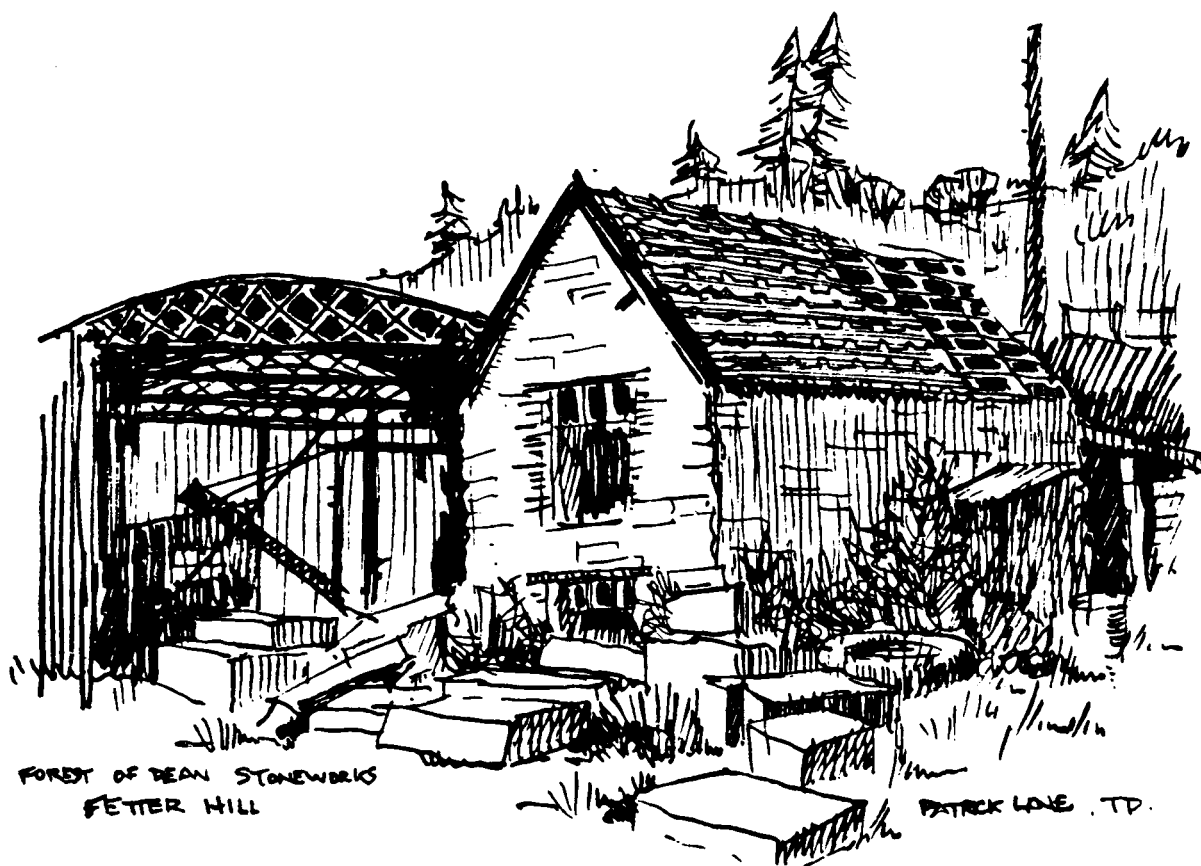


GSIA

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GLOUCESTERSHIRE SOCIETY FOR INDUSTRIAL ARCHAEOLOGY

JOURNAL FOR 1989

CONTENTS

Editorial		Page 1
Charles Baker of Painswick and Cheltenham and the Development of Roads around Stroud and Cheltenham in the Early Part of the 19th Century.	Dr J.V. Garrett	Page 2
A Distant Prospect, Being a Brief Look at Industrial Relations In the Stroudwater Area 200 Years Ago.	Christopher Cox	Page 8
Beard's Mill Viaduct.	Stephen Mills	Page 21
The Nailsworth Engineers.	Tony Youles	Page 22
Circular Wool Drying Towers.	Ray Wilson	Page 32
Stroud Valleys Project.	C.H.A. Townley	Page 35
Dunkirk Mills, Nailsworth: A Progress Report	Ray Wilson	Page 36
GSIA Summer Visits 1989		Page 39
Book Reviews		Page 46
The Association for Industrial Archaeology		Page 52
Officers		Page 57
Committee Members		Page 57
GSIA Members		Page 58

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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

The year 1989 has seen GSIA's quarter century and it is good to know that the Society is still thriving and active. Inevitably, with the passage of time there are some sad aspects. The sudden death in January 1990 of Neville Crawford, who had been with the Society from the beginning, was a shock for all of us. Over the few years that I had known him, he was always active and helpful. He brought to us his extensive knowledge when dealing with planning matters. He was also a very able researcher and writer. He will be missed by us all.

In this issue there are a variety of papers: my predecessor, Christopher Cox, has written a paper with a somewhat different slant on industrial archaeology, industrial relations in the Stroudwater area. In contrast is the article in H.J.H. King, the engineer of Nailsworth, by our new contributor, Tony Youles. He traces the history of this fascinating engineering firm, still in existence under the ownership of Redlers and now well-known for the manufacture of malting equipment. In this year's Journal he covers the company's early years. The later history will appear in subsequent issues.

Transport is covered by Dr Garrett's paper on one of the lesser known road surveyors, Charles Baker. For those interested in the reconstruction of a past industrial process (be it machinery, equipment or building) from documentary evidence there is Ray Wilson's paper on circular wool drying towers. (The book from which the information comes is reviewed in the Book Review section.)

Finally there are reports on the Stroud Valleys Project and Dunkirk Mills. The Society is involved in both and these are two important aspects of future industrial archaeology for the GSIA.

One of the advantages of industrial archaeology (over other archaeological periods) is the enormous variety of aspects its study covers: standing remains, sites requiring excavation, printed sources, manuscript sources, maps, oral history, to mention just some. I think the articles in this year's Journal reflect some of these. My thanks to all the authors and I hope you enjoy reading them as much as I have in editing this year's Journal.

Amber Patrick

The cover illustration is thanks to Pat Lane. Again a superb illustration from our gifted member.

GSIA SUMMER VISITS 1989.

Visit to Berkeley Nuclear Power Station 18 March 1989

The costs of maintenance and up-dating and the changes in costs of alternative fuels made the CEBG decide that Berkely Nuclear Power Station (the first commercial nuclear power station in the world) should cease generation at the end of March 1989.

Just a couple of weeks before the whole station became Industrial archaeology a large party of GSIA members and friends paid a visit (although we undestand it will be possible to arrange visits for sometime yet).

The Station has a most knowledgeable corps of lady guides and after watching a short informative video we split into small groups to see the various parts of the station.

One of the two reactors had already been shut down so only two of the 83 MW turbo-generators were on load. One machine is being modified to display the internals of the turbine and generator for future visitors.

It was very cold when we looked at the circulating water intake and outfall works on the Severn and looked into the very deep pump house. The debris filtered out by the screens included quite a few fish and eels.

The control room was a point of special interest to our "CEGB types" an interesting transition between "ancient and modern" instrumentation.

In the reactor building we saw the large gas circulators returning carbon dioxide coolant from the boilers in their detached "greenhouse" buildings to the reactor, and we were able to visit the pile top and see the massive and towering fuel handling machines. We were pleased to note that as we left this building through the up to date monitoring cubicles that none of us had acquired any significant radiactivity.

Our thanks are due to the CEBG and the Station Staff for a most interesting visit.

Jim Simmons

Visit to Morwellham Quay, Devon, Sunday 21 May 1989

It had been twelve years since the society last visited this open air industrial museum in its splendid setting on the east bank of the river Tamar. Not only had the museum greatly

expanded in that time but also the roads have been improved so that travelling times were comparatively short.

We were fortunate to have as our guide, our chairman, Miss Amber Patrick who had spent some years at Plymouth Polytechnic researching the history of Morwellham. Miss Patrick had just completed a book on the quay and was well qualified to give the party an introductory talk and tour. then we were able to take our own time looking at the areas that interested us most.

There was plenty to see. The main activity at Morwellham had been the export of copper ore (and later arsenic) during the middle to latter part of the 19th century. the opening up of the Devon Great Consols mine made it a very busy port.

Although Morwellham became a 'ghost' village after the decline of the copper trade it has been brought back to life by the Dartington Amenity Research Trust since 1972.

Of particular interest were the paved quays, the inclines and the tram ride underground into the George and Charlotte Copper Mine.

The more energetic amongst us climbed the steep banks behind the port to look at the head of the inclines and to see the start of the Tavistock Canal. This was opened in 1817 and is 4 miles long. Its terminus was at a wharf in the nearby town of that name. For 1½ miles the canal runs in a tunnel under Morwell Down.

Back down at the quay we saw the historic ketch GARLANDSTONE now back in the area where she was built in 1909. Until recently she had been lying for several years at Portmadoc in North Wales. A short walk past the lime kilns took us to the hydro electric power station which still generates for the National Grid. Among the various craftsmen we saw demonstrating traditional skills we had the rare chance to see a cooper at work.

After a full day at the port there was time for just one stop on the return journey. this was at Tavistock wharf to see the other end of the canal.

Ray Wilson

Visit to Dunkirk Mills, Nailsworth, Saturday 3 June 1989.

This was an opportunity for a small group of members to pick their way through the building works referred to elsewhere in this issue to see at first hand what had been going on.

The leader was Ray Wilson who has co-ordinated the society's involvement with the project. From the outside we were able to admire the buildings and see where repairs have restored some parts to their former glory. Inside the mills we could see the advanced state of decay in many areas which have really been caught just in time.

some areas have now had flats fitted but in others we were able to see the original floor layouts.

Of particular interest were the three overshot water wheels and the water courses. the former were just undergoing repairs to put them back in working order. Other machinery in the mills included the governor gear supplied by H.J.H. King of Newmarket, Nailsworth at the turn of the century. (See Tony Youles paper on this firm elsewhere in this issue.)

The tour concluded with a look at some of the documentary material that has been collected for future displays at Dunkirk.

Ray Wilson

Breams Meand and Noxon Park, Forest of Dean, Sunday 11 June, 1989.

Ian Standing and David Bick gave 20 or so members a conducted tour of the areas which they have been investigating in an attempt to estimate the amount of iron ore extracted during the various periods.

Part of their research project is to compare these estimates with the amounts derived from documentary evidence. In theory all that is required is to sum up the volumes of the "empty spaces" in the surface and underground workings. However, it was soon apparent to the party just how difficult this was.

Preliminary results from volume measurements at Noxon Park indicate that the total amount of ore extracted (all) periods was in the order of a million tons. Field work has suggested that twice as much ore was won in a major phase of activity centred in the 17th century than in the later major phase centred on the 19th century.

The return from Noxon Park to Breams Meand was made via Oakwood bottom. Here we followed a short section of the Oakwood Tram road. Many of the stone sleepers ere found to be in place. we also stopped at the now derelict and sealed Green's Trenchard free coal mine.

On the completion of the 2½ mile walk the leaders were congratulated on their research and thanked for an interesting afternoon.

It is to be hoped that the work will inspire other members to join them or start their own investigations of a similar nature.

Ray Wilson

Visit to Somerset Saturday 1 July 1989.

The visit to Somerset went ahead after some hectic work by Dr Wilson to find another guide for the Mendip section and at the last to re-arrange the day to suit the time when the substitute guide was available.

However all was re-arranged and a regrettably small party of 23 set off early on 1 July. After a brief stop at the 'Rock of Ages' we met our guide, Mr Cram, chairman of the Mendip Society at Charterhouse Church. We then had a varied and interesting 2½ hours on the hills. From probably pre-Roman times this area has been exploited for minerals (mainly lead). While the visible remains are mainly from Victorian re-working of the slag Mr Cram was able to fit them into a general picture of nearly 2000 years of activities.

We saw the reservoirs, buddles, condensing flues and slag heaps which are obvious on the surface but we also learnt a good deal about the geology, topography, climate, local history and, not least, the remarkable vegetation. One member was inspired to coin the phrase "industrial botany" for plants (some very attractive) which only flourish on old slag heaps (or near active volcanoes).

It was with some regret that we left Mr Cram and after a lunch stop at Friday we made our way down to the Somerset Levels and Allermoor Pumping Station at Burrowbridge.

Mr Wallace Musgrave described the policies (and local politics) of the various River and Drainage Authorities and gave us a most interesting account of his 20 years in charge of the station.

The moor is some distance away from the station. The practice was to let it flood in the winter then clear it as rapidly as possible in the spring. Mr Musgrave, with the help of his wife kept the engine running as much as 20 hours per day; summer and autumn pumping was then dependent on the weather and agricultural requirements. During the 20 years the engine required only one day's attention by the fitter.

When changes in the overall drainage system made the Allermoor Station redundant the local water engineer Mr Kelstall (an industrial archaeologist before the subject was invented), arranged for the preservation of the engine and Lancashire boiler. Two other variants of the Amos and Eaton vertical engine and centrifugal pump are preserved in the former coal shed and Mr Musgrave acts as semi-official curator.

From Allermoor we went a few miles down the Parrett to the Westonzoyland Engine Trust where another Eaton and Amos engine is preserved in situ and was in steam. This group of enthusiasts have also collected other engines including a locally made horizontal engine with most ingenious valve gear. Various other engines were on show or waiting restoration and we noted two by Sissons of Gloucester and one by G. Waller of Stroud. There was also a display of models of various types.

From Westonzoyland it was only a few miles to the M5 and the end of a varied and enjoyable day, which well repaid the organisational tribulations.

Jim Simmons

Visit to Moreton in Marsh and Blockley, Saturday 22 July, 1989.

This half-day visit coincided with one of the hottest days of the year. About 20 members met our guide, Mr Peter Drinkwater at the curfew tower in the centre of Moreton. From here we went on a short walk around the centre of the town where the main buildings including the market Hall, the Mann Institute and the Curfew Tower were described.

A short car ride took us to Troopers lodge to look at the ancient finger post there.

We moved to Blockley where we looked at the Church and then walked through the village. Blockley had a number of fine silk mills and one of the earliest electricity generating systems but unfortunately it was not possible to gain access to any of these.

Our final site was the Four Shires Stone which until 1931 marked the meeting point of the counties of Gloucestershire, Worcestershire, Oxfordshire and Warwickshire.

To conclude the afternoon we visited the little village of Salford near Chipping Norton. The village festival was in full swing and after welcome refreshments in the village hall we

were able to look at the interesting displays of old country objects and village history that had been laid out.

Ray Wilson

Social Evening: A Walk Around Alney Island Gloucester, Thursday
10 August, 1989.

Our Social evening formula of a short walk in an interesting area followed by the opportunity to get together in a local pub proves to be as popular as ever.

This year Hugh Conway-Jones was our guide for an exploration of Alney Island, Gloucester.

We started from the recently constructed car park on the site of the old Castle Meads Power Station and looked first at the old Llanthorny lock and weir. From there we followed the East channel of the River Severn to Lower Parting where East and West Channels diverge.

Now following the west channel we passed under the main railway bridge close to the junction with the Docks Branch Railway which crosses the island.

Nearby was Telford's Bridge (1829) with its 10 inch sag in the crown.

As we turned for home we were able to find faint traces of the Hereford and Gloucester Canal. The elevated section of the A40 road (Over Causeway) was undergoing extensive repairs and from underneath we had a rare view of the details of its construction. From here we returned to the cars having had a most interesting couple of hours.

Ray Wilson

Visit to Oxfordshire Saturday 14 October, 1989.

Forty four members and friends took part in our best attended coach trip of the year.

Our first stop was the Pendon Museum, Long Wittenham near Abingdon. The first exhibit here is the Madder Valley Railway model. This is the first major detailed landscaped railway model, built completely from scratch before the war, it is

historic as a model and includes some interesting details of industrial and agricultural history.

The second model is a pastiche of GWR practice in a more or less Cornish setting, with an impressive operating regime including a coal train with over 100 different private wagons.

Model railways may not turn everybody on, but all our party were loud in praise of the next exhibit, the Vale of the White Horse. This is an enormous landscaped model, which has been under construction for many years and is still far from complete. We were all lost in admiration of the almost incredibly detailed modelling of a Wiltshire county landscape of the early 1930s with authentic and in some cases, still identifiable buildings. Everybody kept coming back and spotting beautiful little details they had missed first time round.

After lunch we moved to Wheatley windmill, East of Oxford. Here a dedicated group are engaged in restoration of an unusual octagonal stone tower mill, which must have been almost beyond hope.

However, despite lightning damage the structure has been rebuilt almost to the kerb ring, the stone floor is in (two pairs of stones) the bin floor is on its way and a start has been made on the machinery. This is a very praiseworthy effort.

Our last visit was to Combe Mill, the Blenheim Estate saw mill. We had a private visit, the day before a public "Steam Day". The outstanding feature was the 1852 beam engine which is still supplied with steam from the original Cornish boiler. (Strictly it is not the pure Cornish form as it has three "Galloway" tubes across the flue). This is almost certainly the oldest working boiler, though how much longer it can be run without major repairs is apparently rather doubtful. It is however, still capable of turning the beam engine and also a nice horizontal "Bradford" horizontal engine (ex-laundry) and a technical college engine by Sissons of Gloucester. Also on this site is a fine Poucelet type water wheel (frequently without its water supply) which used to power the mill in conjunction with the engine. There is also an extensive collection of old tools, machinery, small engines, craft workshops, etc. (On public days you can make your own poker in the blacksmith's shop - very enterprising!)

All in all this was a varied and enjoyable outing.

Jim Simmons