stadium.

The future for Warriors, both on and off the field, looks bright as the club enters the latter stages of the first decade of the new millennium – so what will happen in the next 100 years? Keep watching and backing the Warriors to find out!

BOOK REVIEWS WEBSITES ETC

BOOK REVIEWS

CHURCHES OF THE BLACK COUNTRY by Tim Bridges

156pp, 154 monochrome photographs, pub. Logaston Press, Little Logaston, Woonton, Almeley, Herefordshire, logastonpress.co.uk. ISBN 978 1 90666304 0. Price £12.95.

This book is a follow-up from Tim's most successful 'Churches of Worcestershire' published in 2000, revised in 2005. In this new volume, the churches of those parts of Worcestershire now belonging to West Midlands are included. This is most welcome and we can anticipate a similar style book. We are not disappointed; Tim leaves no stone unturned in his quest for more information on churches hitherto perhaps rather neglected by church historians.

The book commences with a short but excellently written introduction of a mere 18 pages - but - its brevity is only skin-deep. Much valuable information is contained therein leading us on to the main part, a gazetteer of the whole area. Every church is given its due and we have a bonus as Tim goes into some detail on churches now demolished - this must have involved some midnight oil! Each entry is prefaced by a small local history of the area, its industries, its prominent citizens and its benefactors. This is not a dry list, crusted up with technical terms rarely used by the average reader. It is 'user friendly'. The well-trod alphabetical method of Pevsner and Arthur Mee cannot be bettered. Similar Logaston Press books on the churches of Herefordshire and Shropshire suffer

somewhat in this respect, excellent though their coverage is.

The actual area gave Tim some food for thought; There are only a few ex-Worcs. churches in this book, but the words Black Country is now defined for all time I should think. The area, delineated by a useful map, encompasses Halesowen, Stourbridge, Wolverhampton, Walsall, West Bromwich and Smethwick. Within this area lies Dudley, Sedgley, Bilston, Wednesbury etc. Birmingham, greater or otherwise, falls outside the scope of this book. For those who have an interest in chapels of various denominations, Ned Williams has produced three volumes of Midland chapels.

This book will, I'm sure, be on the shelves of many Black Country people and many others as well. He generously donates a small portion of the proceeds of the sale of this book to the county trusts of both Worcestershire and Staffordshire.

I am now tempted to go 'up north' and increase my knowledge of these; must get a sat-nav to do this!

Mike Wall

A E LEMMON (1889-1963) ARTIST AND CRAFTSMAN. The Stained Glass Windows And Other Art Works Of A Midlands Craftsman by Roy Albutt

109pp with many superb colour illustrations. Published 2008 by Roy Albutt, 11 Great Calcroft, Pershore, Worcs WR10 1QS ISBN 978-0-9543566-2-0 Price £12.95 (plus £1 P&P)

This is a glossy and superbly produced volume on someone who I must confess was unknown to me, but may be more familiar to

those better-acquainted with the many local churches in which his work can be found.

Roy Albut has produced a thoroughly researched biography of this Bromsgrove artist and craftsman - who was born in Birmingham, but later became an assistant to A J Davies in the stained glass studio at the Bromsgrove Guild, before establishing his own studio.

Albert Lemmon's stained glass windows and decorative art work are to be found in churches all over the West Midlands and Lincolnshire – and even as far afield as New Zealand.

The book also contains a comprehensive "gazetteer" of Lemmon's work, accompanied by many superb colour photographs of windows and other pieces.

On a personal note, it came as a surprise to learn that one of his windows was located in St. Michael's, Tividale – where I got married! To my disappointment however, the church was demolished in 1981 and the window has disappeared.

Roy Albutt is a retired head teacher from Bromsgrove and has written two other books on local stained glass windows

For those WIALHS members who enjoy church architecture and history (and I can think of quite a few) this book will be of great interest.

I bet Mike Wall already has a copy!

Glyn Thomas

COPPEROPOLIS by S.R. Hughes,

358pp 339 illustrations **ISBN:** 1871184274
Price: £20.00 Postage: £6.42

Still available (I think) from The Royal Commission on the Ancient and Historical Monuments of Wales. www.rcahmw.gov.uk

If you wanted to learn more about IA in the Swansea area following the WIALHS visit last September then this is the book - superb illustrations.[Ed]



This is a very welcome reprint of the most exhaustive study of an industrial landscape in Wales, based on extensive survey work in advance of modern Swansea's development. The expansion of the city has seen the obliteration of most of the industrial archaeology of the area. But this was the earliest industrial landscape in Wales, originating in the seventeenth century – a key focus of the first Industrial Revolution. Hughes lovingly investigates and documents the development of industry in the lower Swansea valley – not just copper, albeit that by 1850 Swansea was producing some 29,000 tonnes of refined copper – but also coal, tinplate, alum, fire-clay, arsenic, lead, zinc and (primarily earthenware) pottery.

Each industry's origin and development is meticulously analysed, with the primary focus on the copper enterprises and their associated patterns of transport and power – coal roads, canals and waterways, turnpikes, wagon and horse-drawn rail – the navigable river Tawe and its relationship to the south Wales coal field providing the original lift-off for Swansea's metallurgical industries.

This is not simply a study in industrial archaeology; rather, Hughes imaginatively connects the archaeology of industry with the social history of masters and men, and the development of urbanisation. He shows, for instance, that the Swansea area "provided a natural training school in which local artisans were able to develop into innovative engineers" – men who need recognition alongside the traditional "heroes" of the Industrial Revolution. Thus he contributes biographies of men such as William Edwards (1719-89), architect, bridge-builder and nonconformist minister who built the arched iron bridge at Pontypridd, and was commissioned by Robert Morris to build the Beaufort Bridge and Forest Copper and Lead Works (1747-52); and he goes on to examine the copper masters themselves, the settlements they created for their workers, and how these evolved in the 18th and 19th centuries.

The book represents the most sophisticated discussion of Welsh urban settlement that I know, considering layout, housing design and construction, water supply and sewerage, as well as issues such as workers' rents. We get a detailed examination of the planned towns of Morriston and Trevivan – where copper masters provided homes, churches, schools and markets for the families who depended on them – as well as the lesser examples of Landore, Foxhole and Grenfelltown. Comparisons are drawn with workers settlements not only in Britain (Saltaire, for instance) but Europe (Belgian coalfield settlements, Colonia Giiell near Barcelona – where Gaudi began a church).

Equal care is lavished on documenting the mansions of the industrialists, with attention both to architectural detail and the landscape impact of these great houses and associated parkland (Sketty, Singleton, Clyne...). A full chapter is devoted to the social institutions

of the copper townships – schools, churches and chapels principally – considered in both social terms and in relation to architectural history. This means that the book represents a major study in church and chapel design, considering, amongst other humbler examples, the "cathedral of Welsh nonconformity" – Tabernacle, Morriston. Finally, there is a special case-study of Landore – perhaps the most densely developed industrial landscape in the lower Swansea Valley, lying between Swansea itself and Morriston. This poisoned land, the heart of what was once "the largest tract or derelict land in Europe", through which the trains from Paddington and Cardiff General approached Swansea town, has now seemingly disappeared but Hughes records 73 locations where industrial features survive. The book as a whole is a magnificent attempt to recover a lost world and its society, at the same time as it documents forty years of changing understandings of the significance of industrial remains.

Glyn Thomas

WEBSITES

This from Malcolm Nixon -

We are all aware of the enormous potential for research that the internet offers and one of the problems in such use is the sheer difficulty in finding suitable sites. I have found the following two sites extremely helpful and can recommend both - full of fascinating images, useful supportive text and easily accessible. The first is railway based and is regional –

www.warwickshirerailways.com

Superb pictures and many will be new to members.

The other site is very diverse in what it offers and it has an excellent location tool - either by map or by topic. The images are from the museums and art gallery collections and include documents as well as buildings, objects etc. Given the close proximity of Staffordshire to us - it is likely that this site will be of interest

www.staffspasttrack.org.uk

Good luck and happy hunting!

From Len Holder-

I have been told about a web site that may be of interest to some of our members

www.corrugated-iron-club.info

Very odd! But do have a look - Ed

LETTERS AND ENQUIRIES

Editor's Note: *In addition to members' letters, we now receive occasional email enquiries from people all over the world who have discovered WIALHS through our website and are trying to find out about some aspect of Worcestershire history - perhaps for family history research or more general interest.*

In the hope that members may be able to help with such enquiries I will publish them here. If you have any information which may be of relevance to the enquiry please contact me.

ENQUIRIES TO WIALHS

In the last edition I gave details of the following email enquiry -

I have just received a photo of the memorial to Col. Sir Henry Ellis in Worcester Cathedral. He was a native of Worcester and died of his wounds after the Battle of Waterloo.

I am the webmaster of british-cemetery-elvas.org and would like to add a page about this survivor of the Battle of Albuera and the Siege of Badajoz and link it to <http://british-cemetery-elvas.org/royalwelchfusiliers.html> as I have for Lt. Col. Sir William Myers.

I would be very grateful for any information you can give me about Lt. Col. Sir Henry Ellis and his family.

Sincerely,
Sarah King

Thanks to a reply from Mike Wall I was able to send the following, which was gratefully received -

In response to Sarah King's e-mail, I too would love to know more about Col. Ellis as it would help to fill in gaps in my ever expanding quest on information about all the Cathedral's tombs. I have looked up Dean Moore Ede's book on the Cathedral Monuments, dated 1924 but he makes no mention of it. Strange as the monument itself is very large. However Alec Macdonald's Guide of 1947 goes into some detail but not enough perhaps to satisfy Sarah King.

Sir Henry Walton Ellis was the son of Maj. Gen. John Joynor Ellis of Kempsey. There are no monuments within Kempsey church to any Ellis - or at least as the primary subject. Maybe his family lived at The Nash prior to the Temple family. We visited this building, now an hotel several years ago. On December 26th 1814 he was presented with the Freedom of the City of Worcester' as a tribute to his meritorious and distinguished conduct during fifteen years of active

service'. The inscription on the monument records his gallant career and death of a wound received at Waterloo. He was buried on the field and the cenotaph was erected at a cost of £1200 by the officers and men of the Royal Welch Fusiliers in 1819. This was a huge sum for that time. There was a short inscription from Wellington himself but this has vanished.

The monument itself was carved by John Bacon the Younger who was responsible for another in the Cathedral, a glorious one to Richard Solley nearby. Bacon's father was himself an eminent sculptor, even more gifted it is thought. They came from London and other works by Bacon Jnr are at Croome d' Abitot and Astley. The Ellis monument stands on the floor on the south aisle near the cloisters entrance to the west. It depicts the colonel falling wounded from his horse being supported by a large angel crowning him with a wreath. A soldier with helmet and gaiters kneels looking up at him with sorrow, hands clasped in prayer, military artefacts nearby. The horse emerges from a cloud of battle smoke having no tongue. This mistake was erroneously thought to have contributed to Bacon's death by suicide, quite ridiculous! An oddity here is that this is believed to be one of only two monuments in England depicting a horse. The other one, at Gaddesby, Leicestershire shows Col. Cheney - and even this was taken from the nearby Hall to the church.

Yours Sorrowfully,
Mike Wall.

This from Brussels –

An American colleague and I are putting together a database of all the cotton spinning mills that operated in England between 1770 and 1840. Ideally, we would like to be able to determine for each mill when the mill started and stopped spinning, where it was

located, how large it was in terms of spindles, horsepower, employees or valuation, whether it was integrated with power weaving, and who operated it. So far we have managed to digest the following material: 1) 700 commissions of bankruptcy and 1300 dissolutions of partnership from the London Gazette, 1780-1840; 2) entries from most of the major trade directories; 3) advertisements from a variety of digitalised newspapers and from some years of the Manchester Mercury; 4) the Sun assurance policies recorded in the card index held at the Victoria & Albert Museum; and 5) the information available from a fairly thorough trawl through the secondary literature.

We would be most grateful if you could put us in touch with members of the Industrial Archaeology and Local History Society who might be able to tell us more about the mills in Worcestershire. For reference I attach a file containing everything that we know to date about mills in the county.

Thank you very much for your help.

With best regards,

Peter Solar

89 rue J-B Colyns
B-1050 Brussels
Belgium

WIALHS AGM 2009 – TREASURER'S REPORT AND ACCOUNTS

Accounts for the year ended 31 December 2008

Income and Expenditure Account	2008 £	2007 £	Notes
Income			
Annual membership Income	1,798	2,021	2
Day membership	5	19	
Building Society Interest	98	154	
Net Surplus on other activities	59	20	
Income for Bill Gwilliam Fund	316	2,168	5
Total	2,276	4,382	
Expenditure			
Newsletter including postage	491	575	
Refund of committee expenses	342	515	
Speaker fees and expenses	397	454	
Affiliation fees inc Insurance	126	116	
Miscellaneous	59	37	
Representation at Conferences	13	163	
Domain name registration (for 2 years)	0	18	
Donation of Cabinet to Tudor House	0	150	
Donation to Macmillan Nurses viz Examiner's fee	50	40	
Expenditure for Bill Gwilliam Fund	1,041	2,081	5
Total	2,519	4,149	
(Deficit)/Surplus	(243)	233	
Total funds brought forward	4,548	4,315	
Total funds carried forward 31 December	4,305	4,548	
Balance Sheet	2008	2007	
Current assets			
Lloyds TSB Treasurer's Account	440	776	
Alliance and Leicester General Deposit Account	2,949	2,119	
Alliance and Leicester Bill Gwilliam Fund Account	916	582	
Metal Box Books	0	596	5
I A Leaflets	0	445	5
Debtors	0	60	3
	4,305	4,578	
Current liabilities			
Creditors: amounts falling due within one year	0	30	4
Net assets	4,305	4,548	
Bill Gwilliam Fund	916	1,683	
General Funds	3,389	2,865	
Total Funds	4,305	4,548	

NOTES TO THE ACCOUNTS

Note 1 - Accounting policies

These accounts have been prepared under the historical cost convention

Note 2 - Membership	Dec 2008	Dec 2007
Total Numbers	206	223
Recently joined members whose Mlship is clforward	2	14

Note 3 – Debtors	Dec 2008	Dec 2007
	0	60
Total Debtors	0	60

Note 4 – Creditors	Dec 2008	Dec 2007
Accrued expenses	0	30
Total Creditors	0	30

Note 5 – Bill Gwilliam Fund

	2008	2007
Income from Lecture	0	1,050
Sales of Metal Box Book	243	1,058
Donations specified to Fund	0	35
Sales of IA Trail Leaflet	73	25
Total Income	316	2,168
Costs of Lecture	0	1,015
Costs of Metal Box Book sold in 2008	192	1,371
Financial support for Len Holder's Book	0	266
Costs of printing IA Trail Leaflets sold in 2008	25	470
Stock in hand Written off at end of 2008		
Metal Box books valued at £4 each	404	(596)
Leaflets	420	(445)
Total Expenditure	1,041	2,081

Independents examiner's report

We have examined the Accounts set out in pages 3 and 4 and confirm that they agree with the books and vouchers submitted by the Treasurer for the year ended 31st December 2008. We have not carried out an audit.

Merrick & Co (Accountants) Ltd
Chartered Certified Accountants

Worcester
17 February 2009

PHOTO SECTION – SEND ME ANYTHING INTERESTING!

My thanks to Max Sinclair for another excellent set of pictures, which I hope I have assembled with the correct captions from Max's emails. More in future editions – Ed

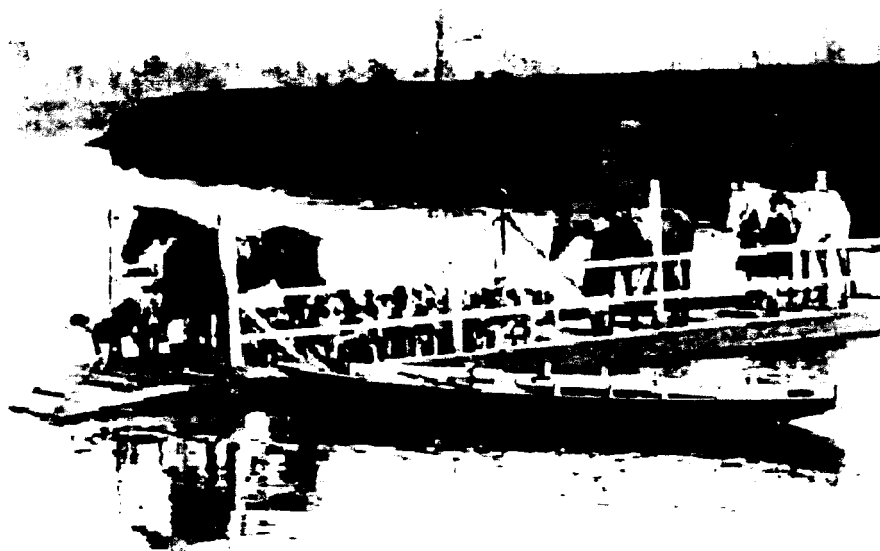


The earliest known photograph of the Severn at Worcester was taken in 1860 from the newly constructed railway bridge. A Trow has moored at the North Quay alongside the public slip where horse and carts could load and unload cargoes. When the Quay walls were built up in the 1960's the river was dredged here and the Roman cobbled ford was removed.

Baulks of heavy timber, probably mahogany, were used as ballast in sailing ships from the Americas and brought up river for house construction. Many of the river front houses in Bewdley have mahogany roof and floor beams as well as the floor boards.



The river used to have prolific quantities of salmon, sturgeon and carp to feed the population. Apprentices complained about being fed fish every day. Here at Diglis net fishermen have trawled up a lovely fish working from their Severn punt, a traditional craft with origins over a thousand years old.



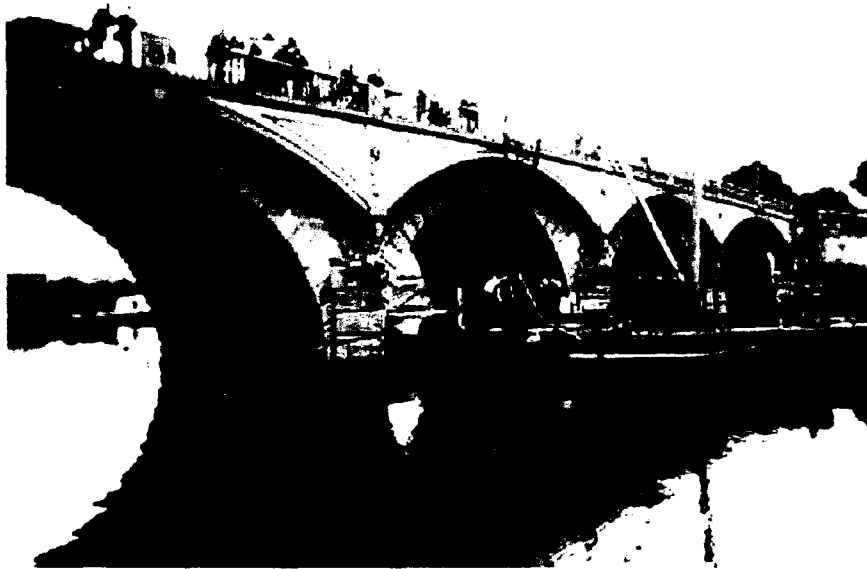
All along the river Ferries were used to carry passengers, animals, and the larger boats transported large carts. Here the Earl of Coventry and his wife cross with the hunt at Pixham Ferry to Croome Court in the 1920's.



*The Pixham Ferry was hauled across the river on a **fixed** chain, seen draped along the rails. The universal Severn Punt was used to take the boatman home at the end of the day.*



Keepax ferry above Pitchcroft was a very busy mode of transport for workers and shoppers using it daily. Sadly there are records of drownings as the river in flood can be vicious.



Worcester Bridge built in the 1840,s became too narrow for the volume and weight of motor vehicles. Leader Williams had designed a cast iron apron and parapet to widen the structure for pedestrians but by the 1930's it was inadequate. The old stone bridge was widened on each side by a third and opened in 1934 by the Prince of Wales. Sir Edward Elgar saved three tons of the cast parapet which is now mirrored in my garden pond.



Worcester is closer to sea level than is generally realised, and with a dramatic rise in levels should be considered as a possible permanent flood. At present five hours ten minutes after a high tide at Avonmouth the river rises up the face of Diglis weir. This sometimes catches out fishermen when their floats move upstream and their wellies fill up. These elver fishermen are skilfully returning home in their punt below Gloucester on the rising Severn Bore which we can expect to be seen in the future at Worcester.



The brilliant river engineer Leader Williams was responsible for much of the navigation improvements and is seen here inspecting clay loaded narrow boats which were sunk at Lincombe Lock to reinforce the bank. The towpath in Worcester from the bridge down to Diglis was constructed on old clay filled sailing Trows, it might be worth using ground radar to find a good example of an upstream vessel as none exist at present. Williams elder son became Chief Engineer for the Manchester Ship Canal and the younger son reversed his name to Williams Leader when he became a brilliant artist, and friend of John Constable who stayed with the family at their Diglis house, now a Hotel

AND FINALLY

Just in case you need a handy reminder of the dates for the Summer Programme.

WIALHS Summer Programme 2009 – Summary of Events

NOTE – full descriptions of events were given in the programme sent to members.

EVENTS IN **BOLD AND UNDERLINED** MUST BE PRE-BOOKED
BY USING THE REPLY SLIPS SENT WITH THE PROGRAMME NOTICE

DATE	EVENT
<i>Sat 25th April</i>	AIA Conference – Winchester (Contact Chairman if interested)
<u>Sunday 26th April</u>	Coach Trip to Waterworks Museum – Hereford. Coach from New Inn 10.30am, returning approx 5.30pm.
<u>Sunday 10th May</u>	WIALHS Spring Lunch (Royal Oak, Broadwas, 12.30 for 1.00pm)
<u>Saturday 16th May</u>	AIA Conference – Worcester (See "And Finally" Note in Journal)
<i>Wednesday 20th May</i>	Evening Visit to Masonic Hall, Rainbow Hill, Worcester. Meet 7pm in hall car park
<u>Saturday 30th May</u>	Brunel Trail. Train visit to Bristol, walk round trail and possible boat journey. Catch 9.09 Train from Worcester, return to Worcester 18.15.
<u>Saturday 13th June</u>	Vintage Bus Tour of Birmingham. Meet at Wythall Transport Museum 10.30am.
<u>Wednesday 24th and Thursday 25th June</u>	Visit to Morgan Motors, Malvern (11am and 2pm 24 th , 2pm only on 25 th). Meet in Morgan works car park, Pickersleigh Road. 20 per group.
<u>Tuesday 7th July and Thursday 9th Juls</u>	Evening Visit to Hewell Grange, nr Redditch. Meet outside main gate on B4096 near Tardebigge. 20 per group.
<u>Wednesday 22nd July and Thursday 23rd</u>	Madresfield Court (guided visits, 2.30pm - 16 per group, 3 groups each day)
<u>Sunday 9th August</u>	Henley on Thames (coach trip and 5 hour Thames cruise). Coach from New Inn 9.00am, return approx 7pm
<u>Friday 14th August</u>	Glass Museums Stourbridge. Meet at Red House Glass Cone Museum, Stourbridge (on A 491) at 11am, then pub lunch, then visit Broadfield House Glass Museum.
<u>Saturday 19th September</u>	Visit to Purton (on Gloucester Ship Canal). Trip down canal from Waterways Museum, return to docks area 11.30am then coach to Purton (2 hour visit). Meet at New Inn 8.45am, returning approx 7pm
<u>NB</u> NOT 5 TH SEPTEMBER AS STATED IN THE PROGRAMME	
<i>Thursday 10th – Sunday 13th September</i>	Heritage Open Days - to be advertised locally.

President	Roger Tapping	155 Northwick Road Worcester WR3 7EQ roger@rogertapp.co.uk	455597
Chairman	Christine Silvester	12 Upper Park Street Worcester WR5 1EX	354679
Vice Chairman	Michael McCurdy	56 Camphill Road Worcester WR5 2EG mmccurdy56@yahoo.com	831415
Treasurer	David Sharman	7 Stuart Rise, Red Hill Lane, Worcester WR5 2QQ davidsharman@talktalk.net	356184
Membership Secretary	Jacky Hollis	57 Sandys Road Barbourne Worcester WR1 3HE jacquelinehollis194@btinternet.com	20868
Secretary	David Attwood	North Wing, Himbleton Manor, Himbleton, Droitwich WR9 7LE davidattwood@bluebottle.com	391590
Summer Programme	Michael Hayzelden	38, Beckett Road, Northwick, Worcester WR3 7NH rnike@adrianhuttarchitects.co.uk	456439
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	Sue Bradley	20 Southall Avenue Worcester WR3 7LR	455145
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Website	Peter Wheatley	peteworcesterl @tiscali.co.uk	359333
The WIALHS website (www.worcester-wia.co.uk) has details of the Society, membership information, information on meetings and events – and more!			

