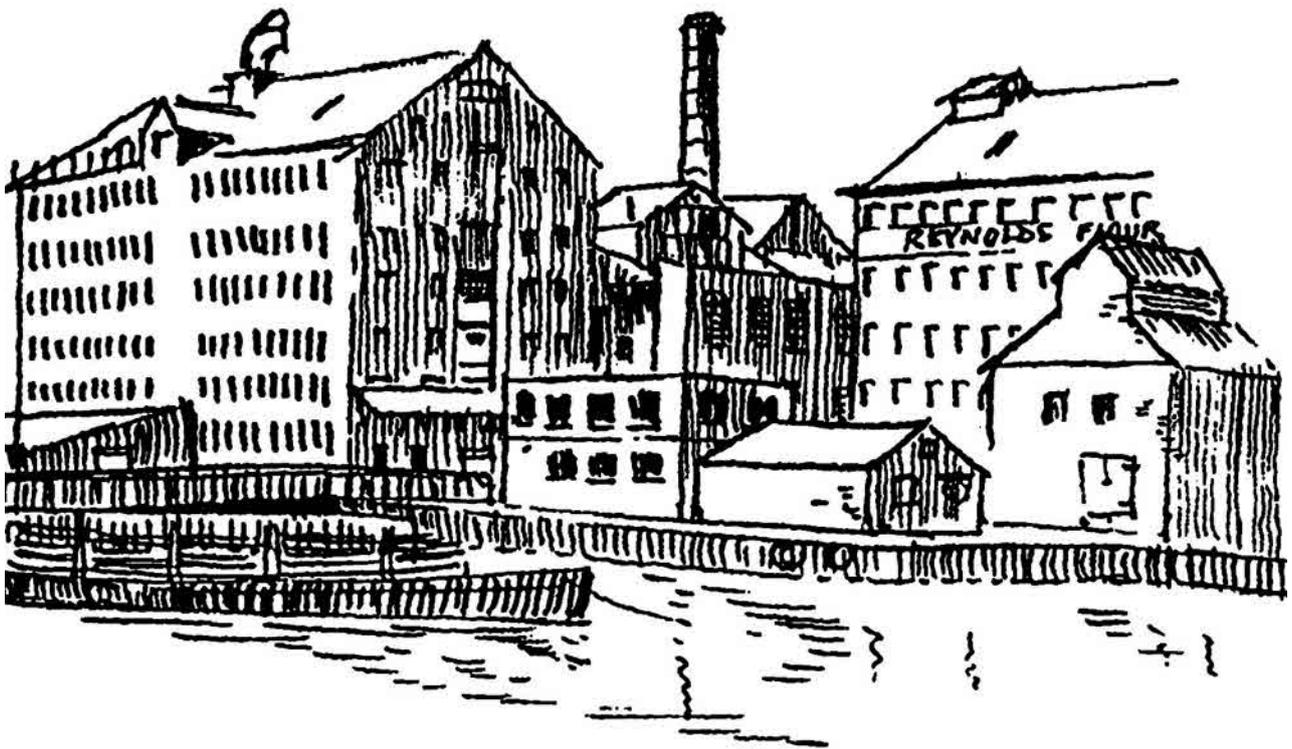


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GLOUCESTER DOCKS
PATRICK LANE .TD.

JOURNAL 2010

GLOUCESTERSHIRE SOCIETY FOR INDUSTRIAL ARCHAEOLOGY

Gloucestershire Society for Industrial Archaeology

Journal for 2010

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Cover Illustration: Gloucester Docks By the late Patrick Lane TD .

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Gloucestershire Society for Industrial Archaeology

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Editorial

The highlight for the Society during the past year has been the celebration of the 200th anniversary of the Gloucester and Cheltenham Tramroad. The main event for members took place in Gloucester Docks on Saturday 4th June 2011, 200 years to the day after the official opening. We were delighted to welcome Sir Neil Cossons, Professor Angus Buchanan and Dr Brenda Buchanan as our guests at the event which was held near the pair of replica tramroad wagons which were installed the previous year. We received good press and radio coverage and we produced an eight page illustrated booklet on the history of the tramroad which has been circulated to members and the general public.

Once again the articles in the Journal cover a diverse range of topics and geographically span the whole County from the Forest of Dean to the Cotswolds. Steve Mills has continued his long standing interest in Millend Mill in his home parish of Eastington near Stonehouse. His present article summarises the latter part of the mill's long history. It then goes on to provide an account of a watching brief he maintained during 2009 when the main stone mill was gutted and the mill's various additional wings, malting kiln and part of the roof were demolished. Pat Morris relates the story of Factory Cottages, Lydney, a terrace of small houses, now demolished, that were alongside the 'Cut' or Pidcock's Canal south of Lydney town centre.

The restoration of the Cotswold Canals continues to gain momentum and as usual Theo Stening brings us up to date with progress along the full length of the two canals with the tenth of his annual reports on the project. He has also provided us with an account of how Henry Ford, the founder of the Ford Motor Company purchased a cottage at Chedworth in 1929 and an old forge at Snowhill in 1930 and had them shipped over to Dearborn, Michigan, USA where they were re-erected at his open-air museum there. The Malt House at Chipping Campden is described by Amber Patrick, who investigated the building when it was being restored and converted to provide additional facilities for the Seymour House Hotel.

Peter Griffin writes about the journal that Charles Richardson, a pupil of I K. Brunel kept between February 1835 and July 1838, when for much of the time Richardson was working on the construction of the railway between Swindon and Gloucester. This provides a fascinating insight to aspects of both his working and social life. The pumping engine house at Gloucester Docks has served a vital role in the operation of the docks since the outset and its history is related here by Hugh Conway-Jones.

Frank Colls, the visits organiser, together with the various leaders, produced another very interesting and enjoyable series of Summer Visits and the customary reports are included here. Unfortunately, this year there is only sufficient space for a single page of book reviews and notices of new books.

As ever, we must thank all of the contributors for the very interesting articles they have provided. Hugh Conway-Jones must also be thanked for his usual invaluable help with the production of the Journal.

Ray Wilson August 2011

GSIA VISIT REPORTS 2010

Once again the Society's thanks are due to Frank Colls who organised a programme of local visits and walks and a coach trip in the Autumn. The following reports have been compiled by Frank Colls, with a contribution from Ray Wilson.

Sunday 25th April 2010

Afternoon Walk - Bixslade, Forest of Dean

The first outing of the summer programme was a walk led by Frank Colls. About 25 members assembled near the Cannop stoneworks at the foot of the track going westwards up into Bixslade. We followed the line of the 1812 tramroad branch which had helped the development of quarries and coal mines by enabling the transport of stone and coal down to the main line at Cannop Wharf. Many of the tramroad blocks survive and we were to see several good stretches as we made our way up the slight gradient. We passed the collapsed air shaft of Miles Level (now fenced off and overgrown) which had been the lowest level worked in the slade, for coal in the Yorkley seam, and used subsequently for drainage of the higher levels. At an open area we could look into Mine Train Quarry which had been an early source of Pennant Sandstone and is still worked intermittently. Opposite, we saw the fenced off portal of Bixslade Low Level, dug in 1809 to reach the Coleford High Delf seam. We continued up the line of the tramroad, spotting various features, to Bixslade High Level of 1826. This had been dug by David Mushet, also working the High Delf seam and is still in use for drainage - a stone trough could be seen through the fenced off portal. As we climbed further up the slade we began to see above us to the north east the disturbed ground and spoil tips which had formed part of the large Bixhead quarries and, diverting from the tramroad line, we came to a good viewpoint overlooking these extensive workings. The whole area was being gradually cleared of previously quarried stone with a major landscaping project underway. Further along we saw a stone structure, possibly an old crane base, and plenty of heavy wire ropes and iron plates, formerly used in haulage work, but now utilised for fencing.

We retraced our steps and soon turned from the tramroad line to follow an undulating track which went through the former quarry workings. This was well marked on the 1:2500 OS map of 1903 which showed some further tramway lines, with two tunnels, used to get close to faces. While these tunnels have clearly been lost in subsequent quarry activity, there were two depressed areas in the track which could have been their location. Back at the main tramroad line we continued downwards and then made a diversion to follow a track to the Spion Kop quarry. This was also on the 1903 map, and presumably named after the 1900 Boer War battle. It was a spectacular sight with a huge face cut into the hillside and then worked downwards to form a deep pit, requiring some heavy crane work to remove the stone. The map showed a double tramroad incline descending to the main Bixslade branch tramroad route, but none of this remains. We could see the obvious steepness of the slope and it seems that the incline was soon abandoned as being far too dangerous to work. It had been replaced in 1905 by a tramroad heading north on a gentle gradient down to the main line, in fact along the track by which we had approached Spion Kop. We retraced our steps and headed down the slade, leaving the tram route near Mine Train Quarry to follow the present vehicle track to the two final sites. The Union Pit memorial and a fine sculpture commemorated the accident in 1902 when the mine flooded and 4 men died. Nearby was the Monument free mine, still intermittently worked but looking distinctly ramshackle. That concluded the walk and Frank was thanked for another interesting afternoon.

Sunday 16th May 2010

Visit to Gloucestershire Warwickshire Steam Railway

This was a combined visit and social event which the GSIA Committee had introduced as an alternative to the annual dinner, this being thought no longer so popular with many members. We had 37 members and guests attending for a three part visit arranged with Colin Fewell of the GWSR. There was a talk on the history of the railway, a round trip train ride, and a guided tour of the engine and carriage sheds and workshops. We were also able to partake of a good lunch in their refreshment room, the Flag and Whistle at Toddington Station as well as look around the small museum and other features on that site.

We all met in a room at Winchcombe Station for the introductory talk which included some interesting video material. Our speaker was warmly thanked for an enjoyable presentation and we then boarded the steam hauled service to travel to Toddington. Here we divided into 2 groups, half on the guided tour and half having lunch and a general look around, before swapping over. We thanked the GWSR members who had shown us around and for a fascinating tour with much interest for everyone. It was then time for all of us to board the train for the main journey towards Cheltenham. We were already aware of the current difficulty the GWSR was facing since, earlier in the year, a problem had been found with the embankment south of Gotherington Halt. This meant that services were not possible along this section pending some major civil engineering work.. They were only running trains to and from Gotherington, hence our trip was slightly shorter than normal. There was still plenty of lineside interest and good views as well as the experience of the runs through the 693 yard Greet Tunnel. We arrived back at Winchcombe and all agreed that it had been a very enjoyable afternoon.

Sunday 20th June 2010

Afternoon Walk – Droitwich Canals

It was a fine afternoon as 21 of us met with David Viner (British Waterways, South West Region Heritage Adviser) at Hanbury, just east of Droitwich. We were to walk around 3 sections of the canal following a major restoration project by BW over the last few years. Although mid 2010 should have seen its completion, David explained that the final stages were held up due to a funding problem so the last steps and the opening of the navigation were still a few months away. He had been heavily involved in the project and began by outlining the history of the two canals, the 1771 Barge Canal linking the River Severn with Droitwich and built by Brindley to serve the salt industry, and the much later Junction Canal linking Droitwich to the Worcester and Birmingham Canal and completed in 1853 by the W and B company.

We began at Hanbury on the “narrow” Junction Canal where it had been necessary to alter the route and build 3 new locks (the first two constructed as a staircase) for the descent to Droitwich.. Apart from the familiar problem of deciding how much to try to replicate the original features while trying to match costs to the funding available, there were other issues to be resolved. Environmental and ecological concerns led to establishing a new area of reed bed (at Salwarpe village) as well as a special habitat for great crested newts. Archaeological work had revealed evidence of charcoal burning related to salt production. Although the new locks were built with concrete walls they had been topped with blue brick copings to give a traditional feel. All 3 were quite deep and beyond the lower single lock we approached a footbridge (good re-use of an old railway footbridge) from which we could see the rather forbidding entrance to a short tunnel taking the canal under the M5 motorway. While of bare minimum dimensions and without a towpath, it had been built into the embankment structure

back in the 1960s to preserve the route and was a good reminder of the ever present need to plan far ahead when thinking of canal restoration.

We returned to our cars for a short drive into Droitwich to see Vines Park alongside the canal, a pleasant area with several features related to the salt industry and the brine wells which supplied several brine boiling works which had formerly occupied the area. There was also a brightly painted structure in the form of the bow and the stern of a full size salt barge. This was a partial replica of The Volunteer, a salt barge which had worked between Droitwich, Gloucester and the Stroudwater canal. We saw the restored broad lock at the eastern end of the park, and the adjacent weir by which the river Salwarpe continued its course. This lock had been built to connect with the later Junction Canal but it was built to the barge width to serve another salt works further up. By the river there were areas of salt deposits emanating from the underground deposits which had provided the town with the basis for its prosperity, but extracting the salt had resulted in major subsidence in the town. The broad lock had itself suffered from major damage in the latter half of the 19th century and had to be raised on 3 occasions (about 5m in total!). The recent restoration work here had involved volunteers of the Waterways Recovery Group and David was keen to acknowledge their contribution.

We then drove a few miles to the far end of the Barge Canal to see the restored locks which connected to the Severn. First we looked at a new tunnel by which the canal went under the A449 dual carriageway near Hawford. The original Brindley bridge here had been widened with a concrete section in 1944 to allow for the movement of US tank transporters, and after the war the whole structure was buried within a new embankment for the dual carriageway. The recent work on the new 80m tunnel involved sinking new piling and building a concrete deck, this being done in 2 halves to maintain the road route. As we walked through on the towpath we saw the large steel piles now forming the tunnel walls, not pretty but a robust engineering solution. It was then on to the final 2 locks, well restored and making use of some of the original paddle gear, and David explained that some work was still needed to establish the final water level. As we stood overlooking the bend of the Severn we could envisage boats entering or leaving the lock and the hopefully bright future that the restored navigation will have. We thanked David for a most interesting walk enabling us to appreciate the great efforts which such projects entail. We could also applaud the determination of the early enthusiasts, without whose vision the whole enterprise would not have been possible.

Sunday 25th July 2010

Afternoon walk, Chedworth

About 25 members were on this walk led by Alan and Sue Strickland. We assembled on the disused World War 2 Chedworth Airfield, on the public road which now crosses the site. This location, known as Five Ways, was where ancient trackways crossed the high Cotswold plateau. We followed the rather overgrown former runway and looked across at the adjacent woodlands, hearing about the extensive cutting of timber in both world wars. This had taken place with steam powered sawmills, winches and a narrow gauge railway, built in World War 1 to assist with timber transportation. We followed tracks descending into Upper Chedworth passing close to a deep cutting near the southern portal of the 495 yard tunnel of the former Midland and South Western Junction Railway. This was completed in 1891 and carried goods and passengers from the manufacturing areas of the midlands to the south coast.

We continued down to enter Chedworth village and followed Queen's Street, over which a bridge (demolished in the 1980s) had carried the MSWJ railway on its route southwards. Alan had photographs of the bridge, quite a striking intrusion in the village scene, and remaining

adjacent houses could still be recognised. As we strolled through the quiet lanes we heard of the many trades and shops which had enabled the village to thrive in earlier periods. The Old Forge is now a house, but many remnants of the blacksmith's craft were spotted in the gateways and fences we passed. In a wall in Gallows Lane, a stile was pointed out as being grade 2 listed, although it looked very awkward to use! We continued along to Ballinger's Row, a terrace of 6 weavers cottages used in the 18th century. It was interesting to pick out various features and to spot some of the changes which had been made. We then went by a field path to re-cross the railway route, now on an embankment, to arrive by the Seven Tuns pub dating from 1610. In the sloping hillside opposite were the restored Chedworth spring and a surprising structure - a water wheel with a trickle of water leaking past it into the road. This is a replica wheel installed in 1995 as a novelty, but there had formerly been a working wheel, from around 1860, to supply pumping power to lift spring water to Manor farm. This hard water from the spring deposits a white material known as Tufa (calcium carbonate) and this was at one time dug locally for making pots. Many Tufa deposits could be seen around and below the wheel.

We then proceeded to St Andrew's Church where we saw a pitched stone water trough by the entrance gate, further examples of local blacksmith's work in some external strengthening bars in the tower and some fine carved gargoyles on the roof. Some of the party explored the interior of the church before we climbed up the hillside and followed the Beech Walk to the top of the plateau. A match on the village cricket field provided a brief diversion before we followed a track back to the airfield. Alan pointed out nearby features including the site of a travellers' chapel with remaining stones built into adjacent walls and the position of Chedworth Beacon used for signalling the sighting of the Armada. We followed the airfield perimeter track to a small wooded area to see the remains of an underground emergency control centre used in case of attack. Alan had some old plans of the brick and concrete structure and some of us descended stairs to see a dark and partly flooded corridor of this grim relic. It was then back to the centre of the airfield where Alan told us more about the wartime period and how the site was operated. Before returning to our cars we thanked Alan and Sue for giving us such an interesting and varied walk.

Sunday 15th August 2010

Afternoon walk, Mills of the Uley Valley Part Three

Another fine afternoon saw 25 of us gather in Dursley for the third part of Ray Wilson's walk to see mills and other sites in the Uley valley. We passed by the extensive area of the Lister company, now much changed with the closure ten years ago of several of its manufacturing activities, and followed the road towards the area of the site of New Mills. Here the diverted stream flowing over the by-pass weir, is the only visible reminder of what was one of the biggest mills in the Stroud District in the early 19th century. The site has been occupied for many years by several large dwellings. It was then on to the site of Rivers Mill, recently developed as housing. Rivers Mill lay on the Caswell stream which fed the River Cam and was a fulling mill in the late 18th century and then a paper mill. The mill was bought in 1822 by George Lister (father of Sir R. A. Lister) where he manufactured "wire cards" which were equipped with short stiff wires used to "card" (straighten) woollen fibres prior to spinning. For most of the 20th century it was the home of Mawdsley's, a well known firm of electrical engineers. A footpath took us towards Sheephouse Farm, now the base of a chemical company, but of interest as the location for a 1971 film *Dulcima*, a melodrama of rural life taken from an H E Bates novel. Close by was the site of Rockstowes Mill from the 1800s and Ray had copies of a Tithe map and an 1823 document of "Sales Particulars" which provided some useful details of the layout and the equipment in use there. The large mill pond had recently been restored by the present owners. Little of the actual mill complex remains apart from a group of stone

buildings. This comprises a small storage building downstream of the dam, a pair of cottages and a former warehouse now converted for residential use.

Field paths took us to Eyles Mill, also known as Wresden Farm, and a carved date stone above the door of the mill house commemorated (just by their initials) John and Elizabeth Eyles who had set up the fulling mill in 1687. This is reputedly the first mill in the District to produce the renowned "Spanish Cloth" as testified by the monument of 1731 to John Eyles in Uley Church. The present owner had kindly allowed us to take a closer look at some of the buildings on the site and the remains of the pond. Water power had been revived in the 1930s when the owner's father had generated electricity using a new water wheel, sadly no longer in use. We headed back towards Dursley and stopped at Mill Farm, the site of the former Dursley Mill. A small 2 storey stone building, used as a fulling mill, is all that remains from the earlier period. It was then back to the town where most of the group were grateful to call in at the old Town Hall for tea and cakes. We thanked Ray for another interesting afternoon before the journeys home.

Sunday 12th September 2010

Coach trip to Staffordshire

Interest in this trip was less than we would have liked but we managed to run it with a 32 seat coach to satisfy all those who did want to attend. It was a 3 part visit taking in the pumping station at Mill Meece, the Wedgwood Museum and a private collection of models of early steam engines. Space constraints at this final location meant we had to divide into 4 groups with each group seeing things in a different sequence, and with our coach driver doing sterling work ferrying everyone around.

The Mill Meece pumping station is now operated by Severn Trent with electric pumps but the fine building was erected by the Staffordshire Potteries Waterworks Company in 1914 to supply water from boreholes to Stoke on Trent. It is now run by a volunteer trust as a splendid heritage site with occasional steaming days. There are two Hathorn Davey horizontal tandem steam engines, a set of Lancashire boilers and several other items and displays. One boiler and both engines were in steam and the massive scale of the engines, and the sights, sounds and smells of them in operation were most impressive. The organisers were also hosting an old vehicle and engine rally on the site so there was plenty of interest for the many visitors.

The excellent Wedgwood Museum was an essential part of our day in the Potteries and, although concentrating on the life and work of the first Josiah Wedgwood, the museum deals with all aspects of the industry for which Staffordshire is famous. The history and technology of pottery making was well illustrated and the large range of exhibits of every form of chinaware made for a fascinating visit. With such a wealth of fine examples from the late 18th and 19th century, many intricately constructed and elaborately decorated, this is a justly famous collection.

The final site was in Stone at the home of David Hulse where we saw his collection of models of early steam engines. David has done a tremendous amount of research into the development of engines from the early work of Thomas Newcomen through to the mid 19th century. He is also a very skilled craftsman and model maker and he has applied the results of his research into the construction of a number of intricate scale models, all with working mechanisms. All his miniature bricks have been hand made and a wide variety of complex metal components built from scratch. The models, powered by some clever electrical and pneumatic control devices, all illustrate the major improvements and inventions which built on the initial idea of the

atmospheric engine, through the developments of Watt, Pickard, Trevithick and others, into the period when steam engines were such a significant feature of the industrial landscape.

Visiting the three sites with four groups and a tight timetable gave your visits organiser an anxious day, not helped by a few navigational errors. The situation was further complicated when it was realised (a couple of days beforehand!) that some of our route coincided with the Tour of Britain cycle race which was travelling around the Stoke on Trent area at the same time. So it was a busy and, at times, rather hectic day but it was also a most interesting one. We had made sure that all our hosts were properly thanked for their efforts and their hospitality.

Tuesday 5th October 2010

Visit to Godwin Pumps

An afternoon visit to the premises of Godwin Pumps Ltd at Quenington, near Fairford, was this year's choice for a look at a modern industrial plant. There were 14 of us on the visit and we were given a very informative introductory talk by David Braithwaite, Engineering Director, covering the general history of the company and the main changes that have occurred, both technical and commercial, over the years. The company was formed as a family business in the late 19th century by Harold Godwin, making and supplying pumps for use in the surrounding area. These early piston pumps were wind powered and were used to draw water from boreholes for domestic and agricultural purposes. Over the years there have been substantial technical developments, much commercial expansion and several changes of ownership. American involvement and investment has taken the company forward and they are now a leading global supplier of equipment for use in a range of applications from quarries to chemical plants and from construction sites to water supply enterprises. They now concentrate on making centrifugal pumps with a "dry priming" feature, for use with water, slurries and suspended solids, and a wide range of types and sizes of pump units can be supplied, with either diesel engines or electric motors.

After a coffee break we split into 2 groups for a tour of the works, one led by David and the other by Jim Mowbray, Production Director (who had kindly arranged the visit for us). With many component parts, including Perkins diesel engines, coming from subcontracted suppliers for final assembly at Quenington, the handling of incoming items is a vital stage. We saw the large stores area with initial checking of parts and sub-assemblies, and an automated storage system for small components which allowed the selection of the hundreds of specified items for every type of pump unit to be efficiently organised. In the machine shop we saw a range of traditional lathes and milling machines, mainly used for special modifications to components prior to fitting. There were also very modern computer controlled machines used for repetitive work on pump impellers and other parts requiring precision finishing. All the pump units were provided with mounting frames, of varying complexity, these being fabricated on site. We saw the areas where components were assembled onto the mounting frames and we could appreciate the wide variety of pumps being made and the different sizes of the units. While many applications needed a basic mounting frame, for simply resting on flat ground or a concrete base, others were fitted onto wheeled trolleys for more portability. A number of the units were fully enclosed with thick sound insulation panels to meet environmental considerations. We passed the paint shop where every unit was given a good coating of the very distinctive orange paint which is the Godwin hallmark. A testing area was briefly seen where every pump is given a practical work-out to ensure it meets its specification. Before leaving we of course expressed our grateful thanks to David and Jim for showing us around and for giving so much of their time to us.