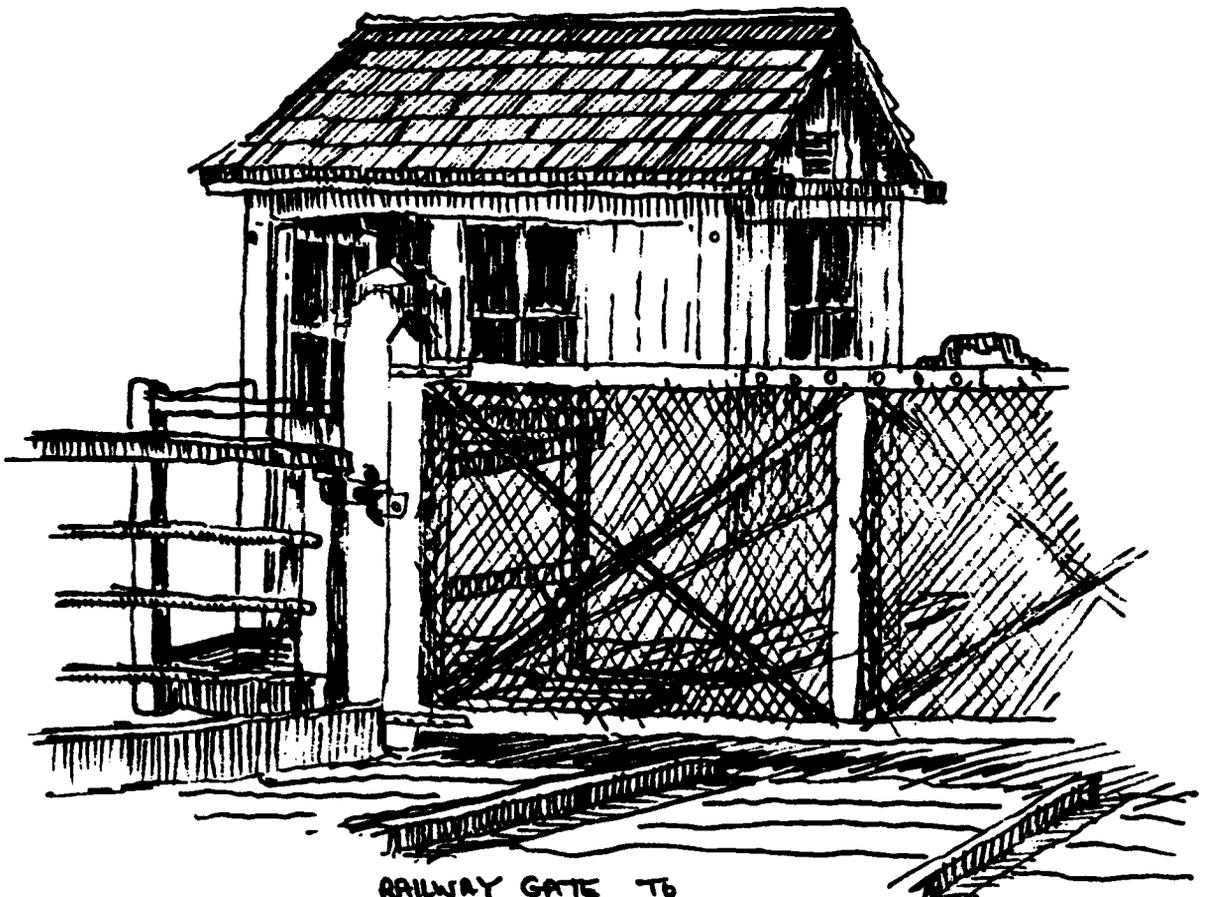


# GSIA

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SWING BRIDGE. SHARPNESS DOCKS. 1.3.72.

PATRICK LANE.TD.

# JOURNAL 1988

GLOUCESTERSHIRE SOCIETY FOR INDUSTRIAL ARCHAEOLOGY

JOURNAL FOR 1988

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The Aims of the Society

To stimulate interest in, to record, to study, and where appropriate to preserve items of industrial archaeology, especially in the County of Gloucester.

## EDITORIAL

This is an important year for GSIA, it has been in existence for 25 years, having started in 1964. However, before I progress onto that, I must thank my predecessor, Christopher Cox for editing previous Journals. Only now as I am working on this year's production do I realise the time, effort and worry which have gone into it. Inevitably there will be changes, as there have been in the past and I hope that contributors will continue to produce papers because without them there would be no Journal.

This year's Journal sees the continuation of Mr Langford's excellent and interesting research on the Brimscombe Boat Builders. It never ceases to amaze me that such industrial activity could take place in what today seems a most unlikely location. I must mention that Mr Langford won the third prize in the Gloucestershire Local History Competition for this research, as did another of our members and contributors, Sue Brown who shares first prize with a group from Stroud Local History Society which included Neville Crawford. A new contributor is Mr C.R. Bowen who writes on the surface drainage of Wigpool Iron Mine which is in the Forest of Dean. Jim Simmons has written short articles on local subjects of an unusual nature. Ray Wilson has written an article on the important new developments at Dunkirk Mills.

Much has happened in the last 25 years, not only in the Society's history, but also in industrial archaeology in general. From early records I note that in the early years GSIA was based in Brockworth with support from ICI Fibres and Dr T.E. Edwards. From those years in the 1960s it is nice to note that some of the early committee members are still with us, Harry Townley, Neville Crawford, Lionel Waldron and Ian Parsons, to provide continuity. It is also good to note that we still retain some of our first members too. The Society represents the whole County and provides a winter lecture series in both Cheltenham and Stroud. Excursions are organised (reported upon in this Journal) and there is an annual dinner and a quarterly news letter is produced as well as this Journal. On a more practical side from the point of view of industrial archaeology, the Society monitors Planning Application affecting industrial sites within the County and makes comments when appropriate. Some of these activities were present in the early years, but others have developed with time. Perhaps the most important involvement for the Society is a recent one, that of Dunkirk Mills. It is more fully reported upon elsewhere in the Journal but it also deserves mention here because it is our first really successful liaison with a development company over the re-use of an industrial site which is proving beneficial for both industrial archaeology and for the developer. It is a story of successful co-operation which we hope will be repeated in the future.

During the last 25 years GSIA has certainly grown, but what of industrial archaeology as a whole? In 1964 when GSIA started, the term industrial archaeology was little more than a decade old. There was then no national body and the only official representation was the industrial archaeology section of the CBA (Council for British Archaeology). I note that in GSIA newsletter No 13 there was a report on a conference on the future of industrial archaeology and that those attending were considering the need for the formation of a national body. That national body did not come into existence until 1973 when the Association for Industrial Archaeology (AIA) was formed. GSIA is affiliated to the AIA and so our local society is linked with nation-wide industrial archaeology. This obviously has advantages for both us and the AIA.

And what will the next 25 years hold? I am sure that the Society will continue to grow and to play an important part in the recording and conservation of the County's industrial heritage. The collaboration over the re-use of Dunkirk Mills is hopefully just the start of similar efforts. As for the industrial archaeology sites themselves, the same types of site will continue to exist, mills for example. But with there being so many and such rapid changes these days and with such rapid advances in technology, many things soon become out-dated and will be coming into the category of industrial archaeology. For example GSIA have planned a visit to Berkley Nuclear Power Station. It is shortly to cease operation and to be decommissioned. Soon it will be just history. No doubt some will consider this the industrial archaeology of the future and in the next 25 years there will be other sites like it, built within living memory but history within a short space of time. Hopefully GSIA will be there to record their passing and to record and make a case for preservation where necessary.

Finally, I cannot let this editorial close without mentioning our President, the Reverend Awdry who has done so much in the field of industrial archaeology in our county as well as delighting people everywhere with Thomas the Tank Engine.

Amber Patrick

The front cover illustration is by Pat Lane. A gifted artist who is a member of our Society and who does superb drawings of industrial archaeology subjects. My thanks to him for this illustration.

## GSIA SUMMER VISITS 1988

### Visit to Portsmouth, 21 May

On 21 May we had a very pleasant day, bright but not too hot, for our first coach trip of 1988. Forty seven members, family and friends went to Gosport where we boarded a boat for Spit Bank Fort in the Solent.

This mid-Victorian artificial island gun battery has been restored as a tourist attraction. We had a most interesting tour of the very complex and extremely strong structure, with its outer walls protected by alternate layers of armour plate and teak and the elaborate storage and handling facilities for shells and propellant charges. The facilities for the garrison were much less elaborate. The 12 inch rifled muzzle-loading guns (reported to be capable of one round every 4 minutes) are now represented by a couple of fibre-glass replica, but they are most impressive.

After lunch (which you could have on the 'lawn' on top of the fort) the launch took us to Southsea where the coach met us to go to Eatrey Pumping station.

Portsmouth City Museums restored the 1887 Watt Compound rotative beam engine sewage pumps and one of these, and several other smaller engines were in steam from coal fired Cornish boilers. The valve and control arrangements of the main engine were the subject of considerable discussion from which our "experts" and the Museum staff all learned something. There cannot have been many coach parties whose driver was able to give hints on boiler firing to the operators, but our driver had learnt the craft on a locomotive footplate.

Also on display were the "next generation" of pumps driven by 1902 gas engines. With engines running light it was possible to appreciate the operation of the "hit and miss" governing system.

The next stop was at the Royal Naval Dockyard where very knowledgeable guides from the Dockyard Historical Society took us round some areas not normally open to the public. Our guides apologised because a security clamp-down had restricted the area we were allowed to see; this was just as well because the "restricted tour" took longer than we had anticipated.

The dockyard is a very large and interesting area; we heard of its development from the 12th century with the increase in size and complexity of its facilities up to the introduction of steam and its current run down. The present buildings, from the 18th and 19th centuries are mainly quite elegant and we saw, in the Block Mill the last remnants in the Dockyard of

the sadly dispersed Brunel block making machinery and its very heavy line shafting.

The Historical Society are collecting and restoring relics, tools and artefacts and we were allowed to explore their collections.

We were rather later than planned in getting home, but felt it had been a varied and satisfactory day.

Jim Simmons

### Visit to Bersham, etc, 30 July

By recent standards it was a comparatively small party (32) of members and friends who left Gloucester on an unpromising day. We first went to the Clwyd County Council's Bersham Industrial Heritage Centre where the Curator, Ann Williams joined the coach to show us some of the Bersham and Clywedog Industrial Trail.

The first stop was at Minerva where the spoil heaps of the early lead workings are being landscaped and covered, with the intention of reducing the pollution of surface water. Many of the old buildings here have been vandalised, but old railway and road formations remain and there is still a large beam engine house, with chimney, which is being conserved.

Lunch was taken near the City Arms home brew pub, whose name commemorates the ownership and exploitation of the area by the City of Chester and whose signs commemorate the old working scene.

We then went down the Clywedog valley, noting the weirs, leats and other evidence of centuries of industrial use to Bersham, where the Wilkinson family had their famous ironworks.

A good deal of excavation and conservation is in hand here and we were joined by the County Archaeologist to explain the finds. There is an unusual blast furnace and a large octagonal building (later used to house a farm horse-gin) which is now believed to have contained the re-melting furnaces and the casting pits where the Wilkinsons produced cannon and steam engine cylinders.

There is also a large building (latterly corn mill) which contains a 32 foot diameter water wheel, almost probably made of cast iron (including the buckets). This is believed to have provided the power for the innovative Wilkinson boring machine for guns and cylinders.

This is only the first half of the full trail but we only had time for a brief look at the museum at the centre before leaving to see Telford's cast iron canal aqueducts.

Mr Derek Jones, who spoke on the Wrexham area in last year's lecture series accompanied us to our first point. The weather had relented and we had a bright and very breezy walk over the lofty Pont Cysyllte aqueduct, well worth a visit even for those who had seen it before.

A short drive took us to Chirk where the cast iron component is less spectacular, being concealed in an apparently conventional though light masonry structure.

From there a longer drive took us to Longdon-on-Tern where we had arranged access to the earliest of these aqueducts, a simple, very functional, structure contrasting strongly with the more elegant pair we had just seen.

Finally for good measure we returned along the A5 and passed under Telford's later aqueduct carrying the Shropshire Union Canal over his Holyhead road.

Jim Simmons

Afloat on the Floating Harbour, 4th September.

About 20 members made their own way to Bristol on Sunday 4 September. We all boarded the Bristol Packet narrow boat for a trip with informative commentary up to the end of the Feeder; we should have looked into the Cumberland Basin, but there were commercial vessels moving through the locks.

After lunch we had two parties on the steam tug Mayflower (12 passengers maximum). This tug, built in 1862, is the oldest working Bristol built steamer and operated on the Gloucester-Sharpness Canal for 100 years. The turn of the century replacement engine, by Sissons of Gloucester, is a very unusual machine.

Members were able to fill in the time not afloat at the Maritime Heritage Centre, S.S. Great Britain and the Industrial Museum, the mock-up cockpit of Concorde, with wall to wall instruments contrasted strangely with the rudimentary equipment on the Mayflower.

Jim Simmons

Visit to Uskmouth Power Station and Gwent, Thursday 6 October

Our first mid-week full day trip, run in conjunction with Barnwood Industrial Archaeology and Transport Section was well supported, with 32 members and friends from the two societies booked for the trip.

At Uskmouth Power Station, we split into two parties for conducted tours of the 'B' station, dating from the early 1960s, and approaching the end of its life. This is equipped with three 120 MW (170,000 H.P.) turbo-alternator sets, each with its own pulverised fuel boiler producing 860,000 pounds of steam per hour at about 1,500 pounds per square inch and 1,050° F reheated to 1,005° F part way along the turbine.

Only one party achieved the height of the boiler house roof, which provided magnificent photographic opportunities. The other party saw more details of the boilers and coal milling plant.

Both parties were impressed by the circulating water pump house which is of unusual design to cope with the abnormally large tide range. The screens provided living evidence that the Usk is a fishing river.

We saw the Unit (alternator and boiler) and the Station (Grid) control rooms, but we were unfortunately not able to look into the 'A' station, (ten years older and being dismantled) nor were we able to explore the coal-handling plant; all coal now comes by road but there are plenty of rail tracks left.

Later than intended (some could have stayed all day) we went to Newport for our lunch stop.

After lunch we moved up to Pontypool and were met by Robin Williams of Oxford House who very generously guided us for the afternoon section of the trip. First point of call was the Pontypool junction on the Monmouthshire and Brecon Canal, newly cleared and landscaped, with a walk to see the early 18th century cast and wrought iron gates of Pontypool Park.

On our way up the Eastern Valley we diverted to Talywain to see British, the site of the large iron works, with a Cornish Engine Pump House, later loco sheds and remains of quarrying, mining, tramways, blast furnaces, etc., all round the valley.

Back in the main valley we passed the well restored Forge Row cottages at Cwmafon and stopped alongside a massive steam hammer, re-erected in the car park, to look at the Blaenavon Ironworks site, with the furnace casting house etc., under restoration under the massive masonry tower of the water balance lift.

This lift started the pig iron from Blaenavon on its way by tramway, inclines and tunnels to Garn-ddyrys on the other side of the mountain which was our next stop.

Here at 1300 feet above sea level an early 19th century community of three or four hundred people refined the pig to wrought iron. As we struggled round the rugged remains of the works in a gale and driving rain we could see that the works would at least have had the benefit of a magnificent view of the Black Mountains (when the smoke cleared).

From here the iron was taken by precipitous inclines to a wharf on the Monmouthshire and Brecon Canal.

Our road was steep enough down to Gonilan where we joined the Heads of the Valleys road to go to the Clydach Gorge, where in recent years the furnaces, etc., have been beautifully excavated, consolidated and landscaped.

After admiring the delightful 1824 cast iron bridge we rejoined the coach to climb back to Brynmaur and down the Western valley, past many industrial remains to Crumlin and back to Pontypool.

Despite the afternoon weather this was a very full and varied day and many thanks are due to our guides.

Jim Simmons

#### HALF DAY VISITS 1988

##### Chalford Stick Company

Our first visit was in February to the Chalford stick Company at Church's Mill Woodchester. This is the new home of walking stick manufacturers who for many years operated at St Mary's Mill Chalord. Clearly th visit had a great appeal for our members as the places were all taken as soon as the visit was announce at the previous AGM.

First we saw the large quantities of timber, mainly chestnut, being seasoned. The next proces is the boiling to enable the bark to be removed. The sticks are then bent in special heated jigs to give them the familiar curve handle.

Upstairs the sticks are straightned, cut to length, varnished and finally the feule attached. The visit was a facinating reminder of what was a very major industry in the early part of the century. Neville Crawford was our leader.

Ray Wilson

## Dudbridge Area of Stroud

This year the society participated in a new venture called Stroud Show week. Each night of the week leading up to Stroud Show in July, a different group put on an event open to all. For GSIA, Lionel Waldron took us to the Dudbridge area of Stroud.

This is really only a very small and on the face of it not particularly attractive area but it is very rich in industrial archaeological remains. However, many of the features are not immediately obvious to the casual observer and we were very surprised how much we saw. It was pleasing that about half the 30 or so on the walk were non-members.

## Social Evening Cheltenham

This year's social evening in August was a double feast. First, Amina Chatwin led a short walk showing us the main features of Cheltenham's ornamental ironwork. A subject of course on which Amina has published the definitive book. We then went back to her new home where a very fine supper was enjoyed by all.

## Forest of Dean

Our final half day visit took us to the Forest of Dean in late September. Our guide was Ian Standing and our afternoon was split between Whitecliffe Furnace near Coleford and an Ancient Timber Tree walk from Beechenhurst Picnic Site.

At the furnace site we saw the outcome of the excavations of the past three seasons. These have revealed the presence of a second furnace and other remains.

The Timber Tree walk was novel but of direct relevance to industrial archaeologists because of all the uses of timber. Ian has identified a number of fine and interesting specimens within a short walk from the car park. We learnt how timber was measured and how such measurements give an indication of a tree's age. This was rather different from previous walks in the Forest and was much appreciated by the party.

Ray Wilson

The half day visits were organised by Jim Simmons and Ray Wilson. Jim Simmons organised the whole day visits.